



**NONRESIDENT
TRAINING
COURSE**



February 2000

**Aviation Maintenance
Administrationman
Basic**

NAVEDTRA 14292

Although the words “he,” “him,” and “his” are used sparingly in this course to enhance communication, they are not intended to be gender driven or to affront or discriminate against anyone.

PREFACE

By enrolling in this self-study course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program.

THE COURSE: This self-study course is organized into subject matter areas, each containing learning objectives to help you determine what you should learn along with text and illustrations to help you understand the information. The subject matter reflects day-to-day requirements and experiences of personnel in the rating or skill area. It also reflects guidance provided by Enlisted Community Managers (ECMs) and other senior personnel, technical references, instructions, etc., and either the occupational or naval standards, which are listed in the *Manual of Navy Enlisted Manpower Personnel Classifications and Occupational Standards*, NAVPERS 18068.

THE QUESTIONS: The questions that appear in this course are designed to help you understand the material in the text.

VALUE: In completing this course, you will improve your military and professional knowledge. Importantly, it can also help you study for the Navy-wide advancement in rate examination. If you are studying and discover a reference in the text to another publication for further information, look it up.

*2000 Edition Prepared by
AZC Larry Smith and
AZC(AW) Karla Japzon*

Published by
NAVAL EDUCATION AND TRAINING
PROFESSIONAL DEVELOPMENT
AND TECHNOLOGY CENTER

**NAVSUP Logistics Tracking Number
0504-LP-022-3640**

Sailor's Creed

"I am a United States Sailor.

"I will support and defend the Constitution of the United States of America and I will obey the orders of those appointed over me.

I represent the fighting spirit of the Navy and those who have gone before me to defend freedom and democracy around the world.

I proudly serve my country's Navy combat team with honor, courage and commitment.

I am committed to excellence and the fair treatment of all."

TABLE OF CONTENTS

CHAPTER	PAGE
1. Naval Aviation Maintenance Program (NAMP)	1-1
2. Maintenance Administration	2-1
3. Technical Publication Library	3-1
4. Maintenance Control and Production Control	4-1
5. Maintenance Data System (MDS)	5-1
6. Aircraft Logbooks	6-1
7. Aircraft Inventory Reporting System (AIRS).....	7-1
8. Aeronautical Equipment Service Record (AESR).....	8-1
9. Aircraft Engine Management System (AEMS).....	9-1
 APPENDIX	
I. Abbreviations, Acronyms, and Glossary of Terms.....	AI-1
II. References Used to Develop the TRAMAN.....	AII-1
 INDEX	 INDEX-1

INSTRUCTIONS FOR TAKING THE COURSE

ASSIGNMENTS

The text pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions. Pay close attention to tables and illustrations and read the learning objectives. The learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

SELECTING YOUR ANSWERS

Read each question carefully, then select the BEST answer. You may refer freely to the text. The answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the course.

SUBMITTING YOUR ASSIGNMENTS

To have your assignments graded, you must be enrolled in the course with the Nonresident Training Course Administration Branch at the Naval Education and Training Professional Development and Technology Center (NETPDTC). Following enrollment, there are two ways of having your assignments graded: (1) use the Internet to submit your assignments as you complete them, or (2) send all the assignments at one time by mail to NETPDTC.

Grading on the Internet: Advantages to Internet grading are:

- you may submit your answers as soon as you complete an assignment, and
- you get your results faster; usually by the next working day (approximately 24 hours).

In addition to receiving grade results for each assignment, you will receive course completion confirmation once you have completed all the

assignments. To submit your assignment answers via the Internet, go to:

<http://courses.cnet.navy.mil>

Grading by Mail: When you submit answer sheets by mail, send all of your assignments at one time. Do NOT submit individual answer sheets for grading. Mail all of your assignments in an envelope, which you either provide yourself or obtain from your nearest Educational Services Officer (ESO). Submit answer sheets to:

COMMANDING OFFICER
NETPDTC N331
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

Answer Sheets: All courses include one “scannable” answer sheet for each assignment. These answer sheets are preprinted with your SSN, name, assignment number, and course number. Explanations for completing the answer sheets are on the answer sheet.

Do not use answer sheet reproductions: Use only the original answer sheets that we provide—reproductions will not work with our scanning equipment and cannot be processed.

Follow the instructions for marking your answers on the answer sheet. Be sure that blocks 1, 2, and 3 are filled in correctly. This information is necessary for your course to be properly processed and for you to receive credit for your work.

COMPLETION TIME

Courses must be completed within 12 months from the date of enrollment. This includes time required to resubmit failed assignments.

PASS/FAIL ASSIGNMENT PROCEDURES

If your overall course score is 3.2 or higher, you will pass the course and will not be required to resubmit assignments. Once your assignments have been graded you will receive course completion confirmation.

If you receive less than a 3.2 on any assignment and your overall course score is below 3.2, you will be given the opportunity to resubmit failed assignments. **You may resubmit failed assignments only once.** Internet students will receive notification when they have failed an assignment--they may then resubmit failed assignments on the web site. Internet students may view and print results for failed assignments from the web site. Students who submit by mail will receive a failing result letter and a new answer sheet for resubmission of each failed assignment.

COMPLETION CONFIRMATION

After successfully completing this course, you will receive a letter of completion.

ERRATA

Errata are used to correct minor errors or delete obsolete information in a course. Errata may also be used to provide instructions to the student. If a course has an errata, it will be included as the first page(s) after the front cover. Errata for all courses can be accessed and viewed/downloaded at:

<http://www.advancement.cnet.navy.mil>

STUDENT FEEDBACK QUESTIONS

We value your suggestions, questions, and criticisms on our courses. If you would like to communicate with us regarding this course, we encourage you, if possible, to use e-mail. If you write or fax, please use a copy of the Student Comment form that follows this page.

For subject matter questions:

E-mail: n315.products@cnet.navy.mil
Phone: Comm: (850) 452-1001, Ext. 1713
DSN: 922-1001, Ext. 1713
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC (CODE 315)
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32509-5237

For enrollment, shipping, grading, or completion letter questions

E-mail: n331@cnet.navy.mil
Phone: Comm: (850) 452-1511/1181/1859
DSN: 922-1511/1181/1859
FAX: (850) 452-1370
(Do not fax answer sheets.)
Address: COMMANDING OFFICER
NETPDTC (CODE N331)
6490 SAUFLEY FIELD ROAD
PENSACOLA FL 32559-5000

NAVAL RESERVE RETIREMENT CREDIT

If you are a member of the Naval Reserve, you will receive retirement points if you are authorized to receive them under current directives governing retirement of Naval Reserve personnel. For Naval Reserve retirement, this course is evaluated at 11 points. (Refer to *Administrative Procedures for Naval Reservists on Inactive Duty*, BUPERSINST 1001.39, for more information about retirement points.)

COURSE OBJECTIVES

In completing this course, you will demonstrate a knowledge of the subject matter by correctly answering questions on the following subjects: the Naval Aviation Maintenance Program (NAMP); maintenance administration; technical publication library; maintenance control and production control; the Maintenance Data System; aircraft logbooks; the Aircraft Inventory Reporting System; the Aeronautical Equipment Service Record (AESR); and the Aircraft Engine Management System.

Student Comments

Course Title: Aviation Maintenance Administrationman Basic

NAVEDTRA: 14292 **Date:** _____

We need some information about you:

Rate/Rank and Name: _____ SSN: _____ Command/Unit _____

Street Address: _____ City: _____ State/FPO: _____ Zip _____

Your comments, suggestions, etc.:

<p>Privacy Act Statement: Under authority of Title 5, USC 301, information regarding your military status is requested in processing your comments and in preparing a reply. This information will not be divulged without written authorization to anyone other than those within DOD for official use in determining performance,</p>
--

NETPDTC 1550/41 (Rev 4-00)

CHAPTER 1

NAVAL AVIATION MAINTENANCE PROGRAM (NAMP)

Most of the duties that AZs perform are in direct support of the aviation maintenance technicians who work directly in the aviation maintenance effort. Since most of the duties and responsibilities of an AZ are specifically outlined in the *Naval Aviation Maintenance Program (NAMP)*, OPNAVINST 4790.2, you should have a good working knowledge of the *NAMP*. This chapter will concentrate on the organizational and intermediate levels of aviation maintenance that the *NAMP* describes. It is to activities that perform these levels of maintenance that you, as an AZ, will most likely be assigned. Since it is in the staff divisions of aviation maintenance activities that AZs are assigned, some of the important duties and responsibilities of staff divisions, especially those that an AZ might perform, are discussed.

NAMP OBJECTIVES

LEARNING OBJECTIVE: Identify the purpose of the Naval Aviation Maintenance Program (NAMP).

The objective of the NAMP is to achieve and continually improve aviation material readiness and safety standards through the optimum use of available resources (money, manpower, and material management). This objective is accomplished through command attention, policy direction, technical direction, management, and administration of all programs that affect activities responsible for aircraft maintenance.

As the basic document that governs the Naval Aviation Maintenance Program, OPNAVINST 4790.2 establishes a standardized set of policies and procedures for the management of all Navy and Marine Corps aviation maintenance activities. Any directive or instruction in conflict with the provisions in the *NAMP* should be revised to conform with the *NAMP*.

OPNAVINST 4790.2 consists of five volumes. Each volume describes policies, procedures, responsibilities, and functions that may be applicable to

one, two, or all three levels of maintenance. These five volumes are as follows:

- **Volume I**—Organizational and Intermediate Level Maintenance
- **Volume II**—Depot Level Maintenance
- **Volume III**—Maintenance Data System
- **Volume IV**—Data Processing Requirements
- **Volume V**—NAMP Standard Operating Procedures

The *NAMP*, available in paper and on CD-ROM, outlines the standardized organizational structure of all aviation maintenance activities.

- Q1. The continuous improvement of aviation material readiness and safety through the efficient use of resources is an objective of what program?*
- Q2. The NAMP, OPNAVINST 4790.2, has how many volumes?*
- Q3. What volume of the NAMP outlines procedures for organizational and intermediate maintenance levels?*
- Q4. What volume of the NAMP outlines the Maintenance Data System (MDS)?*

AIRCRAFT MAINTENANCE ORGANIZATION

LEARNING OBJECTIVE: Describe the organizational structure of aircraft maintenance activities.

In most operating aircraft units or activities, the aircraft maintenance department is the largest department. Its primary efforts are to support the unit's mission of flight operations. The operations department carries out the unit's mission. In support of the unit's mission, the objective of the maintenance department is to maintain all unit aircraft in a state of full mission

capability. An aircraft in this category of readiness can safely perform all of its intended missions.

All aircraft maintenance departments in the Navy have a standard organization. The importance of having a standard organization should be clear if you consider what happens when you transfer from one aircraft maintenance activity to another. When you transfer from one activity to another, you should remember the following:

- The work centers in both the old and new activities use the same work center codes and names.
- Officers will occupy similar billets.
- When you perform clerical and administrative duties, you will use the same publications, instructions, forms, and procedures.

In other words, when you transfer from one aviation maintenance activity to another, you should be able to perform in your new activity within a very short period.

Q5. Maintaining assigned aircraft in a state of full mission capability is the objective of what department in an operating unit or activity?

MAINTENANCE LEVELS AND TYPES OF MAINTENANCE

LEARNING OBJECTIVES: Identify the different levels of maintenance. Define and compare maintenance upkeep and repair.

The *NAMP* defines a three-level maintenance concept and is the authority that governs the management of organizational-, intermediate-, and depot-level aviation maintenance. The *NAMP* provides the management tools for the efficient and economical use of manpower and material resources. In addition, the *NAMP* provides the basis for establishing standard organizations, procedures, and responsibilities for the accomplishment of all maintenance on naval aircraft, associated material, and equipment. The three levels of maintenance allow management to accomplish the following:

- Classify maintenance functions by levels
- Assign responsibility for maintenance functions to a specific level
- Assign maintenance tasks that are consistent with job complexity, scope, and range of work to be performed

- Accomplish any maintenance tasks by ensuring optimum use of resources
- Collect, analyze, and use data to assist all levels of management that are concerned with the *NAMP*.

MAINTENANCE LEVELS

The term *aircraft maintenance* has a very broad meaning, ranging from a few minutes of aircraft servicing to many months of overhaul in an industrial-type facility. More than the words *aircraft maintenance* or *maintenance* are needed to define the full scope of aviation aircraft maintenance. The concept divides all aircraft maintenance functions into three distinct levels. The terms that describe these three levels are *organizational maintenance*, *intermediate maintenance*, and *depot maintenance*. The three aircraft maintenance levels provide an orderly separation of maintenance tasks. Task complexity, space requirement, skill level of assigned personnel, and scope of support responsibility are the basis for the separation of tasks.

Organizational Maintenance (O-Level)

Organizational maintenance is the day-to-day work that an operating unit performs in support of its own operations. The mission of the O-level activity is to maintain its aircraft and equipment in a full mission capable status while improving the local maintenance process. Maintenance at this level includes line operations (inspections, servicing, handling, and so forth) and periodic inspections of aircraft and equipment and associated tests. O-level maintenance also includes repairs and minor adjustments that do not require shop facilities as well as the removal and installation of components.

Operating units perform O-level maintenance in assigned facilities. A squadron may have exclusive use of assigned facilities or may share the facilities with one or more other squadrons.

In an operating activity, permanently assigned sailors normally perform organizational maintenance. The operations maintenance division (OMD) performs O-level maintenance at naval air stations on station aircraft. The OMD also provides O-level maintenance and other assistance to transient aircraft.

Intermediate Maintenance (I-Level)

Intermediate maintenance is work that is performed in centrally located facilities for the support of operating activities within a designated geographical

area, at a particular base or station, or aboard aviation ships. The mission of I-level maintenance activities is to sustain the combat readiness of supported activities (squadrons) by providing quality and timely material support at the nearest location with the lowest practical resource expenditure. I-level maintenance includes:

- Shop-type repair and test work on aircraft, components, and equipment from supported units
- Technical assistance to supported units
- Manufacture of selected aeronautical components, liquids, and gases
- Performance of on-aircraft maintenance when required

Permanently assigned Sailors and Sailors that are temporarily assigned from tenant squadrons man intermediate maintenance activities. When these squadrons deploy, their intermediate maintenance Sailors accompany the squadron and are temporarily assigned to the aircraft intermediate maintenance department (AIMD) onboard the ship or at the new station.

Depot Maintenance (D-Level)

Depot-level maintenance supports O- and I-levels of maintenance by providing engineering assistance and performing maintenance that is beyond the capability of O- and I-level activities. Depot maintenance is work that must be done in an industrial-type facility. Such a facility may either be civilian, military, or both. If the work is contracted out to a civilian facility, the type of work is still depot maintenance. Standard depot-level maintenance (SDLM) includes overhaul, repair, and modification of aircraft, components, and equipment. Depot maintenance also includes the manufacture of aeronautical parts for spares, the manufacture of kits for aircraft, and the modification of equipment. The depot level or a lower level of maintenance installs the spare parts and incorporates modification kits.

For the most part; civilians man naval aviation depots (NADEPs), which are Navy depot-level maintenance facilities. Military personnel at a NADEP help perform the intermediate and organizational maintenance work that is related to the depot facility.

MAINTENANCE TYPES

Maintenance technicians perform two types of aircraft maintenance within the Navy—rework and upkeep.

Rework may be performed on any aircraft or equipment. Industrial-type facilities that provide maintenance program support perform rework. Rework is the restorative and additive work that NADEPs, contractor facilities, or other industrial-type facilities perform on aircraft or equipment. There are two categories of rework—SDLM and special.

Upkeep is the preventive, restorative, or additive maintenance for aircraft and equipment. Activities (squadrons) that have aircraft or equipment or have the responsibility of providing direct support to activities that have aircraft or equipment perform upkeep. Upkeep includes periodic inspections, servicing, preservation, modification, replacement, and repair. There are also two categories of upkeep—SDLM and special.

Shore Stations

Navy shore activities that have intermediate maintenance responsibilities have an AIMD to perform the maintenance. Those shore activities with aircraft have an OMD within the operations department to perform organizational maintenance on assigned aircraft and transient aircraft.

A naval air reserve unit performs organizational and intermediate maintenance on its aircraft; however, the supporting station provides logistic support. A naval air reserve squadron that is on active duty or is assigned to a fleet unit provides organizational maintenance on its aircraft.

Ships

Multipurpose aircraft carriers and amphibious assault ships perform organizational and intermediate maintenance on assigned aircraft. These ships also provide organizational and intermediate material, facilities, and support equipment to embarked air wings, squadrons, and other units.

Squadrons

A squadron performs organizational maintenance on its aircraft. While shore based, designated squadron maintenance technicians are assigned to the AIMD of the supporting station for training and augmentation of the support effort. When the squadron is afloat, designated squadron maintenance personnel are assigned, as required, to the AIMD of the supporting ship.

A squadron or unit, regardless of location, may be required to perform intermediate- level maintenance functions on systems and equipments unique to its equipment or mission. The supporting ship or station provides the squadron with materials, facilities, and support equipment. The squadron or unit also provides selected quantities of readily transportable material and support equipment as organizational property.

Q6. What three levels of maintenance are used within the Navy?

Q7. What type of maintenance does the operating unit perform on a day-to-day basis in support of its own operations?

Q8. What two types of maintenance are performed within the Naval Establishment?

AIRCRAFT MAINTENANCE DEPARTMENT ORGANIZATION

LEARNING OBJECTIVES: Describe the responsibilities and organizational structure of organizational maintenance activities (OMAs). Describe the responsibilities and organizational structure of intermediate maintenance activities (IMAs).

An aircraft maintenance department supports naval operations with upkeep on aircraft and associated support equipment. When providing this support, the department adheres to the organizational policies and procedures that the *NAMP* prescribes.

Since all aviation maintenance activities have similarities in mission, operation, and administration, it is only reasonable that they be standardized in these areas as much as possible. An aircraft maintenance department, properly organized and administered, should rank high in the following areas:

- Performance and training of maintenance technicians
- Aircraft, equipment, and system readiness
- Safety
- Efficient use of resources (manpower and materials)
- Management control of the organization
- Evaluation of performance
- Unit combat readiness

- Continuity when aircraft and maintenance technicians are transferred between commands

The objectives of these areas cannot be met by use of an instruction manual or by means of an organizational structure alone. They are met by the intelligent efforts of all naval personnel who are engaged in maintenance tasks. Functions of an aircraft maintenance department include the following:

- Periodic maintenance and routine inspection and servicing of aircraft, associated support equipment, aeronautical material and components, including the necessary disassembly, cleaning, examination, repair, modification, test, inspection, assembly, and preservation
- Special work, when required, to comply with technical directives or local instructions
- Correction of equipment of aircraft and equipment discrepancies
- Assurance of high quality workmanship
- Maintenance of required records and publications
- Maintenance and custody of tools and other equipment that are provided to the activity for its own use
- Training of assigned personnel
- Conducting maintenance and ground handling safety programs
- Submission of reports for statistical, analytical, and historical purposes

The depth and complexity of functions vary with the number and type of aircraft that are involved and the maintenance level.

ORGANIZATIONAL STRUCTURE

An organizational structure exists to help carry out the responsibilities that are needed for mission accomplishment. Each segment (division, branch, section, or work center) of the organization has line or staff responsibilities. A line relationship is a relationship that exists between senior personnel and their subordinates. A line relationship is a direct supervisory relationship that involves work assignments to subordinates. A staff relationship is a

relationship that exists between an advisory staff supervisor and a production line supervisor. The concerns of staff personnel are with administrative service and support of the production effort.

MANAGEMENT

Management in an aviation maintenance organization is *the exercise of authority and responsibility for the performance of the mission, tasks, and work of the maintenance department*. Within an organizational structure, the maintenance officer (MO), with the aid of subordinate officers, is responsible for management of the maintenance department and is responsible to the commanding officer for accomplishment of the department's mission. The MO uses the guidance in directives from higher authority when he or she directs the maintenance department.

Planning, organizing, and controlling the production effort are management responsibilities of the MO. Along with subordinate officers, the MO directs subordinate divisions to comply with local and higher authority maintenance policies and directives. In an aviation organizational maintenance activity, the following subordinate officers assist the MO in management of the department:

- The **assistant maintenance officer (AMO)** is the assistant head of the department and assists the MO in the administration of the maintenance department in accordance with the *NAMP*. The AMO also supervises the activities of staff divisions (quality assurance and maintenance administration).
- The **maintenance material control officer (MMCO)** exercises direct supervision over the production divisions (aircraft, avionics/armament, and line division).
- Various **divisional** and **branch officers** manage their respective divisions and branches.

The organizational structure of a maintenance department provides a firm line of authority from the MO down to the technician who performs aircraft maintenance. The major segments of the department that report directly to the department head are called divisions. Divisions are subdivided into branches and branches into sections.

NOTE: In this manual, the term *department* is used as a general term and applies to all aircraft maintenance activities that have a department head.

ORGANIZATIONAL MAINTENANCE LEVEL

Organizational maintenance activities (OMAs) are the main users and operators of naval aircraft. Therefore, most of the maintenance tasks that they perform are in support of their own day-to-day operations. OMAs are composed of maintenance managers who manage staff divisions that support the productive functions and production divisions that perform the maintenance tasks.

Figure 1-1 is an organizational chart of a typical organizational-level maintenance department. The number shown in the various boxes are division and work center codes. Work center codes identify what shop performed what maintenance. The Maintenance Data System uses work center codes in recording and reporting maintenance actions. Typical work centers include maintenance control and quality assurance.

Staff Divisions

In an OMA activity, staff divisions provide services and support for the production divisions. They correlate the accomplishments and progress of production divisions. Collectively, staff divisions give the MO a consolidated view and current status of the overall maintenance picture. Detailed functions and responsibilities of staff divisions are contained in the *NAMP*. The quality assurance and maintenance administration work centers are staff divisions in an OMA.

MAINTENANCE ADMINISTRATION.—The maintenance administration work center provides the following administrative services for the department:

- Prepares maintenance-related correspondence that requires action or special attention by the MO or higher authority
- Establishes and maintains a central maintenance reporting and record-keeping system for administrative reports and correspondence to include a tickler file to ensure timely submission of recurring reports
- Implements directives that concern distribution, retention, and disposition of administrative reports and records
- Provides clerical and administrative services for the department
- Maintains a master maintenance message board that is annotated with the action that was taken

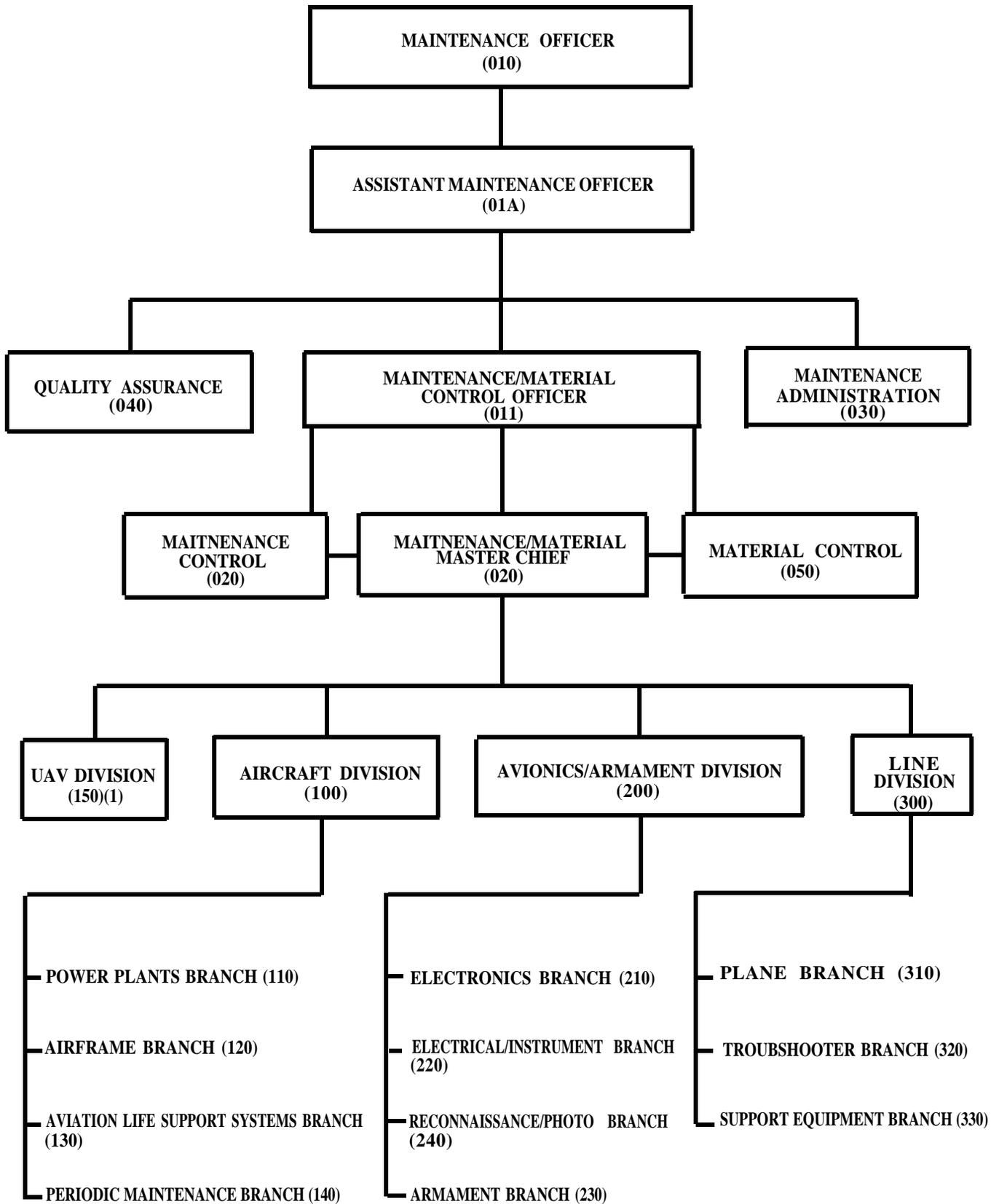


Figure 1-1.—Organizational-Level Maintenance Department Organization Chart.

- Ensures distribution of incoming correspondence and so forth
- Reproduces and distributes incoming messages and maintains a message history file by date-time-group (DTG) for a minimum of 6 months
- Coordinates department administrative and security responsibilities with other departments and divisions
- Distributes nontechnical information and publications
- Maintains personnel assignment records for the department

QUALITY ASSURANCE (QA).—The basic concept of QA is the prevention of the occurrence of defects. This concept includes all events from the start of the maintenance operation to its completion. QA is the responsibility of all personnel. Achievement of QA depends upon prevention, knowledge, and special skills.

Prevention is based upon the principle that maintenance failures should be precluded. This principle extends to the safety of personnel, the maintenance of equipment, and the entire maintenance effort. Prevention is concerned with the regulation of events rather than have events dictate maintenance.

Knowledge is derived from factual information. Data collection and analysis is a means of acquiring this knowledge.

Special skills are those skills possessed by staff that is trained in the techniques of data analysis and supervision of the QA program. Normally, production personnel do not possess these skills.

The QA program provides an efficient method of gathering, analyzing, and maintaining information on the quality characteristics of parts and components and nature of defects and their immediate impact on current operations. The program permits decisions to be based on facts rather than intuition or memory. In addition, the QA program provides comparative data that will be useful long after a particular event has occurred. QA is a staff function that requires both authority and assumption of responsibility for actions. QA's objective is to identify problem areas so that management can accomplish the following:

- Improve the quality, uniformity, and reliability of the total maintenance effort
- Improve the work environment, tools, and equipment that are used in the maintenance effort
- Eliminate unnecessary man-hour and dollar expenditures
- Improve training, work habits, and procedures of maintenance personnel
- Increase the excellence and value of reports and correspondence that are originated by maintenance personnel
- Effectively disseminate technical information
- Establish realistic material and equipment requirements in support of the maintenance effort
- Support the Naval Aviation Maintenance Discrepancy Reporting Program (NAMDRP)
- Support the foreign object damage (FOD) program

The QA division consists of a relatively small group of highly skilled maintenance personnel. Working spaces are usually near production division and the maintenance control office. For a complete list of QA division responsibilities, refer to the *NAMP*. Some functions and responsibilities of the QA division are listed below:

- Maintain the central technical publications library (CTPL) for the department, control classified technical publications for the department, and ensure that dispersed work center libraries (dispersed libraries) receive publications applicable to each work center, and that these publications are kept current.
- Review incoming technical publications and directives to determine their applicability to the department.
- Ensure that work guides, checklists, check sheets, and Maintenance Requirements Cards that define or control maintenance operations are complete and current before issuance.
- Review each engineering investigation request, quality deficiency report (QDR), technical

publication deficiency report (TPDR), or hazardous material report (HMR) to ensure that it is accurate, clear and concise, and comprehensive before it is forwarded.

- Verify Maintenance Requirements Cards (MRCs) that are entered into the Naval Aviation Logistics Command Management Information System (NALCOMIS), Organizational Maintenance Activity (OMA), or Support Equipment Standardization System (SESS) databases as changes occur to MRC decks.
- Perform inspections of all maintenance equipment and facilities to ensure compliance with fire and safety regulations.
- Provide a continuous training program in techniques and procedures that pertain to the conduct of inspections.
- Maintain a list of the current assignments of personnel who are qualified for specific QA responsibilities. When operating under NALCOMIS OMA, QA division should verify user LOGIN IDs against special maintenance qualification (SMQ) codes to ensure only qualified personnel have quality assurance representative (QAR) and collateral duty inspector (CDI) SMQ codes.

MAINTENANCE MATERIAL CONTROL.—

The MO may consider the tasks that are performed by maintenance material control a staff function. However, the maintenance material control officer (MMCO) exercises authority in a line position between the MO and production divisions. The MMCO is directly responsible to the MO for the overall productive effort and material support of the department. Maintenance/material control has two work centers—maintenance control and material control.

Maintenance Control Work Center.—Maintenance control is the nerve center of the entire maintenance department. As head of this office, the MMCO directs the production division with the aid of the maintenance control officer. The MMCO exercises control and coordination of production divisions to ensure prompt repair and movement of aircraft, parts, and materials. The MMCO also maintains liaison with supporting activities to keep the maintenance department's productive capacity compatible with workload requirements. In discharging these

responsibilities, personnel who are assigned to maintenance control perform the following functions:

- Plan, direct, and control the aircraft maintenance department's production effort
- Plan and schedule aircraft and equipment through the entire maintenance process
- Initiate maintenance actions through work centers for scheduled and unscheduled maintenance actions and assign priorities and completion times
- Maintain aircraft and equipment status through the Naval Aviation Logistics Command Management Information System (NALCOMIS)
- Maintain aircraft logs and records in accordance with established procedures
- Provide data to management in graphic and narrative form to assist in the aircraft maintenance management process
- Maintain the command's NALCOMIS system
- Collect, screen, and forward all MDS data to the local data services facility

In the final analysis, maintenance control personnel plan, schedule, and provide positive control over all maintenance in support of assigned aircraft and equipment. Most of the tasks in maintenance control are within the scope of the AZ rating. For a complete list of maintenance control responsibilities, refer to the *NAMP* and the *NALCOMIS End User's Manual*.

Material Control Work Center.—To maintain an effective aircraft maintenance program, a cooperative working relationship must exist between production and supply. Maintenance of complex weapons systems requires an adequate material supply program. A material control center in organizational maintenance level activities is the liaison between the maintenance department and the local aviation supply department (ASD).

The material control work center ensures that parts, tools, and materials are available to production divisions in a timely manner. Material control compiles and analyzes maintenance usage data and furnishes technical advice and information to the local ASD. This information is used to identify the quantity of supplies,

spare parts, and material that are necessary to accomplish the workload.

The material control work center provides material support to the aircraft maintenance department by performing the following functions:

- Ensures maintenance and material requirements for parts and materials are forwarded to ASD by using NALCOMIS
- Establishes delivery and pickup points for the material that is ordered, and ensures that the material that is received is promptly routed to the applicable work center
- Establishes procedures to operate the tool room and for tool inventories
- Initiates surveys in the event of loss, damage, or destruction of accountable items of material and equipment
- Performs certain cost and allotment record accounting, charting, and budgeting of costs
- Maintains liaison with ASD on maintenance material matters to ensure that material needs of the maintenance department are satisfied
- Performs an inventory of aircraft upon receipt and transfer to ensure that inventory log entries are complete, and inventory shortages are recorded

The material control center also maintains aircraft inventory records. This includes the inventory of aircraft upon receipt and transfer. For a complete list of material control responsibilities, refer to the *NAMP*.

Production Divisions

Permanently assigned aviation mechanics and technicians maintain naval aircraft. Organizational charts show production divisions as the lowest element, but this is not in keeping with their level of importance. If it were not for the production divisions, there would be no reason for any other part of the organization.

The production elements of an OMA consist of four divisions, as shown in figure 1-1. These divisions may be further subdivided into branches.

AIRCRAFT.—The aircraft division coordinates and completes scheduled (inspections) and unscheduled maintenance on aircraft and equipment. The aircraft division performs organizational maintenance tasks on power plants, airframes, aviator's equipment branch, and inspection branch.

AVIONICS/ARMAMENT.—The avionics/armament division performs organizational maintenance tasks in the avionics and armament equipment on aircraft. This division also provides technicians to the aircraft division (inspection branch) to accomplish scheduled maintenance (inspections) on aircraft.

LINE.—The line division provides maintenance that supports the day-to-day tasks that are involved in flight operations. The maintenance that the line division provides is limited to servicing and does not involve repair of weapon systems. Daily and turnaround inspections, oil replenishment and sampling, minor adjustment and checkout of installed aircraft equipment, and assumption of custody and accountability of division support equipment (SE) are responsibilities of the line division. The line division also administers the plane captain assignment and qualification program. The line division directs troubleshooters, who are normally personnel from work centers in other production divisions, who are assigned to the line division.

UNMANNED AERIAL VEHICLE (UAV).—A UAV division is established when responsibilities relative to the operation and maintenance of unmanned aerial vehicles are extensive. The UAV division coordinates and performs periodic maintenance, inspection, decontamination, and rehabilitation of recoverable UAVs.

INTERMEDIATE MAINTENANCE LEVEL

Intermediate maintenance supports and supplements the work of OMAs. Intermediate maintenance usually performs these functions in a centrally located area for the support of operating aircraft. These operating aircraft may be ashore, aboard ship, or within a specific geographical area.

Since an intermediate maintenance activity (IMA) is not assigned aircraft for operational purposes, its efforts are concentrated in the area of testing and repairing aircraft components.

The organizational structure of IMAs is similar to the organizational structure of an OMA. Because of its size, the complexity of its tasks, and the depth of the maintenance it performs, an IMA is composed of more divisions than an OMA. An IMA department organizational chart is shown in figure 1-2.

Staff Divisions

Staff divisions serve the same purpose as an IMA in an OMA—to provide services and support to the production divisions. The maintenance administration division, quality assurance, maintenance/material control (with its two branches—production control and material control) provide the MO with a complete picture of the maintenance situation as it exists at a given time.

MAINTENANCE ADMINISTRATION.—The maintenance administration division, under the leadership of the AMO, performs the same general services as the OMA maintenance administration division with the addition of the following additional tasks:

- Maintains liaison with the administrative department regarding departmental matters
- Safeguards and distributes personal mail to department personnel
- In the absence of a manpower, personnel, and training (MP & T) coordinator, maintains an organizational roster, automated or manual, that should include name, rate, and billet assignment in conjunction with the activity manning document
- In the absence of an MP & T coordinator, establishes and coordinates department training requirements and obtains school quotas to support department training requirements
- Coordinates transportation and communication requirements for the department
- Assigns spaces to divisions and assumes responsibility for cleanliness and security of unassigned or vacant maintenance spaces
- Controls department classified material
- Distributes locally issued maintenance directives, procedures, reports, and studies
- Arranges department participation in joint inspections of facilities that are assigned to

tenant activities, especially when a tenant activity is departing

- Maintains correspondence files in accordance with the *Navy Directive System*, SECNAVINST 5210.11

For detailed responsibilities of the maintenance administration division, refer to the *NAMP*.

QUALITY ASSURANCE DIVISION.—The QA division has the same prime responsibilities as an OMA to prevent the occurrence of defects. The QA division accomplishes this in two ways: (1) through statistical analysis to compare desired results against actual results, and (2) through extensive research to find methods for improving effectiveness of the overall maintenance effort.

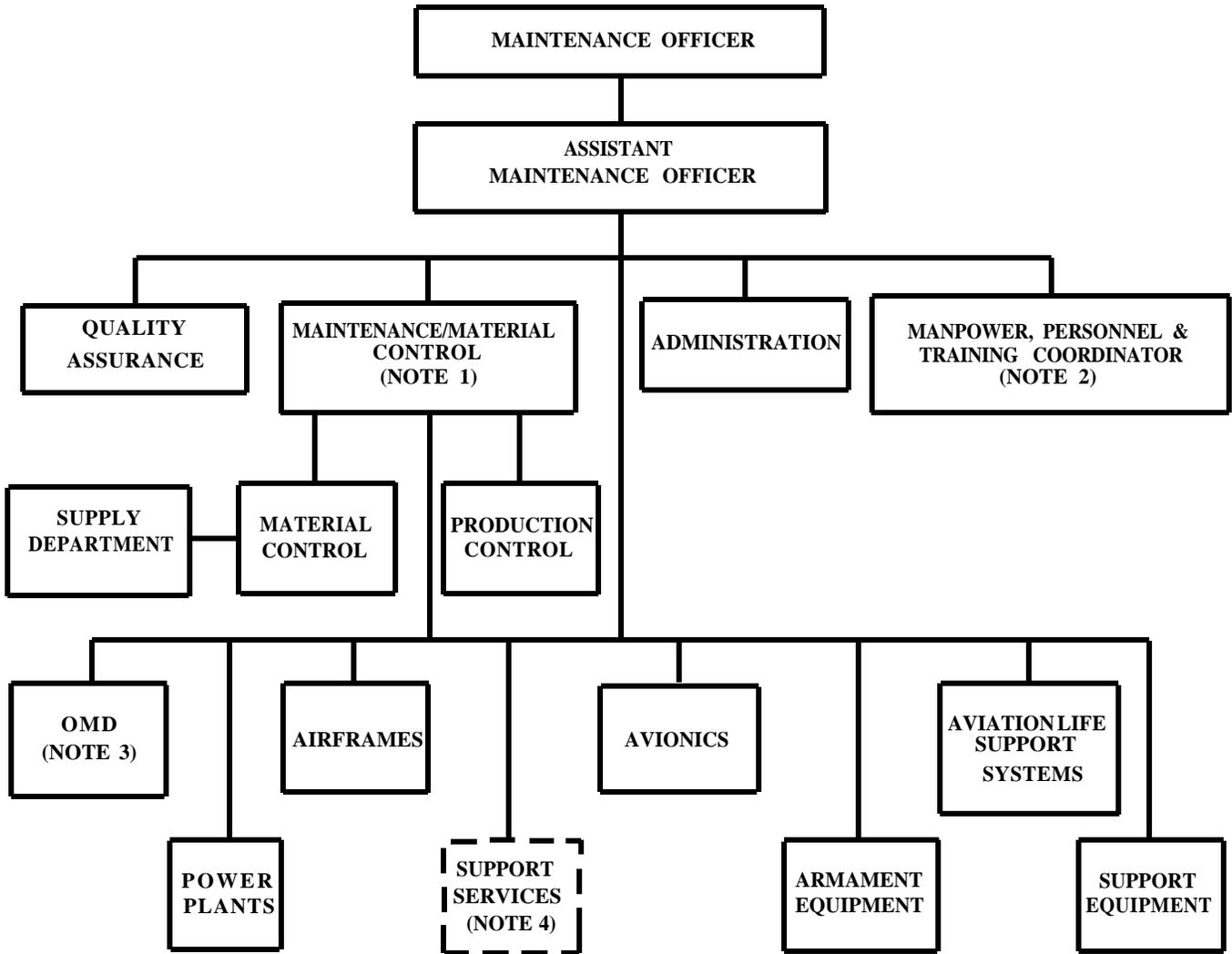
Major concerns of the QA division include the following:

- Safety of personnel and equipment
- The need for training of maintenance technicians in efficient techniques
- Reliability of equipment, parts, materials, and the procedures that are used in the maintenance of each
- Qualification of QA personnel, including collateral duty inspectors (CDIs)

MAINTENANCE MATERIAL CONTROL.—Like the maintenance material control in an OMA, maintenance material control in an IMA has two work centers—production control and material control.

Production Control.—As the name implies, production control is the central control point of the entire maintenance effort. Production control plans, schedules, and assigns the maintenance tasks within the maintenance department. Since intermediate maintenance activities exist primarily for the purpose of supporting operating activities, production control plans and schedules a workload that consists of testing, repairing, and processing aircraft components, parts, and related equipment.

Because of its size, the location of its various work centers, and the number of components that it processes daily, it is not practical for an IMA to control each component that is inducted into the activity from a central production control area. Therefore, production control delegates some of its functions to selected



Breakdowns beyond the basic divisions are not illustrated because of the variety of branches possible. Activities will be required to establish the necessary branches to meet their individual requirements. Branches should be established only when more than one work center is involved, for example, Jet Engine Branch with work centers J79 engine and J52 engine.

NOTES

1. Direct authority for production matters only.
2. For larger IMAs that have more than 500 personnel (including TAD personnel). This position is not required for IMAs with less than 500 personnel.
3. When specific authority has been granted to combine the OMD and IMA, an Organizational Maintenance Division will be established.
4. This is an optional division. Support services may include such functions as IMRL and TOL management, ECAMs, and other functions as determined by the MO.

Figure 1-2.—Intermediate Level Maintenance Department Organization Chart.

production divisions. A division with delegated functions exercises direct control of the production effort of its work centers. Although production control delegates control of some of its functions, it alone is responsible for the overall production effort of the department.

Material Control.—Material control coordinates and controls the supply functions of the maintenance department. This work center acts as liaison between the department and the local supply activity, and it processes all supply and material transactions for the other divisions of the department. The material control division of an IMA has an aeronautical material screening unit (AMSU). AMSU coordinates the screening of received materials and parts to determine status and repair responsibility and capability.

Production Divisions

Production divisions provide intermediate maintenance on aircraft components and equipment for supported activities. The standard organization of an IMA has six production divisions. IMA production divisions are generally manned by maintenance technicians of the same rating in contrast to an OMA where technicians of different ratings are grouped together into fewer divisions. A particular rating performs the same type of work regardless of the maintenance level at which a technician works. For example, ADs work on engines and related equipment, AEs on instruments and related equipment, and ATs work on avionics equipment. The difference between the work of IMA production divisions and the work of OMA production divisions lies in the greater depth of maintenance that an IMA performs.

POWER PLANTS.—Aviation Machinist Mates (ADs) who maintain engines, modules, power plant components, and associated equipment man the power plants division.

AIRFRAMES.—Aviation Structural Mechanics (AMs) are assigned to work centers in the airframes division. This division is responsible for its specified depth of maintenance for airframe and structural components, and movable structures and surfaces including their hydraulic and pneumatic control and actuating systems and mechanisms. The airframes division also maintains air conditioning, pressurization, visual improvement, oxygen, and other utility systems, as well as seat and canopy ejection systems and components.

AVIONICS.—The avionics division is manned with technicians to provide maintenance of avionics equipment for supported activities. Aviation Electrician's Mates (AEs) maintain aircraft electrical systems and instrument systems. Aviation Electronic Technicians (ATs) use conventional and automatic test equipment to maintain aviation electronic components, including repair of weapons replaceable assemblies (WRAs) and shop replaceable assemblies (SRAs). ATs also perform microminiature (2M) component repair. In addition, ATs perform test equipment qualification and associated test bench preventive and corrective maintenance.

ARMAMENT EQUIPMENT.—Aviation Ordnancemen (AOs) are assigned to the armament division. They maintain aircraft armament and aviation ordnance equipment.

AVIATION LIFE SUPPORT SYSTEMS.—Aircrew Survival Equipment (PRs) are assigned to the aviation life support systems (ALSS) division. This division maintains parachutes, life rafts, life vests, pressure suits, oxygen masks, emergency equipment kits, flight clothing, oxygen regulators, automatic parachute actuators, aviator's protective helmets, and so forth.

SUPPORT EQUIPMENT (SE)—The Aviation Support Equipment Technician (AS) maintains SE. SE includes, but is not limited to, such items such as test stands, work stands, mobile electric power plants (MEPPs), and hydraulic and pneumatic servicing equipment.

- Q9. Who is responsible to the commanding officer for the accomplishment of the maintenance department's mission?*
- Q10. Providing clerical and administrative services to the department is a function of what work center?*
- Q11. The prevention of the occurrence of defects is a concept of what work center?*
- Q12. What officer is responsible for the overall productive effort and material support of the maintenance department?*
- Q13. What work center in an OMA is the nerve center of the entire maintenance department?*
- Q14. What work center is responsible for ensuring that parts, tools, and materials are available to production divisions in a timely manner?*

- Q15. *What level of maintenance has the primary responsibility of supporting and supplementing the work of OMAs?*
- Q16. *In an IMA, what work center controls the department's classified material?*
- Q17. *What unit in an IMA coordinates the screening of materials and parts to determine repair responsibility and capability?*

SUMMARY

The objective of the Naval Aviation Maintenance Program is the achievement and continuous improvement of aviation material readiness and safety through the efficient use of resources. The governing directive of the program is *the Naval Aviation Maintenance Program (NAMP)*, OPNAVINST 4790.2. OPNAVINST 4790.2 has five volumes. Of direct interest to the AZ is volume I of the *NAMP*, which outlines procedures for the organizational and the intermediate maintenance levels, and volume III of the *NAMP*, which outlines the Maintenance Data System (MDS).

Rework and upkeep are the two types of maintenance that are performed within the Navy. Organizational maintenance, intermediate maintenance, and depot maintenance are the three levels of maintenance that are used within the Navy.

An aviation operating unit performs daily organizational maintenance in support of its flight operations. The maintenance department's mission within an aviation operating unit is to maintain operating unit aircraft in a state of full mission capability. The maintenance officer is responsible to the commanding officer for accomplishing this mission.

The maintenance administration work center provides clerical and administrative services to the maintenance department. The quality assurance work center has as its objective the prevention of the occurrence of defects in maintenance.

The maintenance material control officer is responsible for the overall productive and material support of the maintenance department. The maintenance control work center in an organizational maintenance activity (OMA) is the nerve center of the entire maintenance department. The material control work center in an OMA ensures that parts, tools, and materials are always available to the production divisions.

The intermediate level of maintenance supports and supplements the work of an OMA. In an intermediate maintenance activity (IMA), the maintenance administration work center controls the department's classified material. The aeronautical material screening unit (AMSU) of an IMA coordinates the screening of materials and parts to determine repair responsibility and repair capability.

The role that an AZ plays in the Naval Aviation Maintenance Program is an important one. Regardless of your assignment, whether ashore or at sea, in a squadron, or in an aviation intermediate maintenance department, the concept of providing safe, reliable aircraft should be your primary objective. To meet this objective, the Navy relies on you, the AZ, to provide detailed, exact information.

The references that are identified in this manual (in *italic*) are the references that you should use in your day-to-day tasks. When you are unsure about how to perform a certain task, never rely on your memory. Learn to use your references. Using your references should make your job easier and you will be respected for being professional and **doing your job right the first time.**

ANSWERS TO REVIEW QUESTIONS

- A1. *The Naval Aviation Maintenance Program (NAMP).*
- A2. *Five.*
- A3. *Volume I.*
- A4. *Volume III.*
- A5. *Maintenance.*
- A6. *Organizational, intermediate, and depot.*
- A7. *Organizational.*
- A8. *Rework and upkeep.*
- A9. *Maintenance officer.*
- A10. *Maintenance administration.*
- A11. *Quality assurance.*
- A12. *Maintenance material control officer.*
- A13. *Maintenance control.*
- A14. *Material control.*
- A15. *Intermediate level.*
- A16. *Maintenance administration.*
- A17. *Aeronautical material screening unit (AMSU).*

CHAPTER 2

MAINTENANCE ADMINISTRATION

As an AZ who works in the maintenance administration division, you will provide clerical and administrative services in support of the maintenance department. In this chapter, we will concentrate first on general office procedures. As with the individual person, office atmosphere is the product of both physical and mental factors.

MAINTENANCE ADMINISTRATION OVERVIEW

LEARNING OBJECTIVE: Describe the responsibilities of the maintenance administration division.

Your duties in the maintenance administration division could range from the preparation of simple memorandums to the preparation of enlisted performance evaluations. Whatever the extent of your duties, they are all performed under the direction of the assistant maintenance officer (AMO). The responsibilities of maintenance administration division include, but are not limited to, the following:

- Preparing maintenance-related correspondence
- Establishing a central maintenance reporting and record-keeping system for administrative reports and correspondence, which includes a tickler file to aid in timely submission of recurring reports
- Maintaining a master paper or electronic maintenance message board of current messages that are annotated with the action taken
- Maintaining a message history file by date-time-group (DTG) for a minimum of 6 months
- Distributing nontechnical information and publications
- Receiving, safeguarding, and distributing personal mail for the department

- Controlling department classified material
- Assigning spaces to various divisions, establishing responsibility for security and cleanliness of each space, and assuming responsibility for the cleanliness and security of vacant and unassigned spaces
- Maintaining an organizational roster board in the absence of a manpower, personnel, and training (MP&T) coordinator
- Coordinating department training requirements and obtaining school quotas to support department training in the absence of an MP&T

The performance of some of these duties will depend on whether you are stationed in an organizational or intermediate maintenance activity and whether you are afloat or ashore. Regardless of the maintenance level that you are assigned to or whether it is located ashore or afloat, most of your duties will be performed in a comfortable, centrally located office. You may be assigned to a small office where you are responsible only to the division officer. Alternatively, you may be assigned to a large office where you are one of several petty officers and strikers who work under the supervision of a chief petty officer. In both types of offices, you will likely be working in close proximity with the assistant maintenance officer (AMO) and maintenance officer (MO). This close proximity requires that you maintain professionalism at all times.

You will also be charged with taking telephone calls and messages and meeting and greeting visitors of the AMO and MO. The most important thing to remember here is that your attitude and the general appearance of your office make an immediate impression on customers who call or visit it. One of your jobs as a maintenance administration worker is to create a positive impression.

Q1. What division maintains a master paper or electronic maintenance message board of current messages that are annotated with the action taken?

OFFICE ARRANGEMENT AND PROCEDURES

LEARNING OBJECTIVES: State the importance of office arrangement and office procedures, including telephone procedures. Identify the major components of a computer.

The amount of control you will have over the physical arrangement of your office varies with the office location and the type of duty. Both aboard ship and ashore, conditions outside your control (space limitations) usually determine the kind of office and equipment you will have. You may or may not have a choice in the arrangement of furniture. Without a doubt, you will be expected to take your share of responsibility for the general neatness and care of the place. You should perform these duties as a routine part of the job and not wait to be asked or told.

When you begin work in a new billet, one of your first concerns should be to learn as much as possible about the overall organization, your office organization, and the immediate chain of command. After you understand all the functions of the office, the role that you will play should be readily apparent. This knowledge not only makes the various jobs more interesting but makes your job easier to perform as well. The files, for instance, take on a new interest with the knowledge of the use of the records they contain.

You should know the name and the rank or rate of every person in your office, and the manner in which every signing official makes a signature. You should learn as much as possible about other jobs in the office and how the performance of these jobs contributes to the overall operation of the office.

The next step is to see the office as part of a larger plan. The office may be viewed in two ways—as a part of the squadron or station and as a part of the overall aircraft maintenance program that operates through similar offices throughout the Navy.

OFFICE ARRANGEMENT

If it becomes necessary to rearrange the office furniture, you should plan before you start to move things around. The following guidelines may help you:

- Locate desks so that people who use them will have enough light but no glare. There should be as much air as possible at a desk without locating anyone in a draft.

- Place equipment where it can be easily used and where work will flow in one direction—not crisscrossing the room.
- Arrange tables or counters to handle supplies or to assemble papers.
- Place files where they can be easily accessed but out of the flow of general office traffic.
- Use bookcases and special shelves for books, magazines, and pamphlets to keep these items from using up workspace on desks and tables.

While striving for orderliness and good appearance, do **not** go to extremes. Remember that the office exists to get work done, and too much emphasis on appearance may interfere with the day-to-day work. It is possible to plan an arrangement that is not only convenient but also looks orderly and uncluttered. Within reasonable limits, the best arrangement is the one that gets the work done.

The appearance of an office is improved by simple practices, such as the following:

- Putting things away from day to day. This is one of your responsibilities.
- Clearing correspondence baskets daily to avoid the accumulation or misplacement of documents.
- Properly stowing supplies that may stain documents or deteriorate rapidly.
- Not stowing cleaning or hazardous materials in desks.
- Removing equipment from desks that might be damaged when the office is cleaned.
- Avoiding accumulations of loose paper or trash in the office. They may create a fire hazard.
- Securing all gear well.
- When securing equipment or supplies that others have been using, exercising good judgment to avoid loss or misplacement of material. What may look like complete confusion to one person may have complete order and meaning to another.

ARRANGING THE DESK

You are always responsible for your own desk. Exactly how you arrange your desk is governed by your own preference and the kind of work you are doing, but you should have an orderly plan.

- If you spend most of your time typing correspondence, you should ensure that an adequate amount of letterhead or bond paper is near.
- Keep pencils, erasers, paper clips, and other small articles in shallow desk drawers or trays.
- Keep unfinished work in a tray or basket.
- If you are unsure about where to keep unfinished work, ask your supervisor.
- If any personal articles are kept in your desk, place them in a separate drawer.
- At the end of the day, clear everything possible from the top of the desk, set straight any articles that must remain on top, and close all drawers.

DUTIES OF A RECEPTIONIST

At one time or another, you will probably receive visitors and greet official callers at your activity or office. The manner in which you conduct yourself and the impression you make determine largely the visitor's initial impression of the whole office or organization. Often the receptionist's manner is apparent, even before he or she moves or speaks, and it sets the tone for what follows.

When receiving and greeting visitors, you should be guided by a few simple rules of business and courtesy. If you do not already know the visitor, you should ask the individual's name. You might write the name on a slip of paper to hand to the person the visitor wishes to see. Listen carefully to inquiries and exercise intelligence and common sense before replying. Do not expect the visitor to know all about the office or the people in it. When referring to Lieutenant Smith, for example, ensure that the visitor knows where Lieutenant Smith's desk is located. If possible, take the visitor to Lieutenant Smith, introduce him, and briefly state the visitor's business. If you cannot help, suggest another source that may be used. This is where broad on-the-job experience is useful. You should never let people leave your office who feel like they have run

into a blank wall or that you were unwilling to assist them.

A good receptionist is, to some extent, a buffer for the other people in the office. Time can often be saved if the receptionist knows the answer to an inquiry. You should be careful to know just how far you should go on your own and when it is better to let someone else take over.

When the people in the office are especially busy, the receptionist should protect them as much as possible without denying legitimate requests or causing visitors to wait for unreasonable lengths of time. If a delay cannot be avoided, it may be feasible to suggest that you call the visitor when the person to be seen is free or to find out whether someone else can help.

As an AZ, you should understand that one of your most important functions is to be of help to other maintenance personnel, and no reasonable request should be too much trouble. You should be polite, pleasant, and considerate at all time. Even when a person's requests may seem a bit unreasonable, maintain your composure and good manners.

TELEPHONE PROCEDURES

When a small child first tries to talk on the telephone, the child is likely to nod the head for yes instead of speaking. Many adults, to a lesser degree, make the same mistake. They forget how important facial expression and gestures are in face-to-face conversation and that these factors are missing on the telephone. Misunderstandings can arise on the telephone because the person at the receiving end cannot see the speaker's expression.

People sometimes develop telephone voice mannerisms that give a misleading impression. To avoid this mistake, listen to yourself and decide whether you would like to be spoken to in that tone of voice. Is it natural? Is it pleasant? Is it friendly and yet businesslike? Remember that a conversational tone is best for telephone use. Avoid voices that may sound dull, pompous, informal, impatient, or too sugary. Speak clearly and carefully. Be especially careful in your choice of words to ensure that the intended meaning is clearly conveyed. You should open a telephone conversation by identifying your office and introducing yourself when answering and calling someone on the telephone. For example, "This is the Naval Advancement Center, AZC Smith speaking." If callers fail to identify themselves when you answer the telephone, and it is necessary to know the name, ask for

it tactfully. You might say, "May I ask who is calling, please?" or "May I have your name, please?" Avoid phrases that may sound abrupt or suspicious, like "Who's this?" or "Who's calling?"

If a telephone caller requests a person who is out of the office, always offer to take a message. If given one, write it down while you are still on the telephone. Be sure to get all details correct, especially the name and the telephone number of the caller. If no message is given, make a note about the call. After hanging up, place the note where the person for whom it is intended will be sure to receive it. It is often a good idea to say, "Perhaps I could help you." Even if it develops that you cannot, the caller will appreciate your good will. As you learn more about your duties, you will be able to answer more and more questions and save a second call.

TAKING INSTRUCTIONS

When you are given instructions, it is wise to make notes. This is especially true if the instructions are not to be carried out immediately. If there are a number of things to remember, as is often the case, some detail of the instructions may be forgotten that may change the whole operation. Notes provide a means of refreshing your memory and ensuring you heard and understood the directions that were given.

USE OF WORKING HOURS

Obviously, working hours should be used to get work done. However, if you have no work to do, you are encouraged to study training manuals and the references that you use in the daily performance of your job. This wise use of time not only helps you in performing your job more efficiently, but also aids you in preparing for your next rating examination. Remember, it is never too early to start studying. Generally, however, you can find something to do. Your wise use of time demonstrates your initiative, your ability to organize work, and your interest in getting ahead.

OFFICE MACHINES

Office machines play an important part in the efficient operation of almost all aircraft maintenance offices. In the course of your duties, you will be required to prepare and disseminate correspondence, complete reports, as well as reproduce copies of messages, letter-type technical directives, charts, forms, and so forth. Therefore, you must be able to

operate word processors, computers, and copiers. You should also know how to provide routine care and maintenance to any machine that you operate. Since almost all office machines are electrical, you should follow certain precautions when operating or cleaning a machine or performing routine maintenance on a machine.

WARNING

Do not eat or drink while operating or cleaning computers or other electrical equipment. Spilling coffee, soda, or foods onto a computer can damage the unit as well as increase the chances of serious bodily harm due to electrical shock.

Computer Familiarization

Throughout the Navy, computers simplify the management and storage of large volumes of data. The computer collects, stores, collates, and processes information in a fraction of the time that is required with manual procedures. In addition, with the help of computer software programs, the preparation and transmission of naval correspondence has also become faster, easier, and more efficient.

Most naval aviation commands have word-processing software programs. The manufacturer of the program usually provides an easy to understand instructional booklet, tutorial program, or both with the computer for easy operation of the word-processing program. Regardless of which word-processing program your activity uses, the instructional booklet and the tutorial should enable you to perform basic computer functions in a very short time.

The major components of the computer include the central processing unit (CPU), an input device (keyboard, mouse), and an output device (printer, monitor). These components are known as the computer's hardware. These computer components by themselves, however, are useless without computer software. Computer software is a series of instructions that a computer interprets and executes to perform certain functions.

The things you will learn about your computer will grow out of what you already know about typewriters. For example, when you use a typewriter, you must manually load a clean sheet of paper before getting started. The computer automatically provides a blank screen for use as a clean sheet of paper. The computer

keyboard is also similar in appearance and function as the typewriter keyboard. The computer keyboard, however, features special keys called function keys to allow users to operate the computer's functions and commands. The computer keyboard also has a numeric keypad for performing fundamental mathematical operations. Further, most electric typewriters have an automatic return. Operating systems of software programs have a similar feature, called wraparound, that returns the cursor to the next line once the typist finishes the current line.

Before operating a computer, take time to read the instructions. In a short time, you should be able to successfully operate your computer and become familiar with the word-processing programs available to you.

Since computers are delicate tools, care should be exercised when computers must be moved or cleaned. A sudden drop on the deck or the use of certain cleaning agents may be harmful to the computer or may render the unit unusable. When a computer must be moved or cleaned, refer to the owner's manual that is provided by the manufacturer.

Word Processing (Typing)

A graduate of the AZ "A" school is not required to take a typing performance test. Successful completion of the approved typing course is a prerequisite for graduation from the AZ "A" school. However, AZ strikers (non-"A" school graduates) must still complete the typing performance test before they can participate in the advancement examination for AZ3.

The typing performance test is usually administered by an activity's (station, ship) education services officer, and may be taken on either a typewriter or a personal computer. The test should be available at least once per quarter. The division chief petty officer (CPO) or petty officer first class, however, may be able to get the test administered on other occasions if they request it at the appropriate time.

AZ strikers are required to type 20 words per minute. For the striker who has had prior typing experience, a small amount of practice will result in 20 words per minute proficiency in just a little time. Therefore, when the AZ striker feels that he or she can type 20 words per minute consistently, the striker should ask the division petty officer for the performance test. Once the striker passes the typing performance test and has the test results entered in his or her service record, the minimum typing requirement

for advancement has been met, and the test does not have to be taken again.

Computers and word processors have all but replaced the typewriter. Therefore, the typewriter will not be discussed in this chapter.

- Q2. *You should know the names and rates or rank of everyone in the office when you start work in the maintenance administration division. (True or False)*
- Q3. *What is the word-processing equivalent of an electronic typewriter's automatic return?*
- Q4. *The input device and the output device are two basic components of a computer. What is the third basic component of a computer?*

CLASSIFIED INFORMATION

LEARNING OBJECTIVE: State the three classifications of classified material and the security and handling of each.

AZs handle all types of publications and correspondence, some of which may be classified. Therefore, you will need to know about classified material. In this section of the manual, we will discuss security classifications, safeguarding classified material, correct handling, storage, and transmission of classified material. For detailed information concerning the security of classified information, refer to the *Department of the Navy (DON) Information Security Program (ISP) Regulation, SECNAVINST 5510.36*.

CLASSIFICATIONS

There are three approved classifications of classified material: Top Secret, Secret, and Confidential. FOR OFFICIAL USE ONLY is **not** an approved classified material classification. Storage requirements, method of transmission, and safeguarding procedures vary for each classification. The following is a brief description of each classification.

Top Secret. A Top Secret designation is applied to material that, if disclosed, could be reasonably expected to cause exceptionally grave damage to national security. Examples include material on armed hostilities against the U. S. or its allies or disruption of foreign relations vitally that affect national security.

Secret. A secret designation is applied to material that, if disclosed, could reasonably be expected to cause

serious damage to national security. Examples include material on the disruption of foreign relations that affect national security, disclosure of significant military plans, or compromise of scientific or technological developments.

Confidential. A confidential designation is applied only to material that the unauthorized disclosure of could be reasonably expected to cause damage to national security. Information that indicates movement and performance of troop or naval forces or discloses test, design, and production data on weapons systems should have a confidential classification.

SECURITY OF CLASSIFIED MATERIAL

Commanding officers have the responsibility of safeguarding all classified material within their commands. They should ensure that classified material that is not being used or under personal observation of authorized personnel is stored in accordance with the *Department of the Navy (DON) Information Security Program (ISP)*, SECNAVINST 5510.36. Top Secret material should be stored in a vault, strong room, or security container that is protected by an alarm system or guarded by U. S. citizens during nonworking hours. Secret or Confidential material may be stored in the same manner prescribed for Top Secret material. Secret and Confidential material may also be stored in steel filing cabinets that have approved built-in combination locks or, as a last resort, in steel filing cabinets that are equipped with a steel lock bar. The combination must be changed when one of the following events or situations occurs:

- The container is first placed in use.
- Authorized personnel who know the combination no longer require access.
- The combination is suspected of being compromised.
- The container is taken out of service.

TRANSMISSION OF CLASSIFIED MATERIAL

You should not handle classified information unless you have been authorized to do so by the commanding officer, and then, only when there is a reason for you to do so. Classified material should only be transmitted in the custody of authorized personnel or by an approved electronic system.

Top Secret material should be transmitted by cleared military personnel, DOD contractors, Defense Courier Service (DCS), or by electronic means in encrypted form. Top Secret material should never be transmitted by registered mail or handled by regular routing procedures.

Secret and Confidential matter may be transmitted by any means that is approved for Top Secret or by Registered Mail. The AZ will be concerned chiefly with its transmittal by Registered Mail. Material that is designated as Confidential requires modified handling procedures and may be sent by ordinary U.S. mail, provided the mail does not pass out of U.S. control and does not enter a foreign postal service. Confidential material may also be transmitted electronically in unencrypted form over landlines that are leased or owned by the U.S. government.

NOTE: Safeguarding classified material is an all-hands effort. If you suspect that classified material has been compromised, immediately contact the command security manager, the commanding officer, or the command duty officer.

TRANSMISSION OF “FOR OFFICIAL USE ONLY” MATERIALS

Documents that have been designated “FOR OFFICIAL USE ONLY” do not require the same level of safeguard for storage and transmission as does Top Secret, Secret, or Confidential material. The main thing to remember is that FOR OFFICIAL USE ONLY documents should be disclosed only to persons who have a need to know the information in the documents for the official performance of their duties. For you, this means that you should only disclose such material as directed by persons above you in your chain of command. The fact that a person might be a senior petty officer or commissioned officer would not entitle that person to require access to information that has been designated FOR OFFICIAL USE ONLY if the individual were in a different organization. If you doubt another’s right to see a document, you should explain politely that under the circumstances you are not allowed to show the material to the individual. If the individual persists in the request, tactfully refer him or her to someone senior in the chain of command.

Q5. What instruction governs the handling, storage, and transmission of classified material?

Q6. What are the three approved classifications of classified material?

- Q7. *What officer has responsibility for safeguarding classified material in an activity?*
- Q8. *By what means should Top Secret material be transmitted?*

OFFICIAL CORRESPONDENCE

LEARNING OBJECTIVE: Identify the elements of naval correspondence, including standard letters, endorsements, memorandums, and naval messages.

Official correspondence in the Navy includes all recorded communications sent or received by naval personnel in the execution of the duties of their office. Besides letters, correspondence includes memorandums and endorsements as well as messages that are transmitted by electronic means.

Within the Navy, letters are prepared in accordance with procedures outlined in *the Department of the Navy Correspondence Manual*, SECNAVINST 5216.5. SECNAVINST 5216.5 outlines procedures to write standard and business letters. SECNAVINST 5216.5 also outlines procedures for the preparation of memorandums and endorsements. Naval messages are prepared in accordance with procedures outlined in *Naval Telecommunications Procedures User's Manual*, NTP 3.

HANDLING INCOMING MAIL

A local instruction normally prescribes procedures for handling incoming and outgoing mail in individual activities. However, there are some general guidelines that you should follow when handling personal and official mail. Therefore, you need to be familiar with your department's incoming mail-handling procedures.

The volume of mail that is received by naval activities makes it desirable to eliminate unnecessary operations whenever possible. It is important to ensure, however, that a record of all important official correspondence is maintained. Experience and judgment are required to determine what mail should be controlled and what controls can be maintained most effectively.

You should sort mail when it arrives at the maintenance office. To do this, separate personal mail from official mail, and separate mail that can be directly routed from mail that should be controlled. Once separated, place routine personal and official mail (as appropriate) in a secure designated area for

divisional pickup or deliver the mail to the appropriate division or work center.

Personally addressed mail falls into two categories—purely personal mail and personally addressed official mail. You should discourage the reception of personally addressed mail at the office because personally addressed mail interferes with the handling of official mail. Personally addressed official mail and correspondence are hard to route and control; therefore, these are not encouraged. A certain amount of such mail will be received, however, and should be delivered unopened whenever possible.

Official mail is routed without opening whenever possible. If information on the envelope does not clearly indicate the intended organizational division or office, official mail should be opened so it can be routed. When mail must be opened, the sorter should read its contents only as far as it is required to determine its destination. Mail that requires priority handling should be delivered promptly.

Personally addressed mail (official and routine) that does not require control will make up the bulk of the mail you receive at each mail call. The remainder of the incoming mail will consist of correspondence that requires some type of control. Mail control is defined as any procedure that is used to make a record of the receipt, location, or dispatch of mail. This definition includes logging or preparing other records to indicate receipt and includes obtaining signatures for classified and registered mail, following up to ensure action, and providing information on the location of an item. The important thing to remember about mail that requires control is that you should never accept or distribute classified or registered mail without authorization and then only when you provide or obtain a signature. Refer to your activity's mail and correspondence handling procedures for mail that falls in this category. Mail controls require additional work and ensuing delays and should be used only for selected types of important mail. Yet, it should be emphasized that some controls are definitely needed for certain types of mail.

CORRESPONDENCE PREPARATION

As an AZ, you must be able to type an official letter correctly and neatly. Every division of the maintenance department where you serve is likely to draft at least an occasional letter for the department head's signature or release. In a maintenance administration office, correspondence preparation will make up a good portion of your daily work routine.

There are two general types of letters—standard and business. The standard letter is a primary tool that is used within the Navy for written communication. For the most part, you will prepare the standard letter. An addressee of a standard letter is a naval activity, the Department of Defense, the Coast Guard, or a civilian firm that deals widely with the Navy. These addressees are familiar with standard letter. An addressee of a business letter is an individual, a civilian firm, and a government agency. These addressees are not familiar with the standard letter. The business letter is not covered in this manual. Refer to the *Department of the Navy Correspondence Manual*, SECNAVINST 5216.5, for information on the preparation of the business letter.

The format of an unclassified standard letter is shown in figure 2-1. As you read the following sections, refer to figure 2-1.

Stationary

Letterhead stationery is normally used for the first page of a standard letter. If a printed letterhead is not available, type or stamp the letterhead in the center of the first page four lines from the top. Type second and subsequent pages on plain bond paper similar to the letterhead in size and quality.

Copies

Before typing a letter, determine how many copies you will need. The requirement for copies of naval letters depends on the subject and local filing practices. Although the necessary number of copies must be

**NAVAL EDUCATION AND TRAINING PROFESSIONAL
DEVELOPMENT AND TECHNOLOGY CENTER
6490 SAUFLEY FIELD ROAD
PENSACOLA, FLORIDA 32509-5237**

**5216
Ser 23/116
22 Oct 99**

**From: Commanding Officer, Naval Education and Training Professional
Development and Technology Center**

To: Commander, Naval Education and Training

Via: Commanding Officer, Naval Air Station, Pensacola

Subj: HOW TO PREPARE A STANDARD LETTER

**Ref: (a) SECNAVINST 5216.5D, Department of the Navy Correspondence
Manual**

Encl: (1) Example of a Standard Letter

1. This example of a standard letter lists all of the elements of the heading that may appear in a standard letter. The From, To, and Subj lines must appear in every standard letter. Via, Ref, and Encl are optional lines. Note that all letters in the subject line are capitalized.

2. The From, To, and Via lines in the heading are all single space. The spacing between the Via and Subj, Subj and Ref, and Ref and Encl lines are all double-spaced. Paragraphs are double-spaced and text within paragraphs is single-spaced.

A. SAILOR

Figure 2-1.—Standard letter.

determined separately for each situation, the following information may help you:

- When making copies, remember that photocopying is convenient but expensive.
- Maintain an updated command distribution list. An updated distribution list prevents the sending of correspondence to commands that have no further need of it.
- Resist the urge to send “just in case copies.” Try to pinpoint the exact number of copies that are needed.
- Use two-sided photocopying whenever possible.
- Include only addressees with a genuine need to know whenever your letter has a “Copy to” block.
- Avoid keeping “nice to have” copies of documents you don’t really need.

STANDARD LETTER FORMAT

The format of the standard letter is precisely outlined in the *Department of the Navy Correspondence Manual*, SECNAVINST 5216.5. You should follow the procedures in SECNAVINST 5216.2 to the last detail when you prepare naval correspondence. In addition, SECNAVINST 5216.2 provides detailed examples of standard letters, memorandums, and endorsements. Included in an appendix to SECNAVINST 5216.2 are correct models of address and salutation, available forms and envelopes, and stationary requirements.

Margins

You should maintain a 1-inch margin at the top and bottom and on both sides of each page of a standard letter. Several exceptions exist. One exception is when you type the letterhead. Another is on the page where the signature appears.

General style

Neither a salutation nor a complimentary close appears on a standard letter. Type major paragraphs in block style, that is, without indenting. Periods do not follow the parts of the heading or the closing. Use abbreviations in the following items of the heading: Subject (Subj:), Reference (Ref:), and Enclosure (Encl:). When referred to in the text, spell out the item, and do not capitalize the initial letter in the item unless

the item is the first word of a sentence. When a heading entry is too long to complete on one line, continue the heading to the next line and flush with the first word of the entry.

The format of a standard letter is discussed in the following text.

IDENTIFICATION SYMBOLS: There are three elements that make up the identification symbol: (1) the standard subject identification code (SSIC), (2) originators code by itself or in a serial number, and (3) the date. Type these elements in the upper right-hand corner and blocked one below the other. Identification symbols are used on correspondence for reference, identification of the sender, and for filing record purposes. Elements of the identification symbol are described below:

- **SSIC.** When a “Refer to” line is printed on the stationary, it governs the location of the identification symbols. The standard subject identification code (SSIC) is a four- or five-digit numeric code that is used to group correspondence. *The Department of the Navy Standard Subject Identification Codes*, SECNAVINST 5210.11, contain SSICs. If the drafter of the letter has omitted this information from the rough draft of a letter, you should look up the correct SSIC in the SECNAVINST 5210.11.
- **Originator’s code.** The originator’s code may be the office symbol of the drafter, the hull number of a ship, or other unique code that is dictated by local policy. The originator’s code should appear on all standard letters, and may or may not include a serial number, depending on local policy and correspondence classification. All classified correspondence must have a serial number along with the security classification. The serial number for unclassified correspondence may be omitted. The administration department of the ship or station where you are assigned normally controls the serialization of outgoing correspondence.
- **Date.** Type the date in day-month-year order; for example, 1 June 95. Type or stamp the date that the letter is signed. Omit the date when correspondence will be signed on a later date.

CLASSIFICATION: If a letter is classified, type the appropriate designation, TOP SECRET, SECRET, or CONFIDENTIAL, in capital letters at the left margin two lines below the date in the identification symbol.

In addition to the typed classification, stamp the classification (with red stamped lettering, if possible) in the center of the top and bottom margins. When you use either of the terms Top Secret, Secret, or Confidential in the body of correspondence to denote a classification category, capitalize only the initial letter or letters. For detailed instructions regarding classified correspondence preparation, refer to the SECNAVINST 5510.36.

"FROM" LINE: Type the "From" line two lines below the date in the identification symbol or two lines below the classification at the left margin. Allow two spaces between the colon after "From" and the beginning of the addresser's title. The "From" line identifies by title, the official in authority (usually the commanding officer or the officer-in-charge) over the activity with cognizance over the subject that is covered by the letter. If an addressee needs to reply to the letter, he or she should direct the reply to the addresser. The "From" line furnishes the addressee with this information. Remember that all standard letters must have a "From" line. Use only long address titles in this section.

"TO" LINE: Place the "To" line on the next line below the "From" line. Allow four spaces from the colon after "To" to the beginning of the title of the addressee. When the functional title does not clearly distinguish the addressee, give sufficient information as to the intended activity to assure that the letter is correctly delivered. Except when you prepare correspondence that is intended for a ship, follow the title of the addressee with the title or the code designation (in parentheses) of the office that has immediate responsibility for the subject matter. Use the complete mailing address with the ZIP code for the "To" addressee when you want the address for a record.

"VIA" LINE: Place the "Via" line, if any, on the next line below the "To" line. If there is more than one "Via" addressee, number each with a numeral that is enclosed in parentheses: (1), (2), (3) and so forth. "Via" addressees are used when one or more activities should see a letter before it reaches the activity that it is addressed to. The numerals indicate the sequence through which the correspondence is sent.

"SUBJECT" LINE: Use the abbreviation "Subj" to introduce a topical statement of the subject of the correspondence. Place the "Subj" line two lines below the preceding line of type. Allow two spaces from the colon after "Subj" to the beginning of the subject. Use normal word order. Capitalize all letters in the subject

line. A letter of reply usually repeats the subject of the incoming letter.

"REFERENCE" LINE: Use the abbreviation "Ref" to identify applicable references. References are previously released correspondence or conversations that have a direct bearing on the correspondence that you are preparing. Type the "Ref" line two lines below the last line of the subject line. Begin each reference citation on a new line. Allow three spaces between the colon after "Ref" and the beginning of the first reference. List references in the order that they are discussed in the text of the communication. Identify references with small letters that are enclosed in parentheses: (a), (b), (c), and so forth. When referencing a letter, you should include the following information:

- The abbreviated title of the originator
- Location of the originating activity
- The abbreviation "ltr" or "memo"
- All identification symbols that were assigned to the referenced letter
- The date

Other types of references include publications, instructions, telephone conversations, endorsements, and messages. When documents other than letters or memos are listed as references, they should be fully identified as to origin, title, and date. Specific samples of various types of references are listed in SECNAVINST 5216.5.

"ENCLOSURE" LINE: Include the abbreviation "Encl" in the heading when correspondence that bears directly on the standard letter is forwarded with the letter. Place the "Encl" two lines below the preceding line of text with each enclosure notation beginning on a new line follow the colon after "Encl" with two spaces. Number enclosures with numerals in parentheses: (1) (2), and so forth. List each enclosure in the order that it is discussed in the text. Identify each enclosure that accompanies the letter by typing, stamping, or writing "Encl" in the lower right corner plus the number that is assigned to it in parentheses, for example, Encl (1).

TEXT: Begin the text (or body) of the letter two lines below the heading information. When drafting a letter, begin by making the opening paragraph clear and concise.

Strict procedures apply when a standard letter that will contain classified information is drafted. Each paragraph that contains classified material must be identified by its classification. Some letters may contain classified and unclassified information. In this case, the overall letter should be assigned the highest classification of material that is contained in the letter.

Mark or number a major paragraph flush at the left margin with an Arabic numeral with a period. Allow two spaces between the period and the first word of the paragraph. Single-space a paragraph in a letter. Double-space between paragraphs and subparagraphs. Do not begin a paragraph at the bottom of the page unless you have enough space for at least two lines of text on that page and at least two lines of text on the following page.

You should indent subparagraphs four spaces from the left margin and mark each with a small letter that is followed by a period. The second and succeeding lines should extend between the left and right margins. Indent each further degree of subdivision accordingly. Mark sub-subparagraphs with numerals in parentheses and the next lower degree paragraph with small letters in parentheses. If you need subparagraphs, you should use at least two. You should limit your use of subparagraphs whenever possible.

SIGNATURE BLOCK: Type or stamp the signature block. Begin the block at the center of the page, four lines below the last line of the text. The signing official's name should be in capitals. Don't include the rank or the title of the signing official. Include the term "By direction" below the signature when a subordinate is authorized to sign the letter. Use the term "Acting" below the signature when the signer has been formally appointed to temporarily sign the letter in the absence of the commanding officer or other signing official. Enter a title under the signature block of a principal subordinate who is authorized to sign by title, such as the chief of staff or deputy in a major command. For correspondence or orders that affect pay or allowances, enter "By direction of the Commanding Officer." The term "By direction" means the correspondence is signed by direction of the commanding officer, and it is only used when the person who signs is authorized to do so in writing.

"COPY TO" LINE.—The "Copy to" line is an optional line that list addressees outside your activity that have a need to see a letter's content but have no need to take action on the letter. When used, place the "Copy to" line at the left margin on the second line below the signature line. List the officials who will

receive copies with abbreviated titles below "Copy to" and even with the left margin. In naval correspondence, "Copy to" addressees may be indicated on the original as well as on the copies. Addressees that appear under the "Copy to" line do not have to be listed by seniority and should be kept to a minimum.

PAGE NUMBERING.—Unless the letter is classified Top Secret, do not number the first page of a letter. Number each page of a Top Secret letter.

On all other correspondence, number the second and succeeding pages. Center page numbers 1/2 inch from the bottom edge of the page beginning with the number 2. Type the page numbers without parentheses, dashes, or periods.

The signature page of a letter that exceeds one page in length should contain a minimum of two lines of the text. Repeat the subject shown on the subject line of the first page on the sixth line from the top of the second and succeeding pages.

Assembling a letter

After you complete a letter, arrange the correspondence that should accompany the letter for signature according to the instructions of the signing official. The arrangement that is outlined below is a suggested order for assembling an outgoing letter and may be altered to conform to local practices. For specific guidelines, refer to the SECNAVINST 5216.5.

1. Briefing sheet as prescribed locally. Brief sheets may be omitted for short, self-explanatory letters.
2. Original outgoing letter to be signed, arranged in normal order.
3. Courtesy copy with enclosures, if required, arranged in the order that they are listed in the letter.
4. Copies for "Via" addressees with enclosures.
5. Envelopes or mailing labels, if required.
6. Copies for "Copy to" addressees, with enclosures if required.
7. Official file copies of the letter with enclosures.
8. Incoming letter, previous correspondence, or reference documents, if any.

MULTIPLE-ADDRESS LETTERS

A multiple-address letter is a standard letter that is addressed to two or more activities. The addressees

may be individually identified in the address or addressed as a group. The format of the multiple-address letters is the same as the naval letter. The only exception is in the handling of addressees. When there are four or fewer addressees, the title of the first addressee is typed on the "To" line, with the other addressees listed on succeeding lines, each title flush with the first. For more than four addressees, a "Distribution" line is used. When a "Distribution" line is used, the short title, collective titles, or both collective and short titles of addressees are listed individually at the end of the letter.

JOINT LETTERS

A joint letter is a naval letter that is signed by officials of two or more activities to establish an agreement or for matters of mutual concern. A joint letter has much the same format as a standard or multiple-address letter. Prepare a joint letter on plain bond paper. In a joint letter, type the command titles of each official who will sign the letter at the top of the page. Ensure that the command title of the most senior official is listed on top. Include the identification symbols (SSIC, originator's code, and date) along with the short title of both commands on the joint letter. When the joint letter is ready for signature, arrange the signature blocks so that the most senior official is on the right. Type the junior official's signature flush with the left margin. Place a third cosigner, if any, in the middle of the page.

ENDORSEMENTS

An endorsement is a brief form of naval letter that is used to approve, disapprove, forward, or comment on the contents of a letter that is transmitted through one or more addressees before it reaches its destination. The contents of a prior endorsement may also be the subject of comment. An endorsement should not be used to reply to the basic communication. Endorsements may be added by one or more of the activities through which an original letter is channeled before it reaches its final destination. An example of a same page endorsement is shown in figure 2-2.

The length of an endorsement, the amount of space that remains on the basic letter, and whether or not changes will be made to the endorsement will dictate whether a same page or new page endorsement should be used. If an endorsement will completely fit on the signature page of the basic letter or previous endorsement and will not be revised, then an

endorsement may be added to that page. If an endorsement will not completely fit on the signature page or on a previous endorsement page or, if there is a possibility that the endorsement will be revised, then the endorsement should begin on a new page. An endorsement should remain with the basic letter. Plain bond paper is used for the original of an endorsement, but manifold paper may be used for copies.

When an endorsement is typed below the preceding basic letter or endorsement, a horizontal dash line is placed two lines below the last line in the preceding communication. Same page endorsements may omit the SSIC, subject, and the basic letter's identification symbols. The general style of an endorsement is as follows:

- Endorsements should be numbered in the sequence that they are added to the basic letter. Identify the number of the endorsement by using **FIRST**, **SECOND**, **THIRD**, and so forth. After the number, type "ENDORSEMENT on" and then identify the basic letter by using the same format as a reference line.
- References that appear in the basic letter should not be repeated in an endorsement. List only new references that are added.
- Enclosures that are listed in the basic letter should not be included in an endorsement. Send any enclosures that are added to the action addressee. Omit enclosures that the action addressee already has, enclosures that are impertinent to the original correspondence, or enclosures that are impractical to send.
- Send one copy of your endorsement to the originator of the basic letter. A single copy of your endorsement should also be sent to each prior endorser if your endorsement is significant. Significant endorsements include correspondence "forwarded recommending disapproval" and correspondence that is "readdressed and forwarded." Routine endorsements include correspondence that is "forwarded," "forwarded for consideration," and "forwarded recommending approval."

MEMORANDUMS

Memorandums provide an informal means to communicate within an activity or between Department of the Navy (DON) activities. Of the types of memorandum formats that the DON uses, we will discuss four here. Other types of memorandums, such

NAVAL EDUCATION AND TRAINING PROFESSIONAL
DEVELOPMENT AND TECHNOLOGY CENTER
6490 SAUFLEY FIELD ROAD
PENSACOLA, FLORIDA 32509-5237

5216
Ser 23/116
1 Oct 99

From: Commanding Officer, Naval Education and Training Professional
Development and Technology Center
To: Commander, Naval Education and Training
Via: Commanding Officer, Naval Air Station, Pensacola

Subj: HOW TO PREPARE A STANDARD LETTER WITH SAMPLE SAME-PAGE
ENDORSEMENT

Ref: (a) SECNAVINST 5216.5D, Department of the Navy Correspondence Manual

Encl: (1) Example of a Standard Letter

1. This example of a standard letter lists all of the elements of the heading that may appear in a standard letter. The **From**, **To**, and **Subj** lines must appear in every standard letter. **Via**, **Ref**, and **Encl** are optional lines. Note that all letters in the subject line are capitalized.

2. Notice the spacing in the heading. The **From**, **To**, and **Via** lines are single-spaced. The spacing between the **Via** and **Subj**, **Subj** and **Ref**, and **Ref** and **Encl** lines should be double-spaced. Separate paragraphs should be double-spaced, while the text in individual paragraphs should be single-spaced.

B. A. SAILOR

Ser 032/216
1 Oct 99

FIRST ENDORSEMENT

From: Commanding Officer, NAS Pensacola, FL
To: Commander, Naval Education and Training

1. A same-page endorsement may be used when the entire endorsement will fit on the same page as the basic letter, and when revisions will not be made to the endorsement. If in doubt, use a new-page endorsement.

2. The basic letter's SSIC, subject line, and basic identification symbols may be omitted in a same-page endorsement. Ensure a copy of the endorsement is sent to the originator of the basic letter. Always maintain a copy of endorsements for your official file.

M. A. SAILOR

copy to:
NETPDTC Pensacola (N01)

Figure 2-2.—Standard letter same-page endorsement.

as the Memorandum For Memorandum, the Memorandum of Agreement, and the Memorandum of Understanding, are normally reserved for use by high-level officials, such as the Secretary of the Navy and the Secretary of Defense.

Memorandum for the Record (MFR). An MFR is used as an internal document to record supporting information that is not recorded elsewhere. Candidates for an MFR include results of meetings, important telephone conversations, or oral agreements. MFRs may be typed or handwritten. Although informal, the MFR should be dated, signed, and show the signer's organizational code.

Printed Memorandum Forms. Printed forms may be used to communicate between individuals or offices within the same activity. Unlike the MFR, memorandum forms require a "From," "To," and "Subj" line, and a name, title, or office code. The contents of a printed memorandum may be handwritten.

Plain-Paper Memorandum. The plain-paper memorandum is used to communicate informally within an activity. It is no more formal than the printed memorandum form, but it is more flexible when there are multiple addressees. The plain-paper memorandum is similar to a standard letter, but no identification symbols other than the date is needed.

Letterhead Memorandum. The letterhead memorandum may be used for direct routine communication within your activity or with an activity outside your command. When used within your activity, the letterhead memorandum provides more formality than either the printed "from-to" or plain-paper memorandum. The letterhead memorandum may be used to communicate with an activity outside your command when the subject is routine and no commitment or official position is taken.

MISCELLANEOUS CORRESPONDENCE

You may be required to draft other types of correspondence, such as business letters and directives. SECNAVINST 5216.5 prescribes policies and procedures and furnishes detailed information for preparation of all types of naval correspondence. This includes information on envelope preparation, mailing procedures, and the use of special mailing instructions as well as information on the forms of addresses, salutations, and complimentary closes to be used in naval correspondence.

NAVAL MESSAGES

As an AZ who works in maintenance administration, one of your primary duties will include naval message drafting for approval. A naval message is a brief form of official communication that is transmitted through a Navy telecommunication center. The naval message is used for urgent communication where speed is of primary importance.

Messages should not be used to transmit information where a letter can provide the same information in time for proper action. The majority of the messages that you draft will be of the general administration (GENADMIN) variety. GENADMIN messages are narrative messages that pertain to organizational-level matters that warrant electronic transmission. These include messages that relate to operations and readiness as well as certain reports and information that require substantial attention of seniors. A description of a naval message is shown in figure 2-3.

Message Terminology

Before you draft a naval message, you should become familiar with the following message terminology:

Originator. The originator of a message is the authority in whose name the message will be transmitted.

Releaser. The message releaser is the individual who is authorized to release a message for transmission in the name of the originator.

Drafter. The drafter is the individual who composes the message. The message drafter's responsibilities include selecting the correct precedence, using the correct message format, and addressing the message properly. The message drafter plays a significant role in the message preparation and transmission.

Minimize. Minimize is a restriction that is imposed on message traffic release when emergency conditions exist. Minimize reduces less urgent message traffic or voice communication when an actual or simulated emergency arises or is anticipated.

Date-Time-Group (DTG) indicator. The DTG indicator is the primary means that is used to identify a naval message. 121430Z JAN 98 is an example of a DTG. A DTG consists of two parts. The first two digits (12) indicate the date and the last four digits (1430) indicate the hour the message was transmitted. The "Z"

ADMINISTRATIVE MESSAGE

ROUTINE

R 111230Z APR 98 ZYB

FM MESSAGE ORIGINATOR PLUS OFFICE CODES IF APPLICABLE//

TO ACTION ADDRESSEES AND OFFICE CODES UNLIMITED NUMBER//

INFO COMMANDS THAT HAVE A NEED TO KNOW BUT REQUIRE NO ACTION//

UNCLAS //N02319//

MSGID/GENADMIN/ORIGINATOR'S PLA//

SUBJ/MESSAGE FORMATS AND PROCEDURES//

REF/A/DOC/NCTC WASHINGTON DC/JUL97/-//

REF/B/DOC/OPNAV WASHINGTON DC//APR96/-//

AMPN/REF A IS NAVAL TELECOMMUNICATIONS PROCEDURES USERS MANUAL NTP 3 (J) AND OUTLINES PROCEDURES FOR FORMATTING AND TRANSMITTING NAVAL MESSAGES. REF B IS OPNAVINST 5510.1, INFORMATION AND PERSONNEL SECURITY PROGRAM MANUAL.

RMKS/1. ADMINISTRATIVE MESSAGES ARE MESSAGES THAT PERTAIN TO ORGANIZATIONAL LEVEL MATERIALS OF A NATURE OR URGENCY THAT WARRANT ELECTRONIC TRANSMISSION. ADMINISTRATIVE MESSAGES INCLUDE MESSAGES THAT REFER TO OPERATIONS AND READINESS AND INFORMATION THAT IS TIME CRITICAL.

2. THE HIGHEST PRECEDENCE THAT IS NORMALLY ASSIGNED TO ADMINISTRATIVE MESSAGES IS ROUTINE. THE EXCEPTION TO THIS RULE ARE MESSAGES REPORTING DEATH OR SERIOUS INJURY. THESE MESSAGES SHALL BE ASSIGNED AN IMMEDIATE PRECEDENCE. MESSAGE PRECEDENCE DETERMINES THE SPEED WITH WHICH EACH MESSAGE SHOULD BE DELIVERED AND INDICATES THE RELATIVE ORDER OR PROCESSING AND DELIVERY TO THE RECIPIENT(S).//

BT

Figure 2-3.—Naval message format.

indicates the time zone suffix ZULU for Greenwich Mean Time. The month (JAN) and year of origin (98) make up the remainder of the DTG. Naval messages may be filed by DTG.

Precedence. Message precedence identifies the priority that a message will be processed and its speed of delivery to recipients. The four categories of message precedence in ascending order of urgency are

Routine, Priority, Immediate, and Flash. You should exercise sound judgement when choosing message precedence.

Plain Language Address (PLA). PLAs identify activities by short title and sometimes location. For example, the PLA address for Sea Control Squadron Twenty Two (VS-22) would be typed on a message as SEACONRON TWO TWO.

Message Types

Messages are classified according to precedence, content, addressees, and format.

Naval message drafts should ensure that the appropriate precedence is assigned to outgoing messages. A “Routine” precedence should not be assigned to important outgoing messages when information is of a time-sensitive or critical nature, nor should an “Immediate” precedence be assigned to an outgoing message that contains only routine information.

Message content determines whether a message is operational or administrative. Operational messages influence or deal directly with ship, troop, or aircraft movement or directly bear on safety of life, ship, forces, intelligence operations, communications, or battle plans. Operational messages also deal with information that relates to fleet readiness training exercises. Administrative messages deal primarily with administrative matters that concern operations and readiness.

Messages types are also classified according to addressees. There are four types of addressees as follows:

- Single-addressee messages have only one addressee. The single addressee may be either the action addressee (TO) or information addressee (INFO).
- Multiple-address messages have two or more addressees, either action or information.
- Book messages are messages that are destined to two or more addressees but contain addressee information that the drafter feels should not be disseminated to the other recipients.
- General messages are GENADMIN-formatted messages for recurring release to a predetermined distribution list or Navy-wide. This type of message is usually identified by the

general message title of ALCOM (all commands), NAVOP (naval operations), or ALMILACT (all military activities).

There are two types of message formats—narrative and pro forma. GENADMIN is the United States Message Text Format that is used for most narrative messages. Pertinent instructions and publications specify the use of other formats for narrative messages. Pro forma messages are messages with defined data fields that can be read and processed by machine.

Message Preparation

Naval messages are prepared in accordance with the *Naval Telecommunications Procedures User's Manual*, NTP 3. NTP 3 provides specific guidance on the preparation and transmission of naval messages. Changes to message preparation procedures occur frequently, so be sure to use the latest revision to the NTP 3. If in doubt about message preparation procedures, check with your local communications office.

The Message Text Format (MTF) Editor provides you with automated assistance for drafting GENADMIN messages. MTF Editor software is menu driven and allows you to draft a formatted message by using a fill-in-the-blank template. Some fields on the template are mandatory, and other fields are optional. You should refer to the NTP 3 whenever you are unsure if a field is mandatory or optional. The following are general guidelines to use when you draft a GENADMIN message:

- Allowable characters include A through Z (all capitalized), numerals 0 through 9, blank spaces, and some special characters. The allowable special characters are quotation marks (“ ”), periods (.), commas (,), parentheses (), question marks (?), hyphens and dashes (-), and, in some cases, slants (-/-). Don't use other special characters because they are not available on Navy teletypewriter keyboards and will cause formatting errors.
- Limit abbreviations within the text of messages to those meanings that are self-evident, unequivocal, and easily recognized. In doubtful cases, always let clarity take precedence over brevity.
- Use the mandatory sets (MSGID, SUBJ, and RMKS) on all GENADMIN messages. Use optional sets (REF, NARR, and so forth) as

necessary. If information is available and pertinent to the message, include optional sets. Conditional sets are EXER/OPER and NARR/AMPN. When using optional sets, use one set at a time. Never use optional sets together.

- When using the REF (Reference) set, you should use the AMPN or the NARR set. Use the AMPN (Amplification) set if there is only one reference. Use the NARR (Narrative) set when there are multiple references. A reference may be a meeting, conversation, document, letter, or record message. Refer to the NTP 3 for the appropriate message reference identifier.
- Be careful when drafting the addressee portion of naval messages. Your command should have the Distributed Plain Language Address (PLA) Verification System (DPVS) installed on all computers that have the MTF Editor. DPVS provides naval message originators with current single and collective PLA information. PLAs may also be found on the Internet. This information ensures that messages are transmitted to activities that are supposed to receive them. If an addressee does not appear in DPVS, verify the address. If your command does not have DPVS, it is available from the local Navy telecommunications center.
- Copy all outgoing messages to a diskette for delivery to the Navy telecommunications center. Ensure that the diskette is properly marked with the highest precedence of the content of the disk, the name of your activity, and your telephone number. Deliver a properly formatted disk that is free of computer viruses.
- Remember that a designated message releaser should sign outgoing naval messages.

Q9. What document outlines detailed procedures for preparing standard letters, memorandums, and endorsements?

Q10. When preparing a standard letter, what rule of thumb should you use for margins?

Q11. What element of the standard letter identifies the sender, acts as a reference, and is used for filing purposes?

Q12. What type of correspondence is similar to a standard letter, is transmitted through another addressee before it reaches its final destination, and is used to approve, disapprove, forward, or comment on the contents of another document?

Q13. What form of correspondence provides an informal means to communicate within an activity or between Department of the Navy (DON) activities?

Q14. What type of urgent correspondence is transmitted through a Navy telecommunication center?

Q15. The release of naval messages is sometimes restricted during an actual or simulated emergency condition. What is this message release restriction called?

Q16. When drafting a naval message and using the NARR set, how many references must you use?

Q17. What system provides an originator of a naval messages with access to current single and collective plain language address information?

DIRECTIVES ISSUANCE SYSTEM

LEARNING OBJECTIVES: Describe the purpose of the Directive Issuance System. Identify the types of directives, their numbering system, and directive security identification.

The directives issuance system provides a uniform method for issuing directives by all naval activities. As set forth in the *Department of the Navy Directives Issuance System*, SECNAVINST 5215.1, the directive issuance system contains two parts. Part I contains Definitions, Criteria, and Responsibilities for issuing directives. Part II contains Preparation and Maintenance of Directives procedures. The directives issuance system is used in conjunction with the *Department of the Navy File Maintenance Procedures and Standard Subject Identification Codes (SSIC)*, SECNAVINST 5210.11. SECNAVINST 5210.11 provides the Navy with a standardized file numbering system to efficiently manage large volumes of paperwork, so Navy personnel have the same filing system from one activity to another. The file numbering system is based on SSICs. SSICs indicate the subject and may be used to identify the document for filing purposes. The SSIC is also used when naval correspondence is prepared.

SCOPE

In the directives issuance system, a directive is defined as a written communication that prescribes or

establishes policy, organization, conduct, method, or procedure. Generally, a directive is issued to do one or more of the following:

- Regulate or set up essential administration
- Establish policy
- Delegate authority or assign responsibility
- Establish an organizational structure
- Assign a mission, function, or task
- Initiate or govern a course of action or conduct
- Establish a procedure, technique, standard, guide, or method of performing a duty, function, or operation
- Establish a reporting requirement
- Change, supersede, or cancel another directive

At times, directives are issued that may not fall within the scope of these criteria. These types of directives are issued in the directives issuance system to obtain quick and controlled dissemination. Normally issued as a notice, a directive of this type may include the following:

- Requests for comments, approval, or information
- Directions for routinely carrying out established operations, such as matters that pertain to individual personnel actions or special shipments of materials
- Informative announcements, such as education or promotion opportunities, recreational activities, work improvement plans, suggestions for morale building, or changes in office locations or telephone extensions

The Navy-wide use of the directive issuance system is advantageous to those activities that receive directives. It allows every naval activity that receives directives to group directives by subject and combine related subjects. Grouping and combining directives with related subject eases the directive filing process and distinguishes directives that are of a continuing nature from those that are of a brief duration. Another advantage to activities that receive directives is that the directive issuance system allows activities to obtain

complete sets of instructions upon activation and decommissioning. By using periodic checklists and subject indexes (5215s), an activity can determine the current status of directives, completeness of a set of directives, or directives currently in force.

Use of the Navy Directives Issuance System is advantageous to activities that issue directives. The directive issuance system reduces the number of directives in effect by consolidating instructions that cover the same subject matter and eliminates instructions that duplicate, overlap, or conflict. The directive issuance system also improves the adequacy and coverage of instructions, identifies gaps in policy and procedures so other directives may be issued to cover necessary subjects, and ensures that activities are sent only those directives that they need.

TYPES OF DIRECTIVES

Two types of directives are used in the directives issuance system—instructions and notices.

Instructions are directives that contain information of a continuing nature or require continuing action. An instruction has continuing reference value and is effective until the originator cancels or supersedes it.

Notices are directives of a onetime nature and usually contain information or action applicable for a brief period (usually 6 months or less, but in no case more than 1 year). A notice has the same force and effect as an instruction but does not have permanent reference value. Therefore, a notice contains provisions for its own self-cancellation. This cancellation date should always be stated. When the exact cancellation date cannot be determined, a specific date for record purposes is set far enough in the future to allow completion of all necessary use of the notice.

The AZ uses many different instructions and notices in the performance of daily tasks. Directives are issued by the systems commands, bureaus, type commands, ships, stations, and operating activities. Many of the directives that are used in aircraft maintenance activities are issued by the Headquarters of the Naval Air Systems Command and are known as NAVAIR instructions and notices. Each issuing activity provides a catalog of issued directives by issuing a NOTICE 5215 that lists its current directives. The consolidated index, NAVPUBNOTE 5215, contains a list of major commands' directives; for example, OPNAV, SECNAV, BUMED, and so forth. Some of these directives are listed and found on the Internet.

Identifying And Numbering Directives

Each originating office identifies its directives by (1) the originator's abbreviation, (2) the type of directive, (3) the subject classification number, and (4) a consecutive number that is preceded by a decimal point (for instructions only). For example:

(1)	(2)	(3)	(4)
SECNAV	INSTRUCTION	5215	.1

Each directive is assigned a subject number from the Department of the Navy Standard Subject Identification Code (SSIC) system.

Consecutive numbers are assigned to instructions that have the same subject classification number to show the order of issuance. For example, the subject number for contract financing is 7810. An originating office would assign numbers to the first, second, and third instructions that it issues on contract financing subjects as follows: 7810.1, 7810.2, and 7810.3, respectively.

Notices are not assigned consecutive numbers because of their onetime nature or brief duration. For this reason, the date must always be used when a notice is referred to, for example, OPNAV Notice 5442 of 6 Jan 1998.

Security Identification

The security classification of Confidential or Secret instructions and notices are indicated by prefixing the subject numbers by the letter "C" for Confidential and by the letter "S" for Secret. A single set of consecutive numbers is used by each originating office for each subject number regardless of the security classification of individual instructions. For example, if the first instruction that was issued on the subject of contract financing was unclassified, the second instruction Confidential, and the third instruction Secret, they would be numbered 7810.1, C7810.2, and S7810.3, respectively.

Requisitioning Directives

Copies of directives, excluding notices, may be ordered from the stock points shown on each directive. If a directive does not have a stock number, a letter should be used to order the directive from its originator. Directives that have stock numbers and are listed in Navy Supply Publication 2002 (NAVSUP PUB 2002) may be ordered by using the MILSTRIP Message Transmittal Worksheet via the Defense Automated

Address System (DAAS). Directives may also be requisitioned by using the Streamlined Automated Logistics System (SALTS). Some directives can be downloaded from the applicable Internet site. For complete ordering instructions for directives, forms, and publications, refer to the *Naval Air Systems Command Technical Manual Program*, NAVAIR 00-25-100.

Q18. What system provides a uniform method of issuing directives by all naval activities?

Q19. What type of document is used to establish policy, organization, conduct, method, or procedure?

Q20. What are the two types of directives that are used in the directives issuance system?

Q21. A directive is numbered C5218.2. What does the "C" that precedes the directive number indicate?

CORRESPONDENCE TRANSMISSION, STORAGE, AND FILING

LEARNING OBJECTIVES: Identify correspondence transmission, storage, and filing procedures. State the purpose of Standard Subject Identification Codes (SSICs).

As an AZ, you will be required to file correspondence correctly and find it promptly. To do this, you must be thoroughly familiar with the Navy filing system and your own files. For example, the maintenance officer may ask you to find a certain letter immediately. The maintenance officer may identify the letter by saying it came from either Commander, Naval Air Force U. S. Atlantic Fleet (COMNAVAIRLANT) or NAVAIRSYSCOM and had something to do with hand tools. On second thought, maybe NAVSUPSYSCOM sent the letter and it covered banding tools. The maintenance officer remembers reading the letter about 6 months ago and has had no further need to refer to it until now.

Such events are everyday occurrences in large maintenance administrative offices. Unless you have a workable system for locating requested materials, you are in for considerable embarrassment, and your seniors will not receive the assistance they have a right to expect.

Constant changes in naval office personnel due to transfers, leave, and discharges, emphasize the need for a standardized subject identification and filing system. The present system fills that need. If you know the subject identification system of one ship or station, you can operate that of another with little decrease in

efficiency. This does not mean that each office has the same number of file jackets. Rather, it means that a uniform system is used in assigning subject identification numbers, that all general files have the same basic arrangement, and certain types of files are maintained by all activities.

Technological advances allow electronic filing of some types of official correspondence on computer diskette. Electronic files are essentially the same as paper files but with one distinct advantage—they allow easy storage and retrieval of large volumes of information in only a fraction of the time and space that would be required for paper files. In practice, there is no difference between managing paper files and managing electronic files. A major disadvantage of electronic document filing is the possibility of frequent power outages and failures. Electronic filing is not practical for every item of correspondence; for example, incoming letters and memorandums. However, other correspondence, such as incoming and outgoing naval messages, can be easily filed electronically.

ELECTRONIC MAIL (E-MAIL)

Electronic mail (e-mail) provides another means of drafting, stowing, and transmitting correspondence. E-mail allows communication within and between activities, and may be used for informal and formal communication. E-mail also allows users to immediately draft, transmit, or respond to correspondence. E-mail serves the same purpose as a telephone call or letter but, in many cases, is much faster and automatically provides a record of the communication. The transmission and storage of classified or sensitive information by e-mail should be avoided due to security concerns and privacy issues. Refer to the *Department of the Navy Correspondence Manual*, SECNAVINST 5216.5, for procedures to transmit classified material by e-mail. For e-mail management procedures, refer to *the Navy and Marine Corps Records Disposition Manual*, SECNAVINST 5212.5 and SECNAVINST 5216.5.

FACSIMILE (FAX) TRANSMISSION

A facsimile machine or fax is another fast and reliable method of transmitting correspondence, and is an excellent alternative to the U. S. Postal System. The fax telephone number of the activity that is to receive the correspondence is the only information that is required for a user to transmit a copy (facsimile) of a document. Fax copies carry the same weight and

authority as the original copy. Some of the same guidelines set forth for e-mail transmission also apply to fax transmission. The transmission of classified or sensitive information should be avoided whenever possible and then only on secure equipment. The cost of sending a fax can be expensive and should be used only for official Government business. Avoid sending graphics whenever possible because they may add to cost. Most activities will have local policies that dictate the use of their fax machines. If you are unsure about what should or should not be faxed, check with your supervisor.

MANUAL FILING PROCEDURES

When electronic filing and storage of correspondence is neither practical nor desirable, the correspondence requires manual filing procedures. The type of correspondence that is being filed dictates what filing procedures should be used. For example, classified material obviously would not be filed in an unsecured file cabinet. Likewise, routine correspondence should not be filed in a locked safe where access would be limited.

Rarely, if ever, will you be tasked with setting up a filing system or selecting filing equipment, however, you should have a working knowledge of the current system and equipment in use in your activity. Whichever filing system or container you use for filing, your correspondence should be filed by standard subject identification code.

STANDARD SUBJECT IDENTIFICATION CODES (SSICs)

The standard subject identification code (SSIC) is a four- or five-digit number that represents the subject of a document. SSICs are required on all Navy and Marine Corps letters, messages, directives, forms, and reports. SSICs provide a method of filing, identifying, and retrieving documents quickly and consistently. A complete list of SSICs is provided in SECNAVINST 5210.11.

There are 13 subject groups under the Navy's SSIC system. They are as follows:

- 1000 Series —Military Personnel
- 2000 Series —Telecommunications
- 3000 Series —Operations and Readiness
- 4000 Series —Logistics
- 5000 Series —General Administration and Management

- 6000 Series—Medicine and Dentistry
- 7000 Series—Financial Management
- 8000 Series—Ordnance Material
- 9000 Series—Ships Design and Material
- 10000 Series—General Material
- 11000 Series—Facilities and Activities Ashore
- 12000 Series—Civilian Personnel
- 13000 Series—Aeronautical and Astronautical Material

These major groups are subdivided into primary, secondary, and sometimes tertiary breakdowns. The last three digits (the hundred group) of the code number designate primary subjects, the last two digits secondary subjects, and the final digit tertiary subjects. For example, the 5000 series, General Administration and Management, could be further broken down as follows:

- 5000 General Administration and Management
- 5 200 Management Programs and Techniques
- 52 10 Office Methods and Paperwork Management
- 521 1 Files and Records Systems

Some of the smaller subject groups are not subdivided below the primary breakdown. Other larger subject groups are divided into many secondary and tertiary subjects, the extent depending upon the scope and complexity of the major subject.

SSICs are used to number and identify directives. For example, the first SECNAV-issued instruction on the files system is SECNAVINST 5211.1, and the subject is “Mail and File Practices.” Subsequent revisions to this instruction are numbered 5211.1A, 5211.1B, and so forth. When additional instructions on the subject of the files system are written, they are numbered 5211.2, 5211.3, and so forth.

MISCELLANEOUS FILING PROCEDURES

Most of the correspondence that you are required to file should have an SSIC. Even with an SSIC, you may have some difficulty deciding exactly where some correspondence should be filed because in some cases it may be filed under one or more SSICs. This is where your experience is needed. All incoming correspondence should be screened and classified.

Classifying

Classifying, as the term is used here, is the process of determining the correct subject group or name title symbol under which correspondence should be filed and subordinate subjects, if any, that should be cross-referenced. Classifying is the most important filing operation because it determines where papers should be filed. The proper way to classify a document is to read it carefully while you consider the following factors:

- The most important, definite, or concrete subject that is mentioned in the document
- The purpose or general significance of the document
- The manner in which similar documents are requested
- The subject identification code under which previous documents of a similar nature are filed

The SSIC that is placed on the letter by the originator may not be appropriate for every office; therefore, the text of the letters should be thoroughly screened and the letters filed correctly.

Parts of a document (enclosures or attachments) should be filed with the basic document, if feasible.

Cross-Reference Filing

Although official letters usually are confined to one subject, they often may be properly classified under two or more file subjects; therefore, they may be filed under more than one file number. In such cases, a system of cross-referencing (indexing) is desirable.

Cross-referencing serves a useful purpose in locating material but should not be overdone. Not every document needs to be cross-referenced. It is a waste of time to list every cross-reference you can possibly think of. Try to select only those that will likely be of use. An endorsement should not be cross-referenced unless it contains subjects that are not covered by the basic correspondence.

Charging Out Materials

The maintenance officer, division officers, or others in your activity use the correspondence maintained in your files. In many cases, they will only need to see the files on particular subjects and may not need to remove the files from the maintenance administration office. On other occasions, they may

need to check files out and take them back to their work centers. When it is necessary to remove a file from the office, a record should be made of the file's whereabouts.

Local procedures normally dictate how files should be checked or "charged" out. If a locally prescribed form is available for use, the form should include identification to identify the removed file, the date of removal, and the person to whom the file was released. If local procedures require that a record of removal be retained after return of a removed file, the date of return should also be recorded. Charge-out records should be checked periodically to note whether materials have been charged out for an excessive amount of time.

Q22. *What method of correspondence transmission is an alternative to the U. S. Postal system and allows users to send an exact copy of a document?*

Q23. *What type of codes provides a method of filing, identifying, and retrieving documents quickly and consistently and is found in SECNAVINST 5210.11?*

REPORTS MANAGEMENT

LEARNING OBJECTIVE: Describe the reports management system.

Every aircraft maintenance department regularly submits various reports. These reports are important lines of communication that help keep the department operating as an effective naval unit and as a part of a coordinated Navy team. Unless care and judgment are exercised, however, reports can increase in number and complexity until the burden they create outweighs their usefulness. Therefore, the Navy has devised a reports management program, whose purpose is to accomplish the following:

- Eliminate and prevent unnecessary or duplicate reporting
- Ensure that instructions, forms, and procedures for necessary reporting is on hand, and that they provide the most simple and direct methods of reporting
- Ensure that the contents of required reports provide adequate data for intended purposes, and that reporting intervals/deadlines are maintained
- Provide central reference points for information regarding reports

RESPONSIBILITIES FOR REPORTS MANAGEMENT

The responsibility for managing the reports of a department or squadron is usually assigned as a collateral duty to an officer. In large aircraft maintenance activities, this officer is the administration officer; in smaller units, it is the assistant maintenance officer. Overall responsibilities are outlined in the *Naval Aviation Maintenance Program*, OPNAVINST 4790.2. An AZ is usually assigned to assist, as directed, with report management procedures. In a small activity where the officer may have many other responsibilities, the AZ may be expected to handle some of the procedures with little supervision.

REPORTS TICKLER FILE

The maintenance administration division is responsible for maintaining a tickler file of reports that have a "recurring" reporting requirement. Recurring reports are reports that must be regularly submitted, usually within a specified period such as weekly, quarterly, or by the 5th working day of a particular reporting period. The report tickler file is a master list of all reports that are required by your activity. The tickler file helps to ensure that reports are prepared correctly and well in advance of their due dates.

A reports tickler file alerts cognizant personnel of required reports and report due dates to allow sufficient time for preparation and submission before the actual due date. Local procedures will again dictate procedures for establishing and maintaining a tickler file. Some activities use 3 x 5 file cards to track recurring reports that originate in the maintenance office. Other activities may use computers to track these reports. The following basic information should be included in a reports tickler file system:

- Type of report
- Form number to be used, if applicable
- Due out date of report
- Address of the office to which the report will be sent
- SSIC of the directive that requires the report, if applicable
- A listing of divisions or work centers from which reporting information must be obtained

If using 3 × 5 cards, sort them by frequency of the report and arrange in chronological order. Then file these cards in a 3 × 5 file box or drawer in the exact chronological order in which they become due. If desired, use tabbed dividers to divide the file into monthly segments. Arrange cards so that they will reach the front of the file a certain number of days before the report is due out. Check the tickler file daily. As reports are completed and months pass, place the cards and dividers toward the rear of the box or file.

Q24. What tool does the maintenance administration division use to track recurring report requirements?

TRAINING

LEARNING OBJECTIVE: Identify Navy training programs.

Training is a continuing evolution that began with your initial enlistment and will continue throughout your naval career. Training is accomplished in many different formats. Regardless of the training format used, training should be performed in a sequential manner. Initial training consists of basic, prerequisite information that should lay the groundwork for future, more complex training. For example, the training you received in AZ “A” school centered on basic knowledge and skills that were required for entry-level job performance. The training you received on aircraft logbooks was designed to serve as an introductory tool to familiarize you with aircraft and equipment record keeping procedures. The intent of the training was to enable you to perform basic functions, such as making logbook entries and extracting information. The initial training on aircraft logbooks is not designed nor is it capable of teaching you everything you need to know about aircraft logbooks.

Maintenance training is critical to the overall readiness of the Naval Establishment. How well you do your job is directly related to the type and quality of training you have received. As such, training will make up a significant portion of your work week. Training is generally a command responsibility, but some types of training should be performed on your own. Below are some training terms that you should become familiar with.

- **On-the-job-training (OJT).** OJT is training that is received during actual performance of a daily maintenance task, and under the supervision of experienced personnel. The fundamental reasoning behind OJT is learning

by doing. OJT may be scheduled or unscheduled.

- **Formal Training.** Formal training uses lectures and lesson guides and may be supplemented by visual aids. Formal training is usually scheduled.
- **Computer-Based Training (CBT) and Interactive Multimedia Instruction (IMI).** CBT and IMI are terms that are used to describe training delivered electronically by using computers. Some CBT and IMI programs allow student-computer interaction.
- **“A” and “C” Schools.** “A” schools provide the basic job entry-level knowledge and skills. “C” schools provide more advanced training than do “A” schools. Upon completion of some “C” schools, a Navy Enlisted Classification (NEC) code may be awarded. NECs are awarded when a certain level of proficiency is demonstrated in a particular job. Proficiency in the performance of the job trained for is usually a requirement for the awarding of NECs.

For example, there currently are three NECs that apply to the AZ rating as follows:

- 6301—Enhanced Comprehensive Asset Management System (ECAMS) for naval air maintenance training groups (NAMTRAGRU)s
- 6314—Naval Aviation Logistics Command Management Information System (NALCOMIS) Data Base Administrator/Analyst for I Level.
- 6315—NALCOMIS Systems Administrator/Analyst for I Level

Fleet aviation specialized operational training groups (FASOTRAGRU)s provide advanced operational and tactical training on **specific** weapons systems and in aviation maintenance administration and management. NAMTRAGRU)s provide advanced training in the repair, operation, and maintenance of weapons systems and in maintenance administration and management.

Q25. What type of training is conducted during the actual performance of maintenance task?

SUMMARY

Before you start to work in the maintenance administration division, you should know the names and rates or rank of everyone in the office.

The maintenance administration division of an organizational maintenance department maintains a master paper or electronic message board of current messages with annotations of the action that was taken.

A computer has three components—an input device (keyboard, mouse), an output device (printer, monitor), and a central processing unit (CPU). Word-processing computer software uses a wraparound feature instead of the automatic return of an electric typewriter.

The *Department of the Navy (DON) Information SECNAV Security Program (ISP) Regulation, SECNAVINST 5510.36*, governs the handling, storage, and transmission of classified material. There are three classifications of classified material—Top Secret, Secret, and Confidential. The commanding officer is responsible for safeguarding classified material in his or her command. The U.S. Postal Service should not be used to transmit Top Secret material; Top-Secret material should be transmitted by cleared military personnel, DOD contractors, Defense Courier Service (DCS), or encrypted for electronic transmission. Secret matter may be transmitted by Registered Mail of the U.S. Postal Service. Confidential matter may be transmitted by First Class Mail of the U.S. Postal Service as long as the mail does not pass out of U.S. control. Secret and Confidential material may be transmitted by the methods that are authorized for Top-Secret material.

The *Department of the Navy Correspondence Manual, SECNAVINST 5216.5*, gives procedures for preparing standard letters, memorandums, and endorsements. The standard letter requires 1-inch margins on all sides. The identification symbol of a standard letter identifies the sender, acts as a reference, and is used for filing purposes. The endorsement is similar to a standard letter, is transmitted through another addressee before it reaches its final destination, and is used to approve, disapprove, forward, or comment on the contents of another document. The memorandum is an informal means to communicate within an activity or between Navy activities.

A naval message is urgent correspondence that is transmitted through a Navy telecommunication center. Minimize is a release restriction to restrict the release of

the least urgent messages during an actual or simulated emergency condition. When the NARR set from the Message Text Format (MTF) Editor is used, a naval message must have two or more references. The Distributed Plain Language Address (PLA) Verification System (DPVS), which is used with the MTF Editor, gives originators of naval messages access to plain language address information.

The directive issuance system provides naval activities with a uniform method of issuing directives. Directives are used to establish policy, organization, conduct, methods, or procedure. The two types of directives that are used in the directives issuance system are instructions and notices. A directive with a "C" before a directive number indicates that the directive is classified Confidential. A directive with an "S" before a directive number indicates the directive is classified Secret. A directive without a letter before the directive number is an unclassified directive.

A facsimile machine or fax is an alternative to U.S. Postal Service transmission of a document. Users can send an exact copy of a document by using a fax.

The Standard Subject Identification Codes (SSICs) provide a method for filing, identifying, and retrieving a document. SSICs are found in the *Department of the Navy File Maintenance Procedures and Standard Subject Identification Codes (SSIC)*, SECNAVINST 5216.11. The maintenance administration division uses a reports tickler file to tracked recurring report requirements.

On-the-job training is conducted during actual performance of a maintenance task.

The tasks that you will perform as a maintenance administration worker are in direct support of the maintenance department's maintenance effort. Depending on the activity to which you are assigned, your job may include other tasks, such as personnel evaluation and award recommendation preparation. Whatever your duties entail, remember that most of the correspondence that you will be tasked with will be transmitted outside of your immediate command. An activity's level of professionalism is often measured by the quality of work of an activity's maintenance administration division, with correspondence as an indicator of quality. As such, the work that you do will reflect directly on the Navy, your command, and you.

ANSWERS TO REVIEW QUESTIONS

- A1. *Maintenance administration division.*
- A2. *True.*
- A3. *Wraparound.*
- A4. *Central processing unit (CPU).*
- A5. *Department of the Navy (DON) Information Security Program (ISP), SECNAV-INST 5510.36.*
- A6. *Top Secret, Secret, and Confidential.*
- A7. *Commanding officer.*
- A8. *Top Secret material should be transmitted by cleared military personnel, DOD contractors, Defense Courier Service (DCS), or by electronic means in encrypted form.*
- A9. *Department of the Navy Correspondence Manual, SECNAVINST 5216.5.*
- A10. *1-inch top and bottom and on both sides.*
- A11. *Identification symbol.*
- A12. *Endorsement.*
- A13. *Memorandum.*
- A14. *Naval message.*
- A15. *Minimize.*
- A16. *Two or more.*
- A17. *Distributed Plain Language Address Verification System (DPVS).*
- A18. *Directive issuance system.*
- A19. *Directive.*
- A20. *Instructions and notices.*
- A21. *Confidential classification.*
- A22. *Fax.*
- A23. *Standard subject identification codes (SSICs).*
- A24. *Reports tickler file.*
- A25. *On-the-job-training (OJT).*

CHAPTER 3

TECHNICAL PUBLICATION LIBRARY

As an AZ striker or AZ3 newly assigned to duties in a technical library, you may be impressed by the large amount of technical data that is received for the library. Many people grossly underestimate the volume and complexity of work involved in maintaining a NAVAIR Technical Publications Library. Nearly every mail call brings several packages or envelopes of publications that must be incorporated into the library files. Automatic distribution accounts for the bulk of the day-to-day publication receipts.

The technical publication library serves two important purposes. It provides a central source of up-to-date information for use by all aviation maintenance personnel in the performance of their work, and it is also an excellent source of reference information to improve personnel training and individual development. To perform these functions, the technical publication library must maintain at least one copy of every publication that pertains to assigned aircraft and related equipment.

TECHNICAL PUBLICATIONS

LEARNING OBJECTIVE: Identify the types of maintenance and operational publications.

To attain a satisfactory state of readiness, technical manuals are developed, published, (in paper and, more recently, in compact disk read only memory [CD ROM] format) and distributed concurrently with aircraft and aircraft systems. Periodic changes and revisions are issued to ensure that manuals reflect equipment configuration and current operational and support concepts and procedures.

Technical manuals that are issued for aircraft and related systems are released under the authority of the Commander, Naval Air Systems Command (NAVAIR). Technical manuals that are concerned with flight personnel and training are issued under the authority of the Chief of Naval Operations and under the direction of NAVAIR. Technical manuals are also prepared and issued by other services, such as the U.S. Army and the U.S. Air Force. Technical manuals are

divided into two major types—maintenance and operational.

MAINTENANCE MANUALS

Maintenance manuals contain a description of the weapon system from a viewpoint of upkeep and repair. Maintenance manuals include the following types of manuals:

- Maintenance instruction manuals (MIMs)
- Component and equipment manuals
- Work Unit Code (WUC) manuals
- Planned Maintenance System (PMS) publications
- Structural repair manuals
- Illustrated parts breakdown (IPB) listings
- Weight and balance manuals

The information provided by maintenance manuals include operation, troubleshooting, installation, removal, repair, and IPB.

Maintenance Instruction Manuals (MIMs)

Each MIM usually consists of a series of volumes specifically numbered for identification of a given aircraft or weapons system. These manuals provide both general and specific instructions required for maintenance of organizational, intermediate, or depot levels of maintenance on aircraft, weapons systems, equipment, and components.

Component and Equipment Manuals

Component and equipment manuals cover all types of aircraft accessories and related equipment. Some of the most common are accessory, instrument, armament and ordnance, electronics and avionics, tools, test equipment, and support equipment such as test and shop equipment and ground handling equipment.

Work Unit Code (WUC) Manuals

Work Unit Code manuals provide a listing of assigned alphanumeric codes for identification of systems or equipment. WUCs are used to report and record maintenance information for use in a database.

Planned Maintenance System (PMS) Publications

PMS publications provide a basis for planning, scheduling, and complying with scheduled maintenance requirements. These maintenance requirements are scheduled at intervals based on daily or weekly intervals, flight time, operating hours, or number of cycles or events. The following are PMS publications:

- Periodic maintenance information cards (PMICs)
- Daily/special/preservation/conditional/aircraft service period adjustment (ASPA) manuals
- Turnaround checklists

In instances where conflicts exist between PMS publications and other directives, the PMS publication takes precedence.

PERIODIC MAINTENANCE INFORMATION CARD (PMIC).—Periodic maintenance information cards (PMICs) contain scheduled or forced removal items and their replacement intervals, record of applicable technical directives, maintenance requirements system index by system, and a conditional inspection listing.

DAILY, SPECIAL, PRESERVATION, CONDITIONAL, AND AIRCRAFT SERVICE PERIOD ADJUSTMENT (ASPA) MANUALS.—These manuals cover the minimum daily inspections requirements and servicing and the performance of special inspection and conditional inspections.

TURNAROUND CHECKLISTS.—These publications are prepared to support inspection of exterior and interior aircraft surfaces in an abbreviated walk-around order. Checklists cover those items that are necessary to determine obvious defects that may have occurred during each flight.

Structural Repair Manuals

Structural repair manuals contain specialized repair information required by maintenance personnel to determine the extent of structural damage and

instructions for performing a permanent or onetime flight repair.

Illustrated Parts Breakdown (IPB) Listings

The IPB provides system, subsystem, and individual parts identification, applicability, and source, maintenance, and recoverability (SM&R) codes. Coverage is normally contained in separate manuals or in a special section of the maintenance manual. An IPB assists maintenance and supply personnel. They can use the IPB to identify, requisition, issue, and store parts that are required for maintenance support of aircraft, weapons systems, equipments, components, and support equipment.

Weight and Balance Manuals

These manuals provide a standard system for a continuous record of basic weight, balance, and loading data for certain aircraft.

OPERATIONAL MANUALS

Operational manuals contain a description of weapon systems along with instruction for their effective use. Operational manuals include Naval Air Training and Operating Procedures Standardization (NATOPS), weapons loading manuals, and tactical manuals. They contain descriptions of weapons systems and systems integration. Operational manuals also contain operating instructions, operational applications, safety procedures, and emergency procedures for weapons systems.

NATOPS Manuals

NATOPS manuals define methods and procedures for conducting operational tasks or exercises. NATOPS manuals are specifically prepared in support of aircrew personnel. NATOPS manuals provide standardized ground and flight operational procedures, training requirements, and other operational information of a technical nature. The data is tailored to particular models of aircraft in accordance with Chief of Naval Operations (CNO) directives and with the assistance of aircraft model managers.

Airborne Weapons Loading Lists, Stores Loading Lists, and Stores Reliability Cards

These manuals are specifically prepared for use by squadron ordnance personnel. Airborne weapons and

stores loading manuals provide standardized weapons system release and control checks as well as loading, arming, and safing procedures for weapons systems.

Tactical Manuals

Tactical manuals define aircraft operational parameters as well as weapons and stores clearances. They also state combat capabilities and CNO-authorized limitations.

- Q1. *What type of publication contains a schedule of forced removal items and their replacement intervals and a record of applicable technical directives?*
- Q2. *What type of publication covers minimum daily inspection requirements for servicing and the performance of special and conditional inspections?*

TECHNICAL MANUAL NUMBERING SYSTEMS

LEARNING OBJECTIVE: Recognize the two technical manual numbering systems that are used within the Naval Establishment.

The structure of numerical and alphabetical combinations of a NAVAIR technical manual number identifies the basic equipment category, main groups within the category, specific item of equipment, type of usage, type or model designation, and specific type of manual.

There are two numbering systems presently in use by NAVAIR: the older NAVAIR publication numbering system and the newer Technical Manual Identification Numbering System (TMINS). You must be able to use both numbering systems.

NAVAIR PUBLICATION NUMBERING SYSTEM

The NAVAIR manual publication number consists of a prefix (NAVAIR or NA for NAVAIRSYSCOM) that designates the command responsible for developing or maintaining the manual. The manual number consists of three parts, separated by dashes (-). Additional numbers may be added to show multiple volumes of a manual.

Part I of the publication number is the category. Normally it is a two-digit number (in some cases two digits and a letter). It designates the major category of the manual; for example, 00 tells you that this is a

general manual; 01 is for airframes, 02 is for power plants. Refer to *Naval Air Systems Command Technical Manual Program*, NAVAIR 00-250-100, for a complete breakdown of publication numbering categories.

Part II of the publication number is made up of numbers (or numbers and letters). They identify either a basic aircraft model, the manufacturer, or the specific class, group, or subcategory of the manual. For example, in figure 3-1, the number F14AAA in view A identifies the aircraft model. In view D, 75PAC identifies Lockheed as the manufacturer of the P-3C airframe.

Part III of the publication number usually identifies a particular type of manual. For example, -1 identifies the NATOPS flight manual, -2 the maintenance instruction manual, -3 the structural repair manual, and -4 the illustrated parts breakdown. Additional numbers may be used to show system grouping breakout by volume or subsystem grouping by subvolume. For example, in the number -2-2, the second -2 indicates the second volume of a maintenance manual. In the number -2-2.1, the .1 indicates a subvolume within the grouping.

Figure 3-1 shows examples of technical manual number assignments.

TECHNICAL MANUAL IDENTIFICATION NUMBERING SYSTEM (TMINS)

The TMINS numbering system is part of the effort to standardize technical manual numbers for all ships, aircraft, and equipment. *Navy Standard Technical Manual Identification Numbering System*, NAV-AIRINST 4160.1, establishes the TMINS for aeronautic publications. The TMINS provides a single user-oriented numbering and indexing system. It meets the requirements of all systems commands for identifying, referencing, and requisitioning technical manuals and changes. The system also makes it easier to identify and order manuals for the operating forces and other users. It is compatible with automatic data processing (ADP) procedures. The *OPNAV Application Guide and Index*, OPNAV N0000-00-1DX-000/TMINS, should be available in your technical library. By using this guide and index, you will be able to understand and use the TMINS.

The TMINS assigns each technical manual a unique identifying alphanumeric designation patterned after the 13-digit National Stock Number (NSN); for example, A1-F18AA-NFM-500. It serves as the

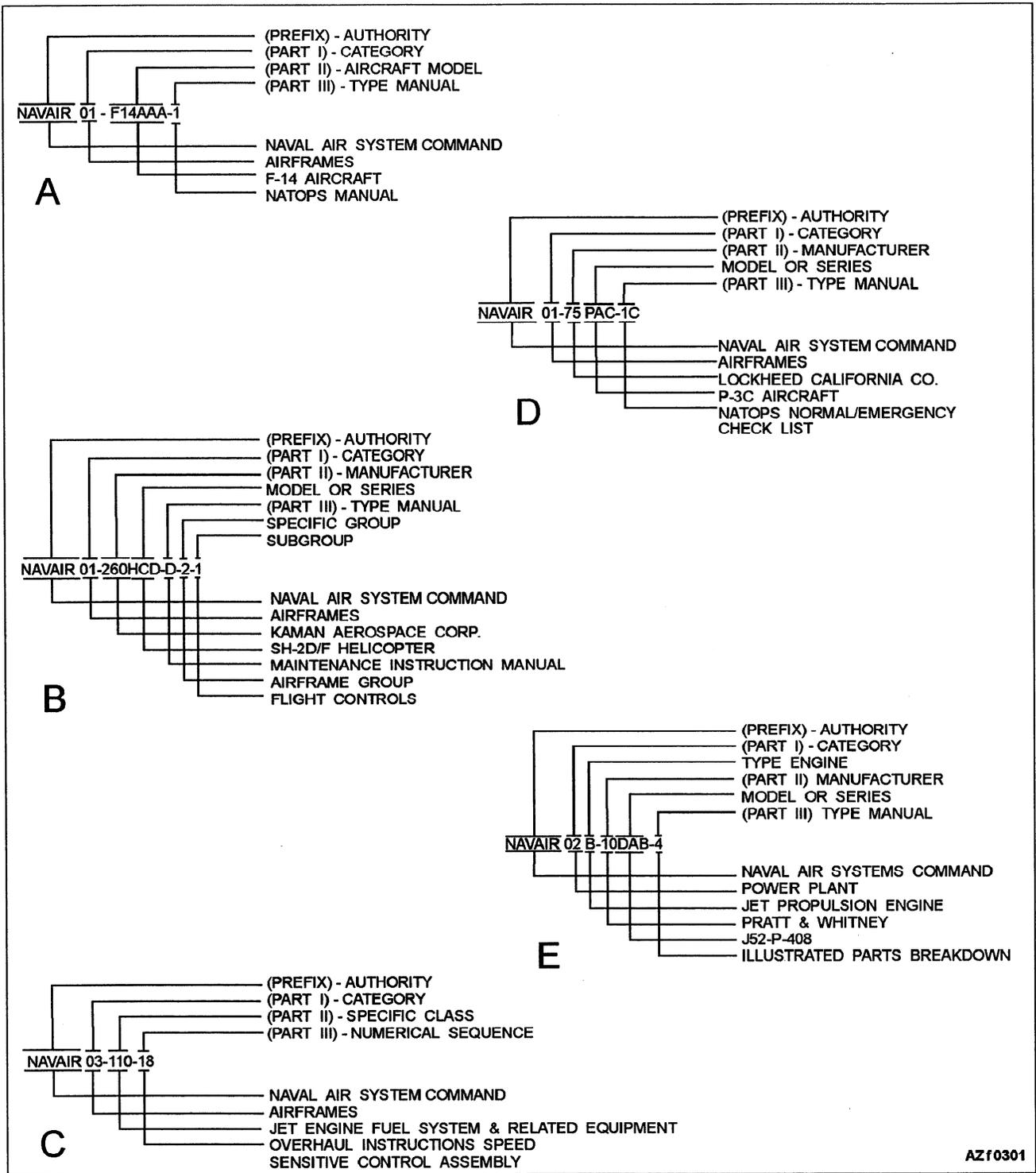


Figure 3-1.—Specific examples of technical manual number assignments.

technical manual identification number. Additionally, TMINS contains a provision for adding a suffix to give the security classification and other information considered important.

TMINS Number Composition

The standard TMINS number (fig. 3-2) is made up of two distinct parts separated by a slash (/). The first

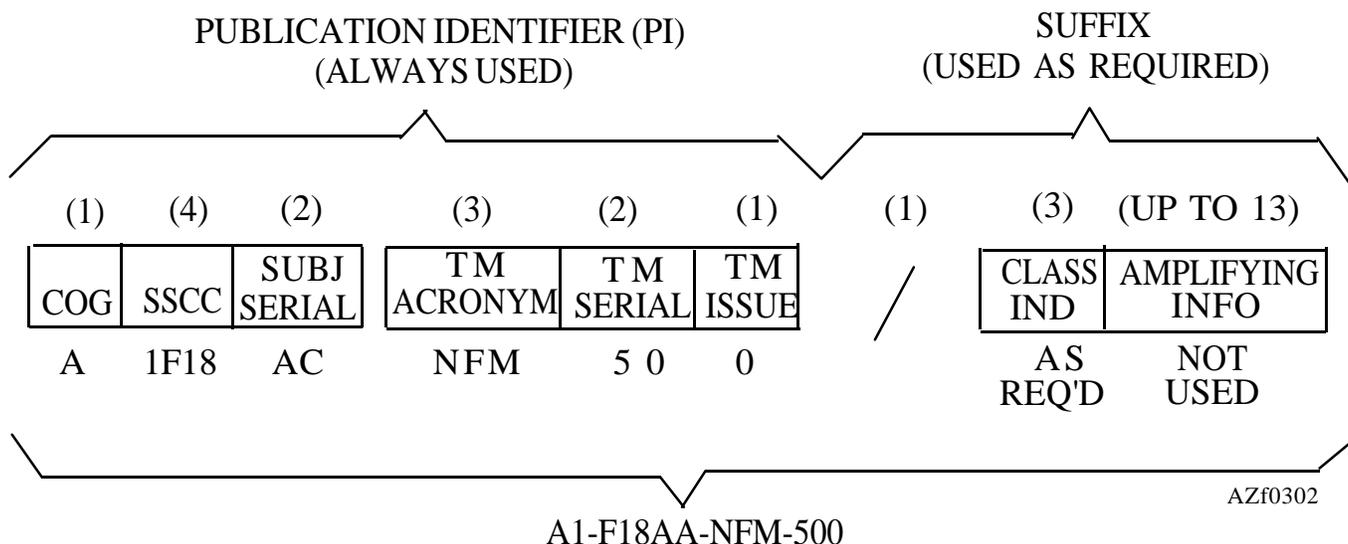


Figure 3-2.—TMINS example (NAVAIR).

part of the TMINS is called the publication identifier (PI). It is the essential root of the number. The PI is always used, and it always has exactly 13 characters.

The second part of the TMINS is called the suffix. It is an added field of up to 17 characters (including the slash). When used, it gives user-oriented information. The suffix is always used for classified manuals and separately bound unclassified portions of classified technical manuals. The suffix for both classified and unclassified TMINS may also supply the user with equipment designation, nomenclature, or model number.

Publication Identifier (PI) Composition

The publication identifier (PI) is made up of two major components: the hardware/subject identifier and the technical manual (TM) identifier. The first seven characters of the PI make up the hardware/subject identifier. These characters identify the specific hardware (such as an aircraft) or subject (such as an airborne weapons system) to which the technical manual applies. Once assigned, the project serial number (for example, SA-AN/APS-39A radar set) will represent the item throughout its life cycle. The first seven characters of the PI (fig. 3-2) are divided into three groups.

- The first group, cognizant (COG), of the PI is a single letter—that tells what command publishes and updates the publication. For example, the COG is A for NAVAIRSYSCOM.

- The second group, standard subject classification code (SSCC), is a four-digit alphanumeric code that identifies the commodity or subject matter; for example, in figure 3-2, the 1 in 1F18 indicates aircraft or aviation. The F18 stands for the F/A-18 aircraft.
- The third group, subject serial number (SUBJ SERIAL), is a two-digit code (either numbers, letters, or both) that is assigned by the Naval Air Technical Data and Engineering Service Command (NATEC) for aeronautic manuals. It differentiates between items assigned to a given SSCC series or subseries. In figure 3-2, the subject serial number AC stands for F/A-18 aircraft federal labs.

The remaining six characters of the PI are called the technical manual (TM) identifier. The six characters identify a particular TM are divided into three groups.

- The first group (TM acronym) consists of three letters or numbers that identify the type of manual; to illustrate, in figure 3-2, the TM acronym NFM identifies the manual as a NATOPS flight manual supplement. Numerically, they can identify the first three digits of a particular Work Unit Code; as an example, 520 is an autopilot. In some instances of Work Unit Codes, such as support equipment (SE), a combination of a letter and two numbers is used for the TM acronym; for example, S14 is an air compressor.
- The second group of the TM identifier (TM serial number) is made up of two numbers. It is

used to identify different volumes, parts, and changes to specific TMs. For NAVAIR TMs, these numbers range from 00 through 99. In the example shown in figure 3-2, the TM serial number is 50. This stands for a *Pilots Pocket Checklist*.

- The third group of the TM identifier is the TM issue and is either a number (0 to 9) or a single letter. The number 0 indicates the TM is a basic issue or revision. The letters A through Z (except I and O) designate (in alphabetical sequence) permanent changes or rapid action changes (RACs).

PI Suffix Composition

The PI suffix has a variable composition, depending upon whether or not the TM has a security classification. For classified TMs, the PI suffix is always used, and the security classification indicator forms the first component of the suffix. The security classification indicator is always three characters (a letter enclosed in parentheses). The entire suffix can contain up to 17 characters, if required.

In figure 3-2, you can see that the PI suffix is not required. Therefore, the TMINS number A1-F18AC-NFM-500 stands for the initial or revised edition of a *Pilots Pocket Checklist* supplement to the NATOPS manual of an F/A-18 aircraft. In-depth information can be found in the OPNAV N0000-00-IDX-000/TMINS publication.

- Q3. What are the two technical publication numbering systems that are used within the Navy?
- Q4. What technical publication numbering system is patterned after the 13-digit national stock number?

NAVAL AERONAUTIC PUBLICATIONS INDEX (NAPI)

LEARNING OBJECTIVE: Identify the sections of and describe the purpose of the *Naval Aeronautic Publications Index* (NAPI).

All aeronautic publications, changes, technical directives (TDs), Navy departmental directives, and forms under the cognizance of NAVAIRSYSCOM and distributed by Naval Air Technical Data and Engineering Service Command (NATEC) are catalogued in the *Naval Aeronautic Publications Index* (NAPI). Normally, the central technical publication library (CTPL) in the quality assurance division should

maintain a complete NAPI. The NAPI consists of six sections to make identifying, locating, and ordering specific publications easier. The six sections of the NAPI are also critical in the management, audit, and verification of the CTPL. Each section contains its own introduction as to the purpose or function of the section and the specific instructions on how to use that particular index. The six sections that presently make up the NAPI are as follows:

- NAVSUP PUB 2002, *Navy Stock List of Publications, Forms, and Directives*
- NAVAIR *Technical Manuals and Technical Directives Distribution Listing*
- NAVAIR 00-500A, *Equipment Applicability List*
- NAVAIR 00-500C, *Directives Application List*
- NAVAIR 00-500SE, *Support Equipment Cross-Reference*
- NAVAIR 01-700, *Airborne Weapons Stores Publication Index*

NAVSUP PUB 2002

Distributed three times a year, the *Navy Stock List of Publications, Forms, and Directives*, NAVSUP PUB 2002, is the primary index for requisitioning Navy publications, forms, technical directives, and departmental directives from the Defense Distribution Depot Susquehanna Pennsylvania (DDSP). The NAVSUP PUB 2002 is issued in compact disk read only memory (CD-ROM) format. Each new edition of NAVSUP PUB 2002 supersedes the previous edition.

NAVAIR Technical Manuals and Technical Directives Distribution Listing

The NAVAIR Technical Manuals and Technical Directives Distribution Listing lists all NAVAIR publications and technical directives that were distributed by the automatic distribution system during a specified time. This publication is also one of the primary tools that is used to conduct annual audits on the CTPL. This listing is issued quarterly.

This publication has two sections. Section 1 lists NAVAIR technical manuals and section 2 lists NAVAIR technical directives. This publication identifies technical manual and technical directive number, type of issue, level of maintenance, title stock

number, date of issue, and the aircraft or weapons system to which the publication applies.

NAVAIR 00-500A

The *Equipment Applicability List*, NAVAIR 00-500A, is a cross-reference index of aircraft components and associated equipment to their associated publications. This index identifies which publications pertain to a particular aircraft system, component, or equipment. This index, issued on microfiche, is updated quarterly.

NAVAIR 00-500C (SERIES)

The *Directives Application List*, NAVAIR 00-500C (series), lists NAVAIR technical directives as they apply to specific aircraft or aircraft engine. The index is issued in sections. Each section has its own subscript number; for example, NAVAIR 00-500C.1, NAVAIR 00-500C.2, and so forth.

The custodians for each type/model aircraft are automatically supplied with the applicable NAVAIR 00-500C for their specific aircraft and engine. An updated index, printed in book form, is issued.

NAVAIR 00-500SE

The *Support Equipment Cross-Reference*, NAVAIR 00-500SE, provides information for identification of support equipment (SE) changes that are required for the latest configuration of end items of support equipment. This index, issued annually in book form, has two sections. Section 1 lists support equipment changes to model and part number references. Section 2 lists model and part numbers to support equipment change references.

NAVAIR 01-700

The *Airborne Weapons Stores Publication Index*, NAVAIR 01-700, provides using activities with a guide to ensure that all changes have been incorporated in airborne weapons checklists, stores checklists, and manuals on hand. The armament branch of the activity should maintain NAVAIR 01-700 for a ready reference.. The index is issued quarterly in January, April, July, and October.

Q5. What publication is the primary index for requisitioning all Navy publications, forms, technical directives, and departmental directives

stocked at the Defense Distribution Depot Susquehanna Pennsylvania (DDSP)?

Q6. What publication contains a listing of published and distributed NAVAIR technical directives as they apply to a particular aircraft?

TECHNICAL DIRECTIVES

LEARNING OBJECTIVES: Identify the purpose, types, and categories of the technical directives. Describe the methods for updating technical directives.

Technical directives (TDs) are letter- and message-type directives that direct modifications and onetime inspections of weapons systems and equipment. In addition, TDs provide the technical information necessary to properly inspect or alter the configuration of aircraft, engines, systems, or equipment. The TD system is the only authorized method for directing the accomplishment and recording of modification and onetime inspections of NAVAIR equipment. The *Naval Air System Command Technical Directive System*, NAVAIR 00-25-300, contains the policies and procedures that govern the TD system. TDs are used for the following purposes:

- Authorize and direct incorporation of approved retrofit changes
- Issue directions for onetime inspections or precautionary instructions regarding personnel safety and equipment limitations
- Provide detailed instructions necessary to perform inspections or install retrofit changes and to report and record compliance
- Provide an official record of inspections and retrofit changes for purposes of technical directive status accounting
- Respond quickly to safety or urgent operational requirements to incorporate retrofit changes
- Expeditiously implement minor changes requested by the fleet

There are four types of TDs as follows:

Formal Change TD. A formal change TD is the primary document for implementing a configuration change. The formal change TD provides the information that is needed to make the change and to record that the change was completed. A formal change TD directs the addition, deletion, removal,

alteration, relocation, or change in parts or materials in a weapons system. Formal change TDs are issued in letter-type format (hard copy). A formal change TD is identified by titles such as airframe change (AFC) or avionics change (AVC). Figure 3-3 is an example of a formal change TD.

Interim Change TD. Urgency sometimes requires that change incorporations be initiated and issued immediately by naval message. An interim TD may also be transmitted through the mail, especially when drawings or diagrams are involved. An interim TD is issued when an equipment situation is critical and requires immediate dissemination. A formal TD supersedes an interim TD. An interim TD is identified by title, such as Interim Airframe Change or Interim Avionics Change.

Bulletin. A bulletin is a TD that directs a onetime inspection to determine if a given condition exists and the appropriate action if the condition is found. A bulletin does not involve an alteration, addition, removal, repositioning, or change in parts or material; however, upon determination of a deficiency, elimination of the deficiency may require the issuance of a formal change TD. A bulletin is normally issued in naval message format but may be issued by letter. A bulletin may also include direction for issuance of a rapid action change or for creation of a local maintenance requirement card to establish continuing inspection requirements. A bulletin is issued by title, such as Airframes Bulletin (AFB) or Avionics Bulletin (AVB).

Rapid Action Minor Engineering Change (RAMEC). A RAMEC is a message-type TD that provides for an expeditious action on a minor configuration change. A RAMEC is issued in the same naval message format as a change TD (AFC or AVC).

PRIORITY OF TDs

TDs are categorized into four separate priority categories based on type, purpose, and urgency. The category of the directive is printed in capital letters at the top center of the first page of the directive.

An **immediate action** TD is issued whenever an unsafe, uncorrected condition exists that could result in fatal or serious injury to personnel, or extensive damage to or destruction of valuable property. An immediate action TD usually requires the aircraft be grounded or that equipment restricted from further use until further notice or until the condition is corrected. Usually an immediate action TD requires compliance

prior to the next flight or next operation of the equipment.

An **urgent action TD** is issued whenever governing factors of combat necessity or potentially hazardous conditions exist that could result in injury to personnel, damage to property, or significant reduction in operational readiness. The condition compromises the safety risk that is calculated to be acceptable within a specified time limit. An urgent action TD is less serious than an immediate action TD. Failure to comply with the time limitation of an urgent TD dictates that aircraft be grounded, that air-launched weapon systems or ground communication equipment use be restricted, or that the use of SE, personnel equipment, material and munitions be discontinued.

A **routine TD** is issued for a condition that has a degree of risk calculated to be acceptable within a broad time limit. A condition that is categorized by a routine TD could, if uncorrected, constitute a hazard through prolonged use, have a negative effect on operational readiness, reduce tactical use and supportability, or reduce the operational life of a system or equipment. A routine TD is only used to authorize the modification of equipment.

A **record purpose** TD is assigned to a formal change TD to document that a configuration change was incorporated before the TD was officially issued. The primary purpose of a record purpose TD is to provide an official record of an engineering change for the Technical Directive Status Accounting (TDSA) system.

UPDATING TECHNICAL DIRECTIVES

There are two methods of updating TDs—amendment and revision. An *amendment* clarifies, corrects, adds to, deletes from, makes minor changes in requirements to, or cancels an **existing** TD. Amendments A, B, and C may be applied to a TD before it must be revised. A *revision* is a complete **new edition** of an existing change or bulletin. It supersedes the original directive or revision and existing amendments.

TD COMPLETION, SUPERSEDURE, AND CANCELLATION

Completion of a TD is an administrative action that enhances the management of the TD program. Cancellation is the process that removes a TD from active files after all requirements have been completed. Just because a TD may have been completed by your command, it may not necessarily mean that the TD is

DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
WASHINGTON, D.C. 20361-0419

PMA(F)223
ISSUE DATE: 15 July 1992
RESCISSION DATE: 31 December 1999

DISTRIBUTIONS STATEMENT C. Distribution authorized to U.S. Government agencies and their contractors to protect publications required for official use or for administrative or operational purposes only, 15 July 1992. Other requests for the document shall be referred to Commanding Officer, Naval Air Technical Services Facility, 700 Robbins Avenue, Philadelphia, PA 19111-5097.

DESTRUCTION NOTICE. For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.

P-3 AIRFRAME CHANGE NO. 523
(TDC 50)

SUBJECT: Avionics, OK-620/APQ Control-Indicator Group as a replacement for the AN/APA-125 Indicator Group in P-3B aircraft; installation of (WUC 72160)

REFERENCES: (a) NAVAVNDEPOT Alameda ECP No. AL-772 of 20 Oct 1989
(b) CNO Washington DC 282325Z of Jul 1989
(c) NAVAIRSYSCOM ACCB No. 901-269R1 approved 23 May 1991
(d) Installation Data Package - 91030039 (OGCL4)

ENCLOSURES: Not applicable.

DOCUMENTATION AFFECTED:

- | | |
|--|---|
| 1. NAVAIR 01-75PAA-0
1 Nov 1988 | Technical Documentation List, P-3A,
P-3B and P-3C Aircraft |
| 2. NAVAIR 01-75AA-1
15 Nov 1983
Chg 3 15 Jun 1987 | NATOPS Flight Manual, P-3A and P-3B
Aircraft |
| 3. NAVAIR 01-75PAA-1.1
15 Nov 1983
Chg 3 15 Jan 1987 | NATOPS Flight Manual, NFO/AIRCREW, P-3A
and P-3B Aircraft |

015001
AZf0303

Figure 3-3.—Example of a formal change TD.

cancelled. A TD that is issued with no completion date should be removed from your active files after a cancellation amendment has been issued. A completed TD is retained (not discarded) as a permanent record of system configuration at the designated compliance maintenance level. An unincorporated TD that is beyond its completion date does not relieve the maintenance responsibility for compliance.

Supersedure is the administrative process by which an issued TD is removed from active files. An interim TD is superseded by a formal change TD. A TD revision supersedes the basic TD, including all previously issued amendments and revisions.

Cancellation terminates compliance requirements and removes a TD from active files. A cancelled TD may be discarded. A TD cancellation is usually issued as a TD amendment. Cancellation amendments specify disposition of prior compliance.

TECHNICAL DIRECTIVE NUMBERING SYSTEM

The TD control center at NATEC assigns TD numbers by using one of two systems. The first numbering system is to number the TD sequentially by title; for example, Avionics Change (AVC) 3500, which would be the 3,500th avionics change. The second system is to number the TD sequentially by title within a specified type/model of equipment; for example, F-18 Airframe Change (AFC) 45, which would be the 45th airframe change to the F-18 airframe. Some of the most common technical directives in TD code sequence are listed in table 3-1. For a complete list, refer to NAVAIR 00-25-100, WP 009 00.

TECHNICAL DIRECTIVE MANAGEMENT

Upon receipt of a new TD, the CTPL librarian stamps the TD with the CTPL stamp and routes a copy of the TD to quality assurance (QA) for review of TD applicability. The CTPL librarian should ensure that the required TD and its revisions and amendments are routed to a quality assurance representative (QAR) for review.

Next, the librarian delivers a copy of the TD, determined to be applicable by QA, along with a TD routing and tracking sheet, part 1, (fig. 3-4) to maintenance control for action. Maintenance control completes part 1, item 3, of the tracking sheet and routes parts 1 and 2 to QA.

Logs and records will add the TD to the NALCOMIS TD configuration file and initiate a maintenance action form (MAF) for each TD that QA determines to be required. Logs and records should also annotate the incorporation compliance and the event on the MAF; for example, incorporation no later than next phase or not later than next 10 flight hours. When compliance involves an aircraft, engine, or component, logs and records will annotate the current time plus the compliance time as the maximum time until the aircraft or item is restricted from flight. Logs and Records also orders the required TD parts or kits and ensures that the TD routing and tracking, part 2, (fig. 3-5) is signed or initialed by a QAR before the TD is logged in the appropriate logbook as not being appropriate. Logs and Records also adds the new TD to TDSA List No. 02 if the TD is an AFC or AFB.

Table 3-1.—Technical Directives in TD Code Sequence

TD Code	TD Title	Abbreviation
01	Power Plant Bulletin	PPB
02	Power Plant Change	PPC
40	Commodity Software Change	CSC
41	Commodity Software Bulletin	CSB
50	Airframe Change	AFC
54	Avionic Change	AVC
55	Avionic Bulletin	AVB
74	Airframe Bulletin	AFB

TD Routing and Tracking Sheet (Part 1)

1. CTP Librarian Action:

- a. Stamp and date original TD and maintain as master.
- b. Stamp and date copy and route to QA for screening.

CTP Librarian Signature: _____ Date: _____

2. QA Action:

- a. TD has been screened and applies/does not apply (circle one) to

Equipment: _____

- b. TD compliance is required no later than: _____

c. Remarks: _____

- d. Deliver this form and copy of TD to MMCO and brief Maintenance Chief on TD requirements.

Screening QAR's Signature: _____ Date: _____

3. Maintenance/Production Control Action:

- a. Update NALCOMIS TD Configuration File.
- b. Initiate (to order parts/issue/no parts required) MAFs.
- c. Complete Columns I, II, and III of Part 2.
- d. Screen for Weight and Balance application (O-level only).

Weight & Balance Officer Signature: _____ Date: _____

- e. Initiate, as applicable to LRCAs, a TD Screening Request (I-level only).

Maintenance/Production Control Signature: _____ Date: _____

- f. Route Parts 1 and 2 to QA (O-level) or ICRL Manager (I-level).
- g. Add TD requirements to ICRL.

ICRL Program Manager Signature: _____ Date: _____

- h. Route Parts 1 and 2 to QA (I-level).

4. QA Action:

- a. Verify, MAF Copy 2 (or NALCOMIS hard copy notice) against Part 2.
- b. File Part 2 with all MAF Copy 4s (or NALCOMIS hard copy notices) issued.
- c. As signed off MAF Copy 4s are received, verify logs and records, weight and balance entries have been made and initial columns IV, V and VI of Part 2.
- d. Data Analyst shall initial Column VII after reviewing MDR-4-1 or MDR-4-2 to ensure that the MAF was processed.
- e. Discard Part 1.

AZf0304

Figure 3-4.—TD routing and tracking sheet (part 1).

A CTPL librarian should not duplicate a TD, but he or she must maintain positive control. To do this, the librarian should annotate page 1 of the master copy of the TD as to the location of other copies of the TD. When the TD is returned, the CTPL librarian should dispose of it in accordance with local procedures and annotate the master copy as to its location and status.

Upon receipt of the Weekly Summary of Issued Technical Directives, the CTPL librarian should review the summary for TDs that have been issued and are required to be acted upon by his or her activity but have not been received. After verifying and resolving any discrepancies in this summary, the librarian retains the summary for reference as well as for use during the audit of the CTPL.

REQUISITIONING PRINTED TECHNICAL DIRECTIVES

TDs are requisitioned in accordance with procedures outlined in NAVAIR 00-25-100, Work Package (WP) 017 00. Formal or hard copy TDs are stored at Defense Distribution Depot Susquehanna Pennsylvania. TDs stored at this depot are stock-numbered items and are listed in NAVSUP PUB 2002. NAVSUP PUB 2002 contains the information to identify and requisition individual TDs. To requisition TDs, you should use one of the military standard requisition and issue procedure (MILSTRIP) methods.

If a TD cannot be obtained from NATEC, another squadron, or a supporting IMA, request the TD from cognizant wing via message with the aircraft controlling custodian, type commander, and support equipment controlling authority (ACC/TYCOM/SECA) as information addressees.

- Q7. *What document is used to direct the accomplishment and recording of modifications and onetime inspections of weapon systems?*
- Q8. *What type of change should be used to cancel an existing technical directive?*
- Q9. *After amendment C has been applied to a technical directive, what action must occur if the TD is to be further changed?*
- Q10. *What process is used to remove a technical directive (TD) from the active files?*
- Q11. *What information summary contains a weekly list of technical directives (TDs) that have been issued?*

LIBRARY PROCEDURES

LEARNING OBJECTIVES: Identify the purpose of the technical publication library. Describe procedures to establish a technical publication library. Describe the methods used to requisition and establish automatic distribution of publications.

The technical publication library (TPL) is a centrally managed function under the quality assurance division of an aviation maintenance department. Based on activity organization, there are normally two types of libraries within an aviation maintenance organization. If more than one library is required to meet the needs of an aviation maintenance department, a central library is established to manage the overall distribution of technical information. When one library is designated as the central library, all other libraries are designated as dispersed libraries. Dispersed libraries are located in individual work centers and are responsible for storing and making available to their users the technical documents for the equipment under their cognizance. The central library is responsible for the initial outfitting of the dispersed libraries. Additionally, all requests for additional publications are made through the central library. You should refer to *Naval Air Systems Command Technical Manual Program*, NAVAIR 00-25-100, and the Naval Air Technical Data and Engineering Service Command (NATEC) Technical Publication Library (TPL) program for detailed technical library establishment and operating procedures.

THE NATEC TECHNICAL PUBLICATION LIBRARY (TPL) PROGRAM

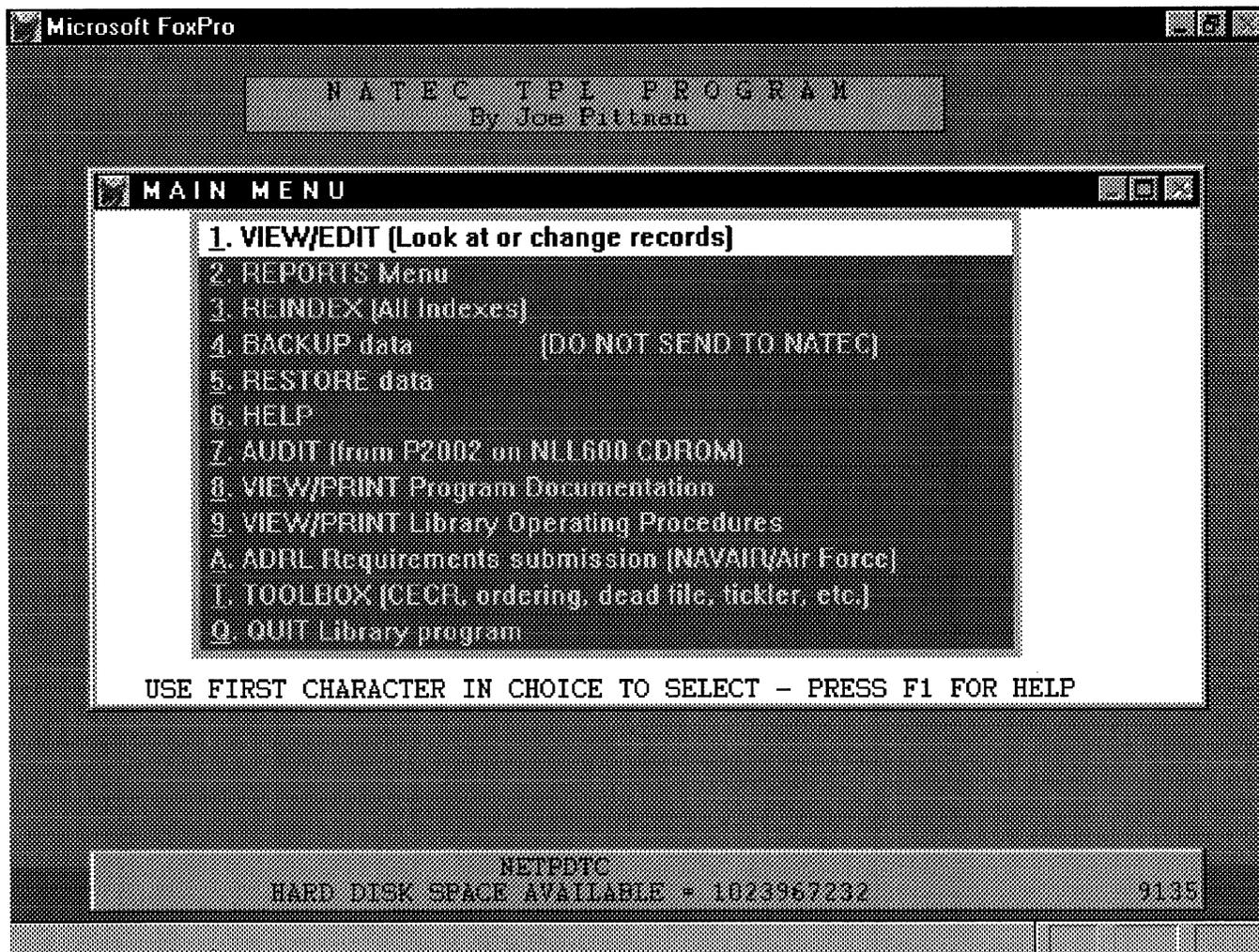
The NATEC technical publication library (TPL) program is used in Navy activities to manage the Technical Publication Library program Network-capable, menu-driven TPL computer software tracks current manuals, changes, and revisions for the central technical publication library (CTPL) and dispersed libraries. The TPL program software provides for updating the automatic distribution requirements listing (ADRL), maintaining a dead file of publications no longer held in the CTPL, printing change entry certification records (CECRs), and maintaining a CECR tickler file. Detailed operating instructions are contained in "Library Operating Procedures" in the main menu of the TPL program and in NAVAIR 00-25-100. Where directions between the TPL program and NAVAIR 00-25-100 conflict, the TPL program takes precedence.

NOTE: Commands that function with minimal publications (10 or less) and have no automatic data processing (ADP) support may use the older Naval Warfare Publication Library (NWPL) system for publication management rather than the Technical Publication Library Program.

Main Menu

At the opening or main menu (fig. 3-6) you will be given 12 selections to choose from. The selections include the following options:

1. VIEW/EDIT—Takes you to the Edit screen where you can modify existing manuals, add new manuals, enter changes to manuals, or search for specific information.
2. REPORTS Menu—Takes you to the Reports Menu.
3. REINDEX—Lets you re-index the database in case you have a problem searching for records or get a RECORD OUT OF RANGE message.
4. BACKUP data—Lets you backup data from a hard disk to diskettes.
5. RESTORE data—Lets you restore data from diskettes to a hard disk.
6. HELP—Provides you with overall HELP information.
7. AUDIT—Let's you audit library holdings against the NAVSUP P2002 on CD ROM.
8. VIEW/PRINT Program Documentation—Allows you to view or print the documentation for this program.
9. VIEW/PRINT Library Operating Procedures—Allows you to view or print a set of standard operating procedures for managing a NAVAIR tech library.



AZ#0306

Figure 3-6.—TPL program main menu screen.

- 10. ADRL Requirements submission—Helps you to prepare an ADRL file for submission to NATEC (or the Air Force). It also prints a listing of your requirements for you to retain as a record of your submission.
- T. TOOLBOX—Takes you to the TOOLBOX main menu.
- Q. QUIT—Lets you exit the TPL program.

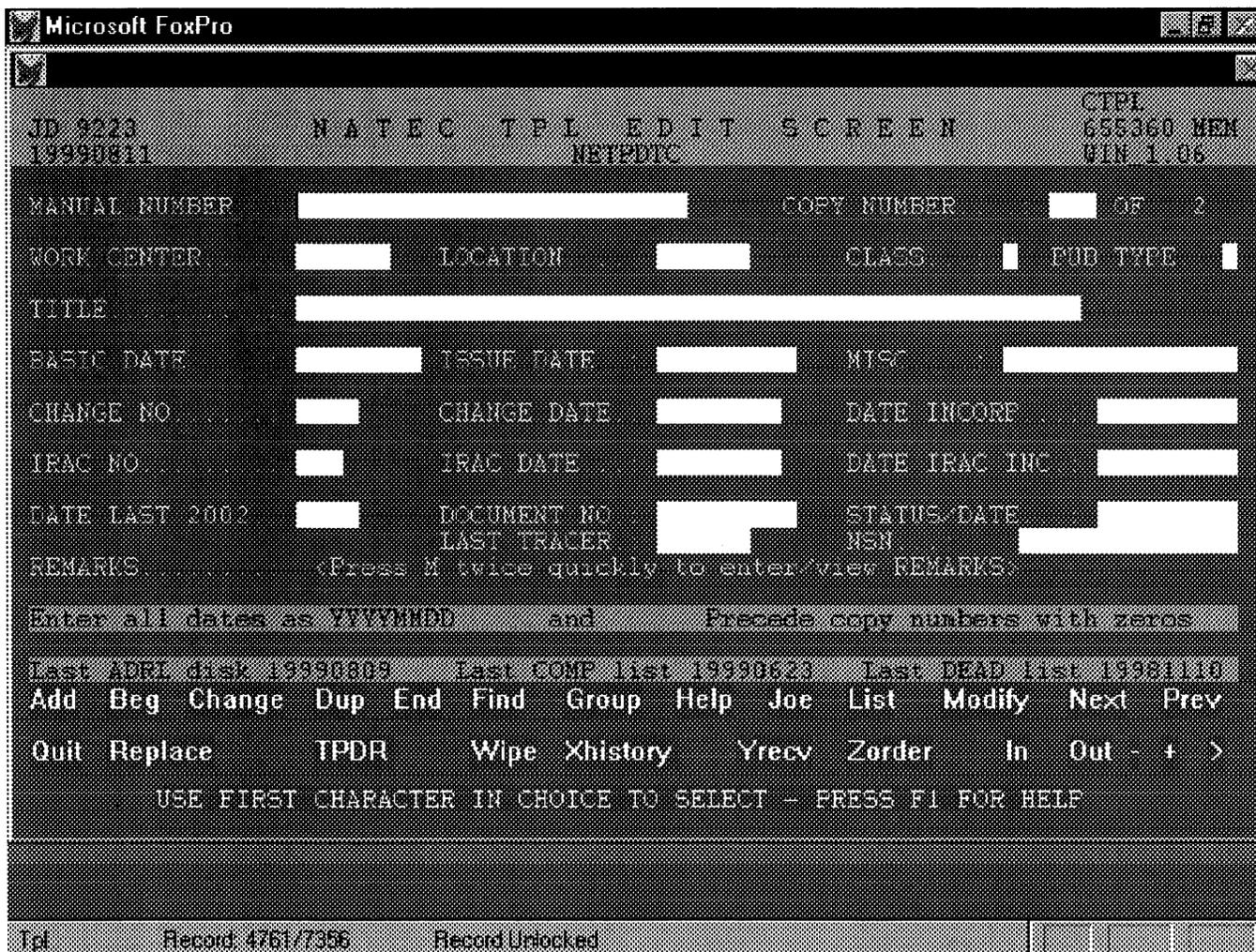
Edit Menu

The Edit Menu option (fig. 3-7) is the heart of the program. It begins by displaying the first manual in the database (an empty record if the database is empty). All fields (except REMARKS and HISTORY fields, which are MEMO fields) are displayed with their current information. Blinking brackets highlight errors that are detected in the record. The options for this menu are displayed across the bottom of the screen.

Reports Menu

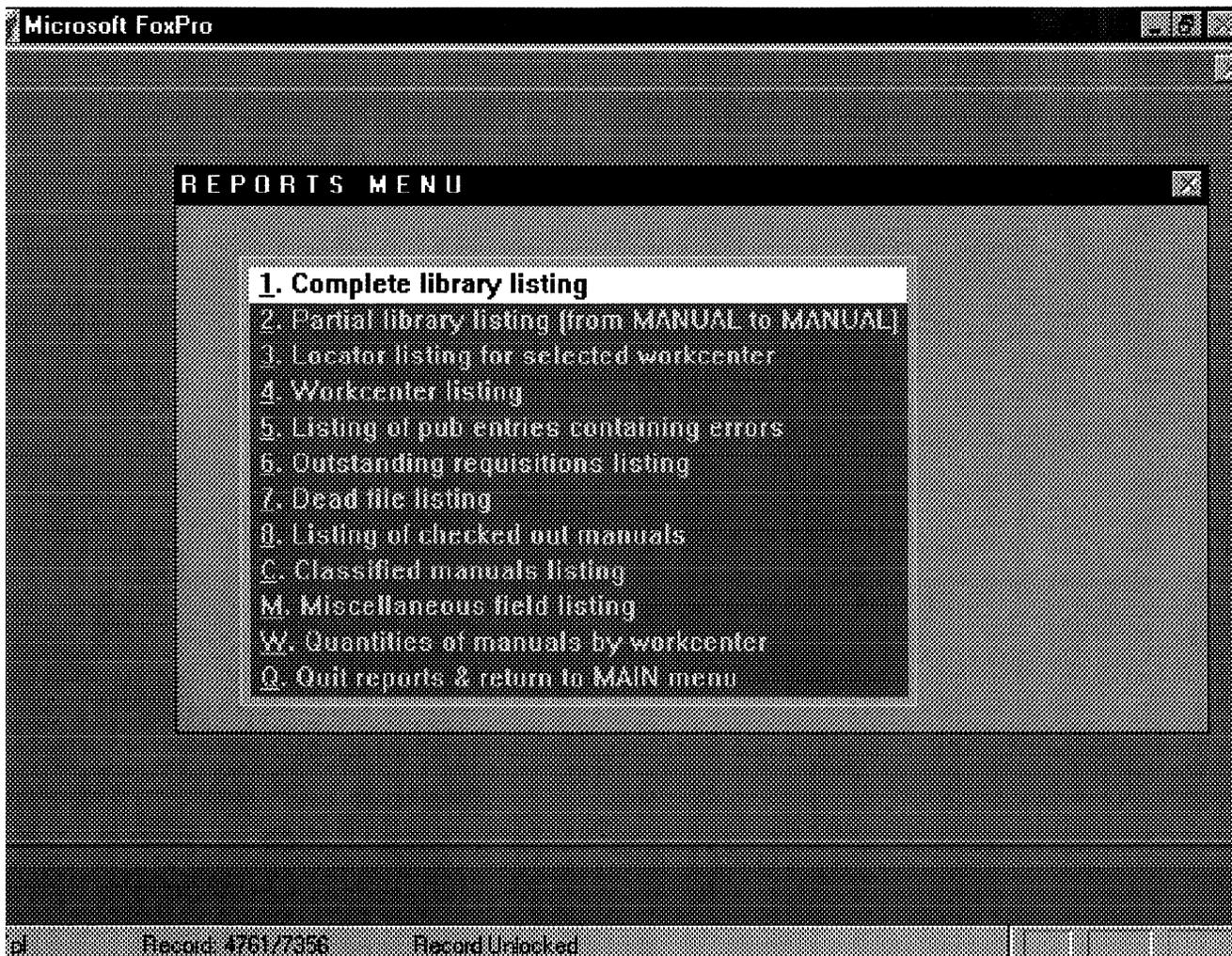
The Reports Menu option (fig. 3-8) gives you a list of the printed reports available from the program. The reports available are:

1. Complete library listing—reflects all the information contained on the EDIT screen plus information regarding the last audit and the document number for manuals on order. It lists all manuals in alphanumeric order with copy numbers. This listing highlights errors or omissions by underlining a missing item and by printing a number in the right column. An error code description list along with the quantity of errors for each code is printed on the first page of the report. You can also select only manuals you want to print by specifying a condition. This report, with no conditions set, must be run at least monthly.



AZ10307

Figure 3-7.—TPL edit screen.



AZF0308

Figure 3-8.—TPL program reports menu screen.

2. Partial library listing—is particularly useful for large libraries by allowing only a partial list to be printed. Errors are also identified in this listing.
3. Locator listing for selected workcenter—is an inventory listing that is used as a locator listing for work centers. Each listing contains the NAVAIR number, title, location, and copy number. This is a required listing for each work center and must be run at least once per quarter.
4. Workcenter listing—must be used to audit a work center. This listing contains the same information as a complete listing except title. The program places an asterisk by those manuals that have been updated since the previous edition of the NAVSUP P2002 that was used to audit the work center.
5. Listing of pub entries containing errors—is a listing that identifies pubs that the program has detected an error in. Error codes are listed on this report. This listing should be run at least once per quarter.
6. Outstanding documents listing—monitors pubs on order. This listing provides an additional monitor capability for outstanding requisitions.
7. Dead file listing—purges the dead database of manuals that have been there for more than one year. You should maintain the latest listing in a folder for at least one year or until you run the next dead file listing. You should run a cumulative dead file listing at least once per quarter.
8. Listing of checked-out manuals—lists all those manuals that are temporarily checked-out from the library.
- C. Classified manuals listing—lists all classified manuals.

- M. Miscellaneous field listing—lists all manuals with data in the MISC field in alphanumeric order.
- W. Quantities of manuals by workcenter—is an AUDIT 2002 listing that lists each copy of each manual in the activity with NAVAIR number, date, change number, change date, work center, and location.

ADRL Requirements Submission

The ADRL Requirements Submission option (fig. 3-9) places all your NAVAIR or Air Force technical manual requirements on a diskette for submission to NATEC (NAVAIR) or the appropriate Air Force activity. The program also generates the transmittal form for your ADRL request when you may need to mail the file. If you have modem or Internet capability, you should transmit your NAVAIR ADRL file to NATEC via the Streamlined Automated Logistics Transmission System (SALTS) or Internet.

Toolbox Utility

The Toolbox Utility option (fig. 3-10) lets you print CECRs; list outstanding or all issued CECRs, print a tickler file listing, view the dead file, print a list of daily requirements, or order manuals via modem, message, or by diskette submission.

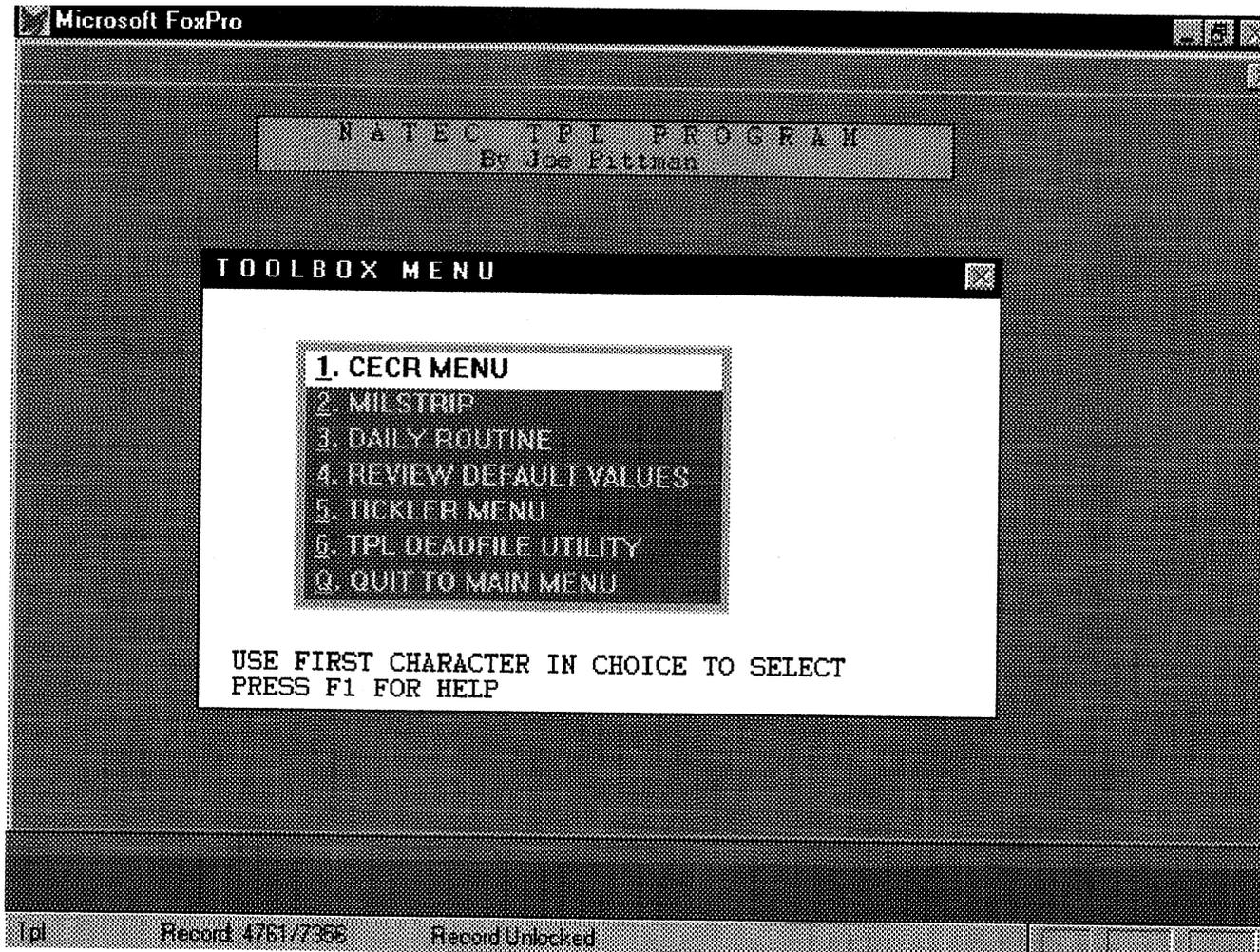
TECHNICAL PUBLICATION INITIAL OUTFITTING

A newly commissioned or reactivated activity must request initial outfitting of general and specific technical manuals. This is done by submitting a request to NATEC. Activities submit initial outfitting requirements by using the automated TPL program. The request includes the type of manuals required. These manuals include general publications and specific publications for a particular aircraft, missile, and engine in the inventory of the activity. An initial outfitting request should be specific and should include the following information:



Figure 3-9.—TPL program ADRL requirements submission initial screen.

AZf0309



AZf0310

Figure 3-10.—TPL program toolbox menu.

- The desired quantity of publications required (if not included, a standard quantity will be provided).
- Statement as to the use of an area NATEC technical publication specialist (TPS). This information provides NATEC personnel with an additional point of contact and allows the requesting activity to coordinate with the TPS prior to submission of a request.
- The priority designator in accordance with the *Uniform Material Movement and Issue Priority System (UMMPS)*, OPNAVINST 4614.1, and the date the publications are required.
- The Unit Identification Code (UIC) as listed in the *Navy Comptroller Manual*, volume II, chapter 5.
- The level of maintenance performed.
- Applicable aircraft and equipment model.

- NATEC-assigned account number.
- Point of contact at the requesting activity.
- The complete mailing address.

Once an activity has defined its initial outfitting publication requirements and submitted a request to NATEC, future changes and revisions to the publications will automatically be mailed to the activity.

AUTOMATIC DISTRIBUTION REQUIREMENT LIST (ADRL)

Without a method of automatic distribution, the initial outfitting of general aeronautic publications would not remain current because of frequent changes and revisions to the publications. The CTPL should use the ADRL option in the TPL program to establish a NAVAIR library and receive NAVAIR manuals. An

established library can use the ADRL option to receive new manuals for new aircraft or to bring its library up-to-date. To determine the latest publication changes and revisions, refer to NAVSUP PUB 2002. The ADRL option establishes a computer profile (list) of technical publications (and their quantities) for a particular activity or platform. Once you transmit the list to NATEC, automatic distribution begins. You should review NATEC's ADRL and Validation Report to ensure all NAVAIR manuals that you hold are listed and resubmit your activity's ADRL to NATEC to correct discrepancies.

ONETIME REQUESTS

From time to time, an activity may need to obtain additional publications to replace technical manuals as separate items. To meet these requests, you should use a onetime requisitioning system. To do this, use the DOD Single Line Item Requisitioning System Document (Manual), DD Form 1348, or message preparation procedures for the Defense Automatic Addressing System (DAAS). If you desire follow-up changes or revisions for a publication that is obtained by a onetime request, you should submit an update to your activity's ADRL.

When using the TPL Program, enter the basic manual into the TPL Program that needs to be ordered. Next, create the MILSTRIP data file by using the MILSTRIP option. This file can be sent directly to Naval Inventory Control Point (NAVICP) via SALTS or used to prepare a MILSTRIP message by using the Message Text Formatter (MTF) Program. Messages must be sent to DAAS Dayton, Ohio. For detailed information about SALTS' use, refer to the *SALTS User's Manual*.

When ordering a basic manual, you will automatically receive all of the changes that are in stock at NAVICP. Therefore, it is not necessary to order changes separately.

DD Form 1348 is the standard MILSTRIP requisition form that is used throughout the Navy supply system. NAVAIR 00-25-100 contains detailed instructions on how to use the DD Form 1348 to initiate a onetime request for a NAVAIRSYSCOM technical publication, technical directive, or departmental directive.

Q12. What division manages the central technical publication library (CTPL)?

Q13. What are the two different types of libraries established within a command?

Q14. To what publication should you refer for detailed information on technical library establishment and operating procedures?

Q15. Commanding officers of newly commissioned aviation maintenance activities should submit a letter requesting an initial outfitting of technical publications to what activity?

Q16. What listing lists the technical publications for which automatic distribution to a particular activity has been established?

Q17. What listing should be updated if your activity needs to increase its distribution requirements for a technical publication from three to five copies?

TECHNICAL PUBLICATIONS MANAGEMENT AND CONTROL

LEARNING OBJECTIVE: Describe procedures for managing the central technical publication library (CTPL).

The CTPL librarian manages the library. Records are kept to identify the type, quantity, and location of all activity publications under the librarian's cognizance. A well-managed CTPL reflects the degree of expertise library personnel bring to this task and enhances technical manual management within the dispersed libraries.

Prompt action must be taken to incorporate official technical documentation and update material that is received. Technical publication changes and revisions must be screened, recorded, and routed. The material must reach each work center that holds copies of the affected manuals and directives so that changes and revisions can be incorporated as quickly as possible. A backlog or accumulation of unprocessed technical data creates potential flight safety hazards. Compliance with the above actions builds maintenance personnel's confidence in their technical manual system.

TECHNICAL PUBLICATIONS FILING AND STORAGE

NAVAIR technical manuals and directives are drilled with five distinctive holes—three large and two small. The three large holes fit the posts of the special NAVAIR publication binders, which are available in 2- and 3-inch sizes. The two small holes are provided to permit use of standard three-ring, loose-leaf binders. Binder storage is a uniform means of protecting and controlling the storage of loose documents.

You should place each manual and directive that is received by the library in a binder with a vinyl envelope spine to accommodate the insertion of an identification strip (fig. 3-11). This strip is used to identify the manual or directive contained in the binder. More than one publication may be placed in the same binder. The lowest NAVAIR or type directive number should appear first in the spine window followed by the term "thru" and ending with the highest manual number or type directive. After the publications are filed in binders, the binders are stored on shelves. You should arrange the binders so the manuals are in alphanumeric order by NAVAIR publication number (for an airframe manual, this will automatically result in arrangement by weapon systems). Letter-type technical directives for aircraft or airframes should be filed in individual binders according individual type.

SCREENING AND REVIEW OF TECHNICAL DATA

All aircraft maintenance organizations are in continuous receipt of large quantities of technical information and data. While some of this material is purely informational, a certain amount requires immediate or future action. Therefore, it is important that incoming technical data be screened and reviewed by technically competent personnel who are in a position either to advise or to initiate proper action and disposition of the material. Internal routing procedures should ensure that designated personnel are made aware of on-hand, unprocessed technical information and data.

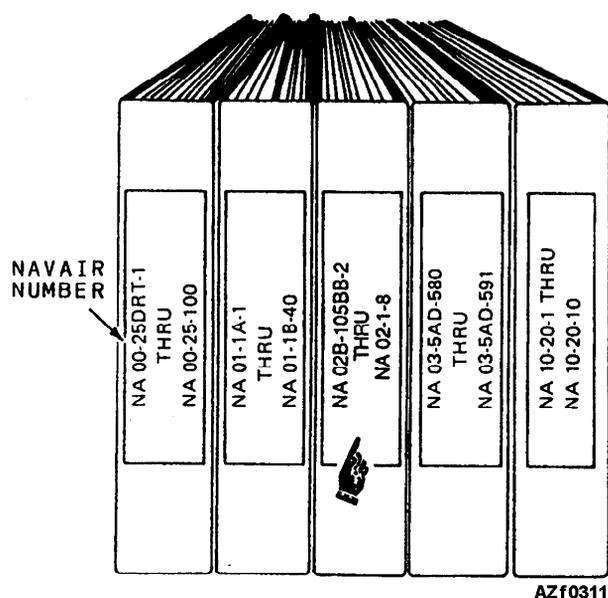


Figure 3-11.—Identification strip in loose-leaf spine.

TECHNICAL PUBLICATIONS RECEIPT AND RECORDING

As a technical publication librarian, you must document receipt of all technical publications and changes received by the central library. You should document receipt by using the TPL program and the TPL stamp. For a change or revision of a technical publication already held by activity, you should input the change into the TPL program and use a technical library stamp (obtained through open purchase) to identify the publication itself. The TPL stamp must be used on all publications and changes, including technical directives. The stamp contains (as a minimum) the following information: (1) activity, (2) copy number, and (3) location (QA, P/P, and so forth). Each basic or revised publication should be stamped on the title page that identifies the date of the publication. A technical directive, rapid action change (RAC), or interim rapid action change (IRAC) should be stamped on the first page.

If the publication is new, you need to verify its need by checking with the supervisor, QAR, or work center where the technical data could be used. If the publication is not needed, you should perform the Return Pubs option in the TPL program.

When a publication has been requisitioned, the basic manual and all of its changes are not always received at the same time for various reasons. Because of this you should set aside a location as a hold area for these manuals. Compare the Hold File and the Order Log in the TPL program at least monthly to ensure that the missing manuals and changes are still on order and to determine their status. You should place a note in the Tickler File of the TPL program at 30-day intervals as a reminder to check the Hold File and Order Log.

TRANSACTION FILES

The material maintained in the transaction files reflects the status of the CTPL. Transaction files consist of the following:

- Most recent ADRL from NATEC
- Copies of the last ADRL submission
- Copies of completed work center audits
- Copies of completed central library audits
- Copies of publication requisitions and order logs
- A current copy of the Dead File

- A current copy of the Complete Listing of manuals
- Copy of outstanding and completed change entry certification records (CECRs)

Q18. *What minimum information must appear on the technical publication library (TPL) stamp?*

Q19. *What does the transaction file show about a central technical publication library (CTPL)?*

UPDATING PUBLICATIONS

LEARNING OBJECTIVE: Describe the methods used to update technical publications.

Modern aviation technology is constantly changing. What is considered to be the latest word today may be modified, totally revised, or otherwise made obsolete tomorrow. This condition is not always planned or intended, but it must be accepted and dealt with. The degree of urgency of updating publications depends upon the type of information involved and the frequency of reference to the affected directives or publications.

REVISIONS AND CHANGES

The two methods used to update technical manuals are revisions and changes.

A *revision* is a complete reissue of an existing document with all change information incorporated. Normally, when a change or changes affect over 60 percent of a publication's pages, a revision is issued. A revision is also issued when the manual usability is impaired because of change complexity. The revision of a manual requires an evaluation of technical manual condition, both physical and technical, and the release of a completely new edition of the manual. Revisions are prepared on a nonscheduled, as required basis. All manuals are reviewed periodically (at least once a year) to determine requirements for reissue. Revisions direct the supersedure and disposal of the revised document.

A technical manual *change* is the official release of correction pages to a part or portion of an existing document. A change provides replacement pages for that area of the manual affected by a change action. This approach provides both an economical and expedient method of issuing new or correct material to the user. Upon receipt, you should remove the superseded pages and insert the new material. This action is required for paper manuals only.

Changes to original manuals are issued as two basic types—routine changes and RACs. Routine changes are released periodically. A RAC is an expedited change action that is programmed for short turnaround and release time because of its relationship to safety, equipment damage, or danger to personnel.

Routine Manual Changes

A routine manual change is partial manual updating action that is issued as a corrective insert page (or pages) to an existing technical manual (printed manuals only). A routine manual change provides the user with information concerning a change in configuration, maintenance concept, or procedure.

Rapid Action Changes (RACs)

A RAC is prepared to disseminate urgent essential data that directly involves hazards to personnel, an impairment to safety of flight, aircraft grounding, mission capability, equipment or property damage, or maintenance capability, including that for high value and repairable items. There are two types of RACs—interim and formal.

An interim rapid action change (IRAC) is prepared in naval message format. IRACs should be maintained with the affected technical manual until the formal change is received and should be placed directly behind the title page of the manual. Formal RACs are prepared as replacements for IRACs. Formal RACs are prepared in the same style and format as the technical manual being changed.

When an IRAC is received, annotate the specific publication page to which the IRAC applies by drawing a vertical line in the margin opposite the affected text. The vertical line should extend for the length of the affected text. The IRAC number and the date-time-group of the IRAC message should also be annotated near the affected text. After making the appropriate annotation on the affected page, or pages, place a copy of the IRAC directly behind the title page of the applicable publication until you receive the formal RAC. To help manage IRACs, NATEC issues an IRAC Tracker that lists IRACs that were issued during the previous month. Upon receipt of a new IRAC Tracker, the CTPL librarian should perform a verification to ensure that the IRACs that should have been received were actually received.

Formal RACs should be incorporated into the applicable manual immediately after receipt. When incorporating a formal RAC, verify previously issued

and incorporated changes and revisions. Some formal RACs will have a vertical black line drawn opposite the affected text to indicate that a change has been issued that affects the indicated text.

NOTE: A pen-and-ink change is NOT the appropriate method of identifying changes to NAVAIR technical manuals and directives. Documentation policy prohibits the use of pen-and-ink changes for this purpose. The basic reason for this policy is to avoid the probability of error and possible conflict in direction or information.

INCORPORATING THE LATEST CHANGE

One of the most important functions of the technical publication librarian is the incorporation of change pages into existing manuals. Upon receipt of a change document, each page in the existing manual that corresponds to a page in the change document is removed, and the change page is inserted in its place. These procedures should be followed for each manual affected by a change.

A1-H60FB-110-400		Page A	
RAC 1 - 4 December 1992			
NUMERICAL INDEX OF EFFECTIVE PAGES/FIGURES			
List of Current Changes			
Original	0	6 December 1990	Change 4
Change	1	31 May 1991	Change 5
Change	2	1 October 1991	Change 6
Change	3	4 October 1991	RAC 1
			6 December 1991
			31 May 1992
			1 June 1992
			4 December 1992

Only those pages/figures assigned to the manual are listed. If the numerical sequence is broken in the list, the missing page/figure numbers have not been assigned to this manual. Insert RAC 1 pages/figures, dated 4 December 1992. Dispose of superseded pages/figures. The portion of text and tabular listings affected is indicated by a change bar or the change symbol R in the outer margin of text pages and tabular data. Total number of pages in this manual is 998 consisting of the following:

<u>Figure Number</u>	<u>Page Number</u>	<u>Title</u>	<u>Change Number</u>
		Tide	RAC 1
		Page A Numerical Index of Effective Pages/figures	RAC 1
		Page B Numerical Index of Effective Pages/figures	RAC 1
		Page C Numerical Index of Effective Pages/figures	RAC 1
		Page D Numerical Index of Effective Pages/figures	RAC 1
		Page E Numerical Index of Effective Pages/figures	RAC 1
		Page F Numerical Index of Effective Pages/figures	RAC 1
		Page G Numerical Index of Effective Pages/figures	RAC 1
		Page H Numerical Index of Effective Pages/figures	RAC 1
		Page J Numerical Index of Effective Pages/figures	RAC 1
		Page K Numerical Index of Effective Pages/figures	RAC 1
		Page L Numerical Index of Effective Pages/figures	RAC 1
		TPDR-1 List of Technical Publications Deficiency Reports Incorporated	RAC 1
		INDEX-1 Alphabetical Index	1
		INDEX-2 Alphabetical Index	6
		INDEX-3 Alphabetical Index	0
		INDEX-4 Alphabetical Index	6
		INDEX-5 Alphabetical Index	RAC 1
		INDEX-6 Alphabetical Index	6
		INDEX-7 Alphabetical Index	RAC 1
		INDEX-8 Alphabetical Index	6
		INDEX-9 Alphabetical Index	RAC 1
		INDEX-10 Alphabetical Index	6
		INDEX-11 Alphabetical Index	0
		INDEX-12 Alphabetical Index	RAC 1
		INDEX-13 Alphabetical Index	1
		INDEX-14 Alphabetical Index	RAC 1
		INDEX-15	
		INDEX-22 Alphabetical Index	6
		INDEX-23 Alphabetical Index	RAC 1
		INTRO-1 Introduction	4
		INTRO-2	
		INTRO-3 Introduction	6

AZf0312

Figure 3-12.—List of effective pages.

List of Effective Pages

In NAVAIR manuals, a list of effective pages (fig. 3-12) lists the pages altered in the latest and previous changes. It is provided with a change to assist the librarian in inserting change pages and checking the currency of all the pages. A change may not necessarily have a page-for-page replacement, so be sure to follow the guidance on the list of effected pages. When you check the pages and dates that are listed on this page against the corresponding pages of the publication, you can determine if the publication is current and complete.

Change Entry Certification Record (CECR) Tickler Files

The CTPL librarian uses the CECR (fig. 3-13) to maintain control of changes. The CTPL uses the CECR form as a record to ensure that changes and revisions to publications have been issued to dispersed libraries. A separate CECR form should be initiated and attached to each change.

There are two CECR tickler files. One file is the 2-day CECR tickler file that consists of CECRs (OPNAV Form 5070/12, Part 1) for IRACs and RACs. Due to the critical nature of both IRACs and RACs, the changes should be incorporated within 2 working days. The second file is the 5-day CECR tickler file, and it is for routine changes and revisions to publications. Routine changes should be incorporated within 5 working days. The files should be reviewed daily to ensure timely incorporation of changes. You should remove the CECR, Part 1, from the tickler file upon receipt of the completed CECR, Part 2, that indicates the change has been made. The TPL program allows users to print and maintain CECR tickler files and reports.

Q20. A revision to a publication is issued when over what percent of its pages are affected by the change?

Q21. What type of rapid action change is usually prepared in naval message format?

Q22. When an interim rapid action change (IRAC) is received and after the applicable annotation has been made, what should be the disposition of the IRAC?

CHANGE ENTRY CERTIFICATION OPNAV 5070/12 PART 1				CHANGE ENTRY CERTIFICATION OPNAV 5070/12 PART 2			
SHORT TITLE		COPY #	CHANGE/CORRECTION	SHORT TITLE		COPY #	CHANGE/CORRECTION
NA-00-XXX		002	C 1 DTD 19990515	NA-00-XXX		002	C 1 DTD 19990515
WORK CTR	LOCATION	ISSUED	RETURN TO CTPL NLT	WORK CTR	LOCATION	ISSUED	RETURN TO CTPL NLT
020	MC	19990825	19990901	020	MC	19990825	19990901
REMARKS:				REMARKS:			
1) ENSURE SAME COPY NO AND LOCATION. 2) ENSURE ALL PRIOR CHANGES HAVE BEEN INCORPORATED. 3) INCORPORATE IAW NA 00-25-100. 4) REMOVE ANY IRAC's CANCELED BY THIS CHANGE 5) RETURN ALL OLD PAGES WITH PART 2 OF CECR TO CTPL. I acknowledge receipt of the above change/correction and certify that this change/correction will be entered within five (5) working days (two(2) working days for rapid action changes) and that the superseded pages will be returned to the Central Technical Publications Library.				6) ENSURE SAME COPY NO AND LOCATION. 7) ENSURE ALL PRIOR CHANGES HAVE BEEN INCORPORATED. 8) INCORPORATE IAW NA 00-25-100. 9) REMOVE ANY IRAC's CANCELED BY THIS CHANGE 10) RETURN ALL OLD PAGES WITH PART 2 OF CECR TO CTPL. I certify that the above change/correction has been entered and the list of effective pages has been checked against contents of the basic publication, and the superseded pages and residue of the change were returned to the Central Technical Publications Library. Missing pages or other defects should be reported in the remarks space above.			
SIGNATURE AZ2 Paul T. Boate			DATE 25 AUG 1999	SIGNATURE AZ2 Paul T. Boate			DATE 27 AUG 1999

NATEC TPL Program Version WIN_1.06 release date 9135 by Joe Pittman

AZ#0313

Figure 3-13.—Change Entry Certification, OPNAV 5070/12.

- Q23. *What document should you use to verify that all interim rapid action changes (IRACs) that have been issued have been received?*
- Q24. *A pen-and-ink change is the authorized method of identifying a change to a NAVAIR technical publication. (True or False)*
- Q25. *What page in a technical publication lists all the previous pages in the publication that have been affected by past and present changes?*
- Q26. *What form is used as a record by the central technical publication library (CTPL) to ensure that changes and revisions to technical publications have been issued to dispersed libraries?*
- Q27. *How many working days are allowed for the incorporation of an interim rapid action change (IRAC)?*
- Q28. *What part of the Change Entry Certification Record (CECR) is removed from the technical publication library tickler file after a change has been incorporated into a technical publication?*

SECURITY OF CLASSIFIED PUBLICATIONS

LEARNING OBJECTIVE: Identify the governing directive for managing classified publications.

The technical library must store, safeguard, account for, and dispose of classified publications in accordance with existing directives. The basic Navy security directive that relates to the safeguarding of classified information is *the Department of the Navy (DON) Information Security Program (ISP) Regulation, SECNAVINST 5510.36*. SECNAVINST 5510.36 applies uniform, consistent, and cost-effective policies and procedures to the classification, safeguarding, transmission, and destruction of classified material.

The TPL librarian should ensure positive control of all classified publications for which the library maintains custody. Classified material should NOT be kept on open shelves. While large libraries sometimes need walk-in safes, most find that a few locking drawer files are adequate for classified material. SECNAVINST 5510.36 discusses storage containers of varying degrees of integrity. Also provided in the directive are specific requirements for safeguarding combinations and keys for locks as these affect the

protective capabilities of the different types of containers.

Classified publications that are no longer required in the library should be disposed of by procedures that are established by SECNAVINST 5510.36.

- Q29. *What basic Navy security directive outlines procedures for safeguarding classified information?*

LIBRARY AUDITS

LEARNING OBJECTIVE: Identify the requirements for auditing the central technical publication library (CTPL) and dispersed technical publication libraries.

Technical publication library audits are conducted to ensure accuracy of publications. This leads to improved readiness. The need to ensure that correct and up-to-date publications and directives are available cannot be overemphasized. There are two categories of library audits—CTPL audits and dispersed library audits.

CTPL AUDIT

The following procedures define the steps required to audit the CTPL:

1. The central library must be completely audited annually. An audit must also be performed under conditions outlined in NAVAIR 00-25-100 and as required by OPNAVINST 4790.2 by using the Computerized Self-Evaluation Checklist (CSEC) (fig. 3-14) audit forms. (This includes an audit when an activity has a change of mission, when the CTPL librarian is replaced, and when directed to do so by higher authority.)
2. Use a locally prepared form to record procedures and discrepancies you discover during the audit. At a minimum, the form should provide for the following information:
 - NAVAIR number
 - Discrepancy
 - Corrective action required
 - Corrective action taken
3. The annual audit consists of the following procedures:

Activity - Computerized Self Evaluation Checklist (CSEC)

08/17/1999

VFA-999 using NAVY Service Type Setting

Work Center Audit Checklist

Work Center: 020, Maintenance/Production Control

Organizational Maintenance Level

NUMBER	QUESTION	Yes	No
1907 C	B Are manuals arranged alpha-numerically by NAVAIR publication numbers? Refs. OPNAVINST4790.2G, vol. 1, par. 14.8.1 and NAVAIR 00-25-100, WP 022 00, par. 13 and fig. 1	—	—
1908 C	B Is a locally procured stamp which includes the activity, copy number, and location used on each publication? Refs. OPNAVINST 4790.2G, vol.I, par. 14.8.1 and NAVAIR 00-25-100, WP 020 00, par. 25	—	—
1910 C	B Are MRC decks stored in appropriate containers in alpha-numerical order? Refs. OPNAVINST 4790.26, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 020 00, par. 40 d	—	—
1911 C	B Do MRC decks have QAR/CDQAR/CDI functions correctly annotated? Ref. OPNAVINST 4790.2G, vol. I, par. 14.8.1 e(1)(c)	—	—
1912 C	B Are local MRC numbers correctly entered on the MRC deck "A" Card (List of Effective Cards), or on a separate 5" x 8" card formatted like the "A" card? Ref. OPNAVINST 4790.26, vol. I, par. 14.8.1 e(2)(b)	—	—
1913 C	B Are applicable SCCs adjusted (annotated) as necessary? Ref. OPNAVINST 4790.26, vol. I, par. 14.8.1 e(5)	—	—
1914 C	B Are local MRCs printed on NAVAIR 4790/3 (Rev 10/90), and is all required information correct? Ref. OPNAVINST 4790.26, vol. I, par. 14.8.1 e(2)(b)	—	—
1919 C	B Are changes, revisions, IRACs/RACs correctly incorporated into manuals? Refs. OPNAVINST 4790.26, vol.1, par. 14.8.1 and NAVAIR 00-25-100, WP 007 00	—	—
1920 C	B Are NAVAIR publications, manuals, and technical directives current and readily accessible to work center personnel? Ref. OPNAVINST 4790.26, vol. I, pars. 14.8.1 b and 15.8	—	—
1923 C	B Are audits/inventories on dispersed libraries conducted: quarterly; when a new Work Center Supervisor is assigned; when a new Dispersed Librarian is assigned? Refs. OPNAVINST 4790.2G, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 023 00, pars. 2 and 3	—	—
1925 C	B Does the Central Librarian provide training and assistance to both the Work Center Supervisors and the dispersed librarians? Refs. OPNAVINST 4790.2G, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 022 00, par. 3	—	—
1927 C	B Do dispersed libraries have a visible, readily accessible list of publications and their location? Refs. OPNAVINST 4790.26, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 022 00, par. 5	—	—
1928 C	B Is the Dispersed Librarian incorporating changes into publications in the required time frames? Refs. OPNAVINST 4790.26, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 020 00, par. 51 b and d	—	—
1929 C	B Do work center publications require reordering (damaged, missing changes, etc.)? Refs. OPNAVINST 4790.26, vol. I, par. 14.8.1 and NAVAIR 00-25-100, WP 023 00, par. 7 f	—	—
1939 C	B Are work centers returning copies of TDs to the CTPL upon task completion? Refs. OPNAVINST 4790.26, vol. 1, par. 14.8.1 and NAVAIR 00-25-100, WP 023 00, par. 7 e(2)	—	—

Figure 3-14.—Computerized self-evaluation checklist (CSEC).

- Compare the Central Library Listing from the TPL computer program with actual manuals on hand. Ensure that all manuals are reviewed, not just those in binders on the shelf. Ensure each entry on the listing has a matching manual and that each manual in the library is on the list. Record date and the discrepancies.
- Perform TPL program "NAVSUP P2002" and record the date and the discrepancies.
- Indicate the date of the NAVSUP P2002 that was used to perform the audit in the 2002 DATE column of the Central Library Listing and update the information in the DATE LAST 2002 field in the TPL computer program, if necessary.
- Compare the verified and corrected audit list with a current copy of your activity's automatic distribution requirements list (ADRL). Record the discrepancies and the date. Perform TPL program "Distribution Analysis."
- When all discrepancies are corrected, place the audit form in Central Library Transaction file. This file should contain a cover sheet that shows the date of each audit and who performed the audit. This file should be retained for a minimum of 1 year.

DISPERSED LIBRARY AUDITS

An audit of each dispersed library is required quarterly. The CTPL librarian schedules and performs the audit. It is often convenient to schedule dispersed library audits at the same time as the quarterly work center audit. In addition, the CTPL librarian should audit a dispersed library when directed to do so by competent authority, when a new work center supervisor is assigned, or when a new dispersed librarian is assigned.

To perform an audit of a dispersed library, carry out the following steps:

1. Run a Work Center Audit List from the TPL program.
2. Use a locally prepared form to record discrepancies that you discover during the audit. At a minimum, the form should provide for the following information:
 - NAVAIR number
 - Discrepancy

- Corrective action required
 - Corrective action taken
3. Using your file of CECR forms (Part 2), ensure that each of the manual changes issued to the work center has been made properly.
 4. Ensure that all manuals that are assigned to the work center are in usable condition.
 5. Ensure all manuals assigned to the work center are appropriately labeled.
 6. Ensure that canceled and out-of-date pubs have been purged from the library or marked appropriately.
 7. Ensure that classified publications are stored in accordance with SECNAVINST 5510.36.
 8. Ask the dispersed librarian and the work center supervisor if they have all the manuals they need.
 9. When all discrepancies are corrected, place the audit form in the work center audit folder and retain it for at least 1 year. This folder should contain a cover sheet that indicates a chronological record of audits. Also, show the date of each audit, who performed the audit, and who the dispersed librarian was at the time of the audit.

Q30. At least how often should a dispersed technical publication library be audited?

NAVAL AVIATION MAINTENANCE DISCREPANCY REPORTING PROGRAM (NAMDRP)

LEARNING OBJECTIVES: Identify the reports submitted under the Naval Aviation Maintenance Discrepancy Reporting Program (NAMDRP). Describe procedures for reporting discrepancies in maintenance and operational publications.

The Naval Aviation Maintenance Discrepancy Reporting Program (NAMDRP), outlined in Volume V of the *Naval Aviation Maintenance Program (NAMDP)*, OPNAVINST 4790.2, establishes policy, responsibilities, and requirements for reporting substandard workmanship, improper quality assurance procedures, and deficiencies in material or in technical publications. NAMDRP reports include:

- Hazardous material report

- Quality deficiency report
- Aircraft discrepancy report
- Engineering investigation
- Technical publication deficiency report

HAZARDOUS MATERIAL REPORT (HMR)

A hazardous material report (HMR) is a standard method to report material deficiencies that, if not corrected, could cause death or injury to personnel, loss of aircraft, or damage to equipment or facilities. An HMR priority precedence message should be submitted within 24 hours of discovery when one or more of the following conditions occur:

- A malfunction or failure of a component part occurs, that if not corrected, could result in death or injury to personnel, or damage to or loss of aircraft, equipment or facilities.
- A configuration deficiency (when discovered) that constitutes a safety hazard in aeronautical equipment (aircraft, SE, or components) is discovered.
- Urgent action or assistance is required and corrective action must be completed at an early date because of operational commitments.
- A design is detected that would allow incorrect installation of parts, resulting in possible system malfunction or failure.
- A potential or experienced in-flight or on-the-ground loss of aircraft parts occurs in which a maintenance or material factor is involved. "Things Falling Off Aircraft (TFOA)" is the terminology that is used in reference to an incident such as when foreign object damage (FOD) to an engine causes the engine to shed its parts.

QUALITY DEFICIENCY REPORT (QDR)

A quality deficiency report (QDR) reports a deficiency in new or newly reworked material that may indicate nonconformance with a contract, a deviation from a specification requirement, or substandard workmanship. Definitions of new and reworked material are as follows:

- *New* material is material that is procured under contract from industry or is manufactured by an in-house facility and is under warranty. Material, whether in actual operation or on the shelf, is considered new until the warranty expires.

- *Reworked* material is material that has been overhauled, rebuilt, repaired, or modified by government or commercial activities but is unproven in actual operations.

A QDR is targeted toward reporting possible deficiencies in QA during the manufacturing or rework process. A discrepancy that is found after initial use of equipment does not qualify for QDR reporting. *Product Quality Deficiency Report Program*, SECNAVINST 4855.5, and *Product Data Reporting and Evaluation Program (PDREP)*, SECNAVINST 4855.3, provide overall Navy QDR policy.

Category 1 (CAT 1) QDR

A CAT 1 QDR is used for quality deficiencies that may cause death, injury, or severe occupational illness. A CAT 1 QDR is also used for a deficiency that would cause loss of or major damage to a weapon system; would critically restrict the combat readiness capabilities of the using organization; or would result in a production line stoppage. Unless a CAT 1 QDR is combined with an HMR, a CAT 1 QDR should be submitted by routine precedence message within 1 working day after its discovery.

Category 2 (CAT 2) QDR

A CAT 2 QDR is used for quality deficiencies that have been assessed to have significant and widespread material or human resource impact but do not affect safety of personnel or impair combat efficiency. A CAT 2 QDR is submitted by using the Product Quality Deficiency Report, Standard Form 368, within 5 working days after discovery of the deficiency.

AIRCRAFT DISCREPANCY REPORT (ADR)

An aircraft discrepancy report (ADR) identifies and documents a defect in newly manufactured, modified, or reworked aircraft to ensure quality maintenance or rework procedures. An ADR is documented on Standard Form 368.

An acceptance flight is performed and a functional check flight (FCF) is flown as soon as possible after the aircraft is delivered and prior to maintenance. Only those discrepancies noted by the ferry pilot and those found during the acceptance inspection and check flight that can be attributed to the manufacture, modification, or rework process are on an initial ADR.

An ADR is used to report critical, major, or minor discrepancies. Definitions of critical, major, and minor deficiencies are as follows:

- A *critical* defect constitutes hazardous or unsafe condition (or as determined by experience and judgement could conceivably become hazardous and unsafe), thus making an aircraft unsafe for flight or endangering operating personnel.
- A *major* defect is a defect that could result in failure or materially reduce usability of the unit for its intended purpose.
- A *minor* defect is a defect that is not likely to materially reduce usability of the unit or product for its intended purpose or departs from established standards.

Submit the required ADR within 5 working days after completion of an acceptance flight. A supplemental ADR, if any, must be submitted within 30 days of completion of the acceptance check flight. Submit a negative response if no discrepancies are found. State “No Discrepancies Noted, Reply Not Required” in Block 22 of Standard Form 368. Use the preaddressed envelopes that should be in the manila envelope in each aircraft logbook. Refer to OPNAVINST 4790.2 for more information on ADRs.

ENGINEERING INVESTIGATION (EI)

An engineering investigation (EI) provides an investigative process to determine cause of an aircraft mishap, lightning strike, weapon system and equipment failure, or fleet-wide material problem. An EI is submitted in support of the investigation. An EI should be submitted whenever the following circumstances exist:

- Safety is involved. This includes an EI request that is prepared in conjunction with an aircraft mishap and an HMR when an unsafe condition exists
- Additional technical or engineering information is required to complete an aircraft mishap investigation.
- Aircraft readiness is seriously impaired due to poor material reliability.
- A component is rejected through the Naval Oil Analysis Program (NOAP) after all authorized repairs are attempted.

- An environmental issue requires a change in material or process that is in conflict with a material or process that is specified in an existing publication or TD.
- Higher authority directs that the investigation be conducted.

Unless combined with an HMR, an EI request should be submitted by routine priority message within 5 working days after discovery of the deficiency. A combined report follows HMR reporting criteria. Refer to OPNAVINST 4790.2 for handling and preparation of EI material.

TECHNICAL PUBLICATION DEFICIENCY REPORT (TPDR)

A technical publication deficiency report (TPDR) is a simplified method for reporting a safety hazard or routine deficiency in a technical publication. Technical publications where TPDRs can apply include MRCs, checklists, WUC manuals, shop process cards, MIMs, weapon loading manuals, stores loading manuals, conventional weapon checklists, nuclear weapon checklists, stores reliability cards, IPB listings, TDs, and technical manuals. The TPDR is the NAMDRP report that the CTPL will be most concerned with since the CTPL librarian submits and monitors this report. Some routine deficiencies may not require issuance of a change for immediate corrective action. Other deficiencies are critical and may, if not corrected, cause serious injury or death to personnel, loss of equipment, or damage to personal or government property. Some of the more common deficiencies include the following:

- Incorrect artwork
- Missing details
- Incorrect or missing part numbers
- Format errors affecting maintenance
- Incorrect operating or troubleshooting procedures

NOTE: A deficiency or routine change recommendation in a Naval Air Training and Operating Procedures Standardization (NATOPS) manual or other tactical manual should be reported under the NATOPS/Tactical Manual Deficiency Reporting Program by submitting a NATOPS/Tactical Change Recommendation Form, OPNAV Form 3710/6. Instructions for processing OPNAV Form 3710/6 are

contained in *NATOPS General Flight and Operating Instructions*, OPNAVINST 3710.7.

Maintenance technicians who use the publications in the performance of their daily work will discover most technical publication deficiencies. However, as an AZ, you may occasionally discover an error in quality or content in a technical publication. The deficiency may not be limited to a typographical error and may include technically inaccurate or other erroneous information. If you find such an error, you should report it no matter how trivial it may seem. What you think is only a simple misprint may have serious implications.

Category 1 (CAT 1) TPDR

A CAT 1 TPDR should be submitted whenever a technical publication deficiency is detected which, if not corrected, could result in death or injury to personnel, or damage to an aircraft, equipment, or facilities. Submit for a CAT 1 TPDR by priority naval message within 24 hours of discovery of the deficiency. Validity/incorporation notification will be accomplished within 1 working day after receipt.

Category 2 (CAT 2) TPDR

Use a CAT 2 TPDR for a routine deficiency in a technical publication. Routine deficiencies include technical errors, incorrect measurement values, improper use of support equipment, wrong sequence of adjustments, wrong measurements, part number errors or omissions, and microfilm deficiencies, such as poor film quality. To report a CAT 2 TPDR with the TPL program, select the TPDR function from the View/Edit screen. An electronic transmission of a CAT 2 TPDR significantly reduces submission and response times. Benefits include automatic acknowledgement of receipt, status, reporting capability, and validity/incorporation notification. You can also submit a CAT 2 TPDR by forwarding a Technical Publications Deficiency Report, OPNAV 4790.66 form. Validity/incorporation notification will be accomplished within 10 working days after receipt when you forward an OPNAV 4790/66.

NOTE: A CAT 1 TPDR message or CAT 2 TPDR should not be used as justification to make a pen-and-ink change to a NAVAIR technical publication under any circumstance. Physical alteration of technical content in a NAVAIR technical publication, including pen-and-ink correction, is not permitted.

- Q31. What program establishes requirements for reporting substandard workmanship, deficiencies in material and technical publications, and improper quality assurance procedures?*
- Q32. What report should be used to report discrepancies in new or newly reworked aviation material?*
- Q33. What report should be used to report discrepancies in an aviation technical publication that include incorrect part numbers or incorrect operating procedures?*
- Q34. What form is used to report deficiencies in NATOPS manuals?*
- Q35. What report should be submitted to report a deficiency in an aviation technical publication that, if not corrected, could result in death or injury to personnel?*
- Q36. A category 2 technical publication deficiency report (CAT 2 TPDR) should be used to report what type of technical publication deficiency?*
- Q37. A valid category 1 technical publication deficiency report (CAT 1 TPDR) or category 2 technical publication deficiency report (CAT 2 TPDR) may be used to alter the technical content of NAVAIR technical publications. (True or False)*

SUMMARY

A periodic maintenance information card (PMIC) is a Planned Maintenance System publication that contains information such as a schedule for a forced removal item, an item replacement interval requirement, and a record of the applicable technical directives for a system. A maintenance requirements card (MRC) contains the minimum daily inspection requirement for servicing or the requirements for inspection.

You will work with two publication-numbering systems that are used within the Navy to identify technical publications—an older Navy (NAVAIR) Technical Manual Numbering System and the current numbering system, the Technical Manual Identification Numbering System (TMINS). TMINS is patterned after the 13-digit national stock number.

The *Navy Stock List of Publications, Forms, and Directives*, NAVSUP PUB P2002, contains the information needed to order Navy publications, forms,

technical directives (IDs), and Department of the Navy directives from Defense Distribution Depot Susquehanna.

The *Equipment Applicability List*, NAVAIR 00-500C, lists publications that pertain to particular aircraft systems, aircraft components, or specific equipment.

A technical directive (TD) directs modification or onetime inspection of a weapons system or equipment. The TD also requires supporting documentation that the modification or onetime inspection was accomplished. An amendment can modify or cancel an existing TD. After amendments A, B, and C to a TD have been issued, a revision must be issued. The Weekly Summary of Issued Technical Directives lists TDs that have been issued.

The quality assurance (QA) division at an aviation maintenance activity manages the technical publication library (TPL) program. When more than one TPL is needed at an activity, one library becomes the central technical publication library (CTPL), and the other libraries become dispersed TPLs that are supported by the CTPL. The *Naval Air Systems Command Technical Manual Program*, NAVAIR 00-25-100, and the Naval Air Technical Data and Engineering Service Command (NATEC) Technical Publication Library (TPL) program govern the management of TPLs for aviation maintenance activities. A request for initial outfitting for a TPL is sent to NATEC. NATEC carries out automatic distribution of technical publications to a maintenance activity. Automatic distribution is facilitated by the use of the automatic distribution requirements listing (ADRL) for the activity that lists publications for which automatic distribution to the activity is required. When a change in the automatic distribution of a technical publication for an activity is needed, the CTPL of the activity sends an updated ADRL to NATEC.

A page change is the only approved method for making an individual change to a technical publication. The CTPL uses the Change Entry Certification Record (CECR) to ensure that a change or revision to technical publication, issued to a dispersed library, has been entered into a publication. The CTPL removes part 1 of the CECR from the CECR tickler file after the dispersed library enters the change into a technical

manual. The minimum information on a technical publication library stamp includes the name of the activity, the copy number, and the location of the publication. The transaction file of a CTPL reflects the current working status of the CTPL.

When over 60 percent of a technical publication is affected by changes, a revision of the publication is issued. Page A (list of effective pages) of a technical manual lists all pages that are affected by past and present changes.

An interim rapid action change (IRAC) disseminates urgent essential data to change technical information in a technical manual. IRACs should be incorporated in a manual within 2 working days. An IRAC, later to be replaced by a formal rapid action change (RAC), is placed behind the title page of the affected publication after the change's application has been annotated on the master copy. The IRAC Tracker should be used to verify that all IRACs have been received.

The *Department of the Navy (DON) Information Security Program (ISP)*, SECNAVINST 5510.36, is the basic Navy directive that applies to classified information, including classified publications in a TPL.

The QA division audits the CTPL annually. The CTPL librarian conducts quarterly audits of dispersed libraries in the work centers.

The Aviation Maintenance Discrepancy Reporting Program (NAMDRP) is used to report substandard workmanship, an improper quality assurance procedure, or a material or technical publication deficiency. The quality deficiency report (QDR) under NAMDRP furnishes information on a deficiency in new or rework material. The technical publication deficiency report (TPDR) under NAMDRP documents a technical publication discrepancy, such as incorrect artwork or an incorrect and missing part number. A category 1 (CAT 1) TPDR reports by message a discrepancy that, if uncorrected, could result in death of injury to personnel. A CAT 2 TPDR reports a routine deficiency in a publication. A CAT 1 TPDR or a CAT 2 TPDR is not authority to alter a technical publication in any way.

A deficiency in a tactical publication is reported by submitting the NATOPS/Tactical Change Recommendation Form, OPNAV Form 3710/6.

ANSWERS TO REVIEW QUESTIONS

- A1. *Periodic maintenance information cards (PMICs).*
- A2. *Maintenance requirements cards (MRCs).*
- A3. *The older Navy (NAVAIR) Technical Manual Numbering System and the more recent Technical Manual Identification Numbering System (TMINS).*
- A4. *Technical Manual Identification Numbering System (TMINS).*
- A5. *Navy Stock List of Publications, Forms, and Directives, NAVSUP Pub 2002.*
- A6. *Equipment Applicability List, NAVAIR 00-500C.*
- A7. *Technical directive (TD).*
- A8. *Amendment.*
- A9. *A revision.*
- A10. *Supersedure.*
- A11. *Weekly Summary of Issued Technical Directives.*
- A12. *Quality assurance division (QA).*
- A13. *Central technical publication library and dispersed technical publication library.*
- A14. *Naval Air Systems Command Technical Manual Program, NAVAIR 00-25-100.*
- A15. *Naval Air Technical Data and Engineering Service Command (NATEC).*
- A16. *Automatic Distribution Requirements Listing (ADRL).*
- A17. *Automatic Distribution Requirements Listing (ADRL).*
- A18. *Activity, copy number, and location.*
- A19. *The complete status of the central technical publication library (CTPL).*
- A20. *60 percent.*
- A21. *An interim rapid action change (IRAC).*
- A22. *Placed directly behind title page of the publication.*
- A23. *The interim rapid action change (IRAC) tracker.*
- A24. *False.*
- A25. *List of effective pages.*
- A26. *Change Entry Certification Record (CECR).*
- A27. *Two working days.*
- A28. *Part I.*
- A29. *Department of the Navy (DON) Information Security Program (ISP), SECNAVINST 5510.36.*
- A30. *Quarterly.*
- A31. *Naval Aviation Maintenance Discrepancy Reporting Program (NAMDRP).*
- A32. *Quality deficiency report (QDR).*

- A33. *Technical publication deficiency report (TPDR).*
- A34. *NATOPS/Tactical Change Recommendation Form, OPNAV Form 3710/6.*
- A35. *Category 1 technical publication deficiency report (CAT 1 TPDR).*
- A36. *A routine deficiency.*
- A37. *False.*

CHAPTER 4

MAINTENANCE CONTROL AND PRODUCTION CONTROL

The maintenance control or production control office is the focal point of all aircraft and aeronautical equipment maintenance actions within an aviation maintenance activity. Maintenance control in organizational maintenance activities (OMAs) and production control in intermediate maintenance activities (IMAs) have similar roles. Both coordinate the work of shops with diverse skills to achieve a common goal—keeping aircraft flyable.

MAINTENANCE CONTROL AND PRODUCTION CONTROL TASKS

LEARNING OBJECTIVES: Identify the function of maintenance control and production control in the maintenance effort and the levels of maintenance of each. Define the purpose of Naval Aviation Logistics Command Management Information System (NALCOMIS).

As the nerve center of a maintenance activity, maintenance control plans and schedules the workload of the work centers. Maintenance control uses the Naval Aviation Logistics Command Management Information System (NALCOMIS) to schedule the workload of work centers and divisions in the maintenance department. NALCOMIS is an automated management information system that provides Navy aviation activities with the information to aid in the day-to-day management of the maintenance effort of assigned aircraft and equipment. The system provides detailed procedures to enter, collect, process, store, review, and report maintenance and flight data that are required to manage the maintenance organization.

The maintenance material control officer (MMCO) heads maintenance control. The MMCO is responsible to the head of the maintenance department, the maintenance officer (MO), for the overall maintenance effort and material support of the maintenance department.

The main tasks that are performed by maintenance control include the following:

- Coordinate and monitor the department workload
- Control the daily workload and assign work priorities
- Prepare the monthly maintenance plan (MMP)
- Ensure compliance with the planned maintenance system (PMS), related instructions, and publications
- Review NALCOMIS and maintenance data reports (MDRs) to ensure effective use of manpower and materials
- Maintain aircraft logs and records, associated equipment records, and weight and balance records
- Coordinate and monitor NALCOMIS in the maintenance evolution
- Maintain aircraft discrepancy books (ADB)

The MMCO ensures accomplishment of maintenance control functions through division officers, maintenance chiefs, work center supervisors, NALCOMIS, and AZs. If you are assigned to a maintenance control, you may perform tasks in support of these functions. One of your primary duties as a maintenance controller should include maintenance action form (MAF) initiation. To perform this task, you should have an in-depth knowledge of aircraft maintenance documentation procedures.

NOTE: Refer to the *Naval Aviation Maintenance Program (NAMP)*, OPNAVINST 4790.2, for detailed information of the duties and responsibilities of maintenance and production control.

The most important function of maintenance control is to ensure that aircraft and equipment are maintained in the highest state of material condition of readiness. One program that is used to maintain aircraft and equipment in high states of material condition of readiness is the Planned Maintenance System (PMS).

- Q1. *What work center in an organizational maintenance activity acts as the nerve center for all maintenance actions within an activity?*
- Q2. *What officer is responsible for the overall production effort and material support of a maintenance department?*
- Q3. *What automated management information system (MIS) provides a Navy aviation maintenance activity with the information to aid in the day-to-day management of maintenance for assigned aircraft and equipment?*

PLANNED MAINTENANCE SYSTEM

LEARNING OBJECTIVES: Identify the purpose of the Planned Maintenance System (PMS). Identify the purpose of reference publications that are used in the Planned Maintenance System (PMS). Define the different types of aircraft and equipment inspections. Identify authorized deviations for aircraft inspections.

The Planned Maintenance System (PMS) is a program to ensure that aircraft and aeronautical equipment are maintained throughout their service life. This is done by controlling the degradation that is caused by time, use, climatic exposure (weather), and operational cycles. The PMS has the following purposes:

- Simplify complex maintenance tasks
- Provide a readily manageable maintenance program
- Facilitate the scheduling and controlling of maintenance actions
- Provide a means to detect impending equipment failures
- Facilitate an effective quality assurance (QA) process
- Forecast and plan manpower and material requirements

The PMS program consists of a series of scheduled maintenance requirements and inspections that are performed on aeronautical equipment, including aircraft, in accordance with prescribed PMS publications.

PMS PUBLICATIONS

An activity's effective use of PMS publications and adherence to their policies and procedures is critical to maintaining aircraft and equipment in a high state of readiness through preventive maintenance. Preventive maintenance refers to the servicing and care that is required to maintain aircraft and equipment in satisfactory operating condition. Preventive maintenance is accomplished primarily through systematic aircraft and equipment inspection to detect and correct impending failures before they occur or develop into major defects.

The Naval Air Systems Command (NAVAIRSYSCOM) issues scheduled maintenance requirements by publishing PMS publications for every model of Navy and Marine Corps aircraft. PMS publications prescribe the following:

- Standardized procedures for Navy and Marine Corps aviation maintenance activities
- The planning, scheduling, and performance of the scheduled maintenance tasks for aircraft and aeronautical equipment

Basic PMS publications include the following:

- Maintenance requirements cards (MRCs)
- Periodic maintenance information cards (PMICs)
- Sequence control cards (SCCs)
- Checklists

Revisions to PMS publications are based on the data that is collected from maintenance experience with aircraft. NAVAIRSYSCOM publishes these revisions at intervals to add, delete, or change maintenance requirements.

Maintenance Requirements Cards

Prescribed maintenance requirements publications are presented to maintenance personnel in the form of maintenance requirements cards (MRCs), shown in figure 4-1. Usually, a set of cards is provided for each aircraft model or equipment. For each type of scheduled inspection, one set of MRCs is provided. All of the minimum requirements for the accomplishment of any particular scheduled maintenance task, or portion thereof, are contained in these cards.

RATING TO ACCOMPLISH CARD

IDENTIFIES AE AS INDIVIDUAL NUMBER 1 DOES NOT SPECIFY THE RATE OF AE 1

DESIGNATES SPECIAL EQUIPMENT REQUIRED TO ACCOMPLISH CARD

DESIGNATES IF ELECTRICAL, AIR CONDITIONING OR HYDRAULIC POWER IS REQUIRED WHEN ACCOMPLISHING CARD

MRC NUMBER

MRC SET NUMBER

TYPE OF INSPECTION

CARD 21	NAVAIR 01-F14AAA-6-3	CHANGE NO.	SPECIAL 14-DAY	ELEC PWR ON
DATE 1 DECEMBER 1986				HYD PWR NA
WORK AREA ZONE	WORK UNIT CODE	C TIME R	RTG. AE NO.	MOS. 6636 NO. 1
		0.3	1	THROTTLE ACTUATOR OVERRIDE CHECK
<p>NOTE: This card incorporates the inspection requirements of AYB 279 and applies to all aircraft.</p> <p>SPECIAL TOOLS/GROUND SUPPORT EQUIPMENT REQUIRED Power Source, Electric Cart, Air Conditioning</p> <p>1. APC override: a. if AFC 595 has been incorporated select FLT GR Down on the master test panel. b. remove access 1211-2 (throttle computer). c. perform self test in accordance with NA 01-F14AAA-2-3-6 WP 011 paragraph 14. (1) observe during 75-second run of BIT that computer BIT lamp is on. (2) approximately 50-seconds after BIT initiate, observe that both throttle levers move toward MIL position. (3) after approximately 75-seconds, BIT will be complete and BIT lamp will be off. Observe that all fault indicators (located on computer) are black. d. perform throttle torque override tests.</p> <p>NOTE: if torque switch override function fails repeat test three times or until override functions properly. If still inoperative replace rotary actuator.</p> <p style="text-align: right;">Continued</p>				

TIME IN HOURS & MINUTES TO ACCOMPLISH ALL ITEMS ON CARD

WORK AREA

INSPECTION ITEMS LISTED IN ORDER OF ACCOMPLISHMENT

CARD 21.1	NAVAIR 01-F14AAA-6-3	CHANGE NO.	SPECIAL 14-DAY	ELEC PWR ON
DATE 1 DECEMBER 1986				HYD PWR NA
WORK AREA ZONE	WORK UNIT CODE	C TIME R	RTG. AE NO.	MOS. 6636 NO. 1
			1	THROTTLE ACTUATOR OVERRIDE CHECK
<p>(1) set both throttle levers slightly above idle. (2) cycle mode switch from boost to manual and back to boost. (3) on throttle computer, momentarily set BIT switch to test. As throttle levers start to move toward MIL position, pull left throttle toward idle and hold. Observe that both throttles revert from boost to manual mode, within 1.25 seconds, .025 seconds if AVC 2235 has been incorporated. (4) after BIT is complete, cycle mode switch from boost to manual and back to boost position. (5) perform steps C(1) through C(3) with one exception. Instead of pulling throttle lever toward idle, push the lever past MIL toward afterburner to revert to manual mode. (6) repeat steps C(1) through C(5) for right throttle. (7) on master test panel, de-select FLT GR DOWN and select OFF position. e. close access 1211-2.</p> <p style="text-align: right;">End of Card</p>				

AZF0401

Figure 4-1.—Maintenance requirements card (front and back).

MRCs are the working documents for squadron aircraft and equipment inspections and preventive maintenance actions. These 5- by 8-inch cards specify the tasks that relate to a particular system, subsystem, area, or component and state a logical sequence to accomplish the tasks. MRCs identify the recommended rating that is needed to perform the task, the performance interval, and the work area or the work zone involved. Assembled into sets and numbered in sequence, the cards contain pertinent information that maintenance personnel require to complete each task.

Data for each task includes the following information: description; approximate time that is required to perform the task; whether power, tools, equipment, or material is needed; and information on such items as pressures and torque values. Also included, when necessary, is a diagram of the affected area in which the work is to be accomplished.

A master file copy of current MRCs should be maintained within the maintenance department. This master file copy reflects revisions to the published card sets and additional local requirements. Local periodic maintenance requirements for equipment that is not covered by published MRC sets should be added as specified in the *NAMP*.

When an aircraft undergoes an inspection, MRCs are given to the maintenance person in the specified order of the cards. Certification of completion of the work is not made on the MRC cards; therefore, the cards are used until they are worn out. Before a set of cards is issued, the check crew supervisor should check each card against the master file set to ensure that the set of cards is complete and current.

Periodic Maintenance Information Cards

Periodic maintenance information cards (fig. 4-2) are decks of cards that refer to the maintenance of aeronautical equipment and aircraft. The cards support maintenance actions and cite, when necessary, requirements for documentation and operating limits. PMIC decks contain the following information:

- Requirements for items that have approved mandatory removal and replacement intervals as well as requirements that require special monitoring with emphasis on failure trends. The card cites the component or assembly removal and replacement schedule, Equipment History Record (EHR), Scheduled Removal Component (SRC) card; Assembly Service Record (ASR),

or Module Service Record (MSR) that contains the requirement.

- Airframe structural life limits.
- Maintenance requirements system index that lists, by Work Unit Code (WUC), the system and the MRC number of the requirement to be performed.
- Conditional inspection listing that contains a brief description of the condition, type inspections to be performed, and a reference to the manual or directive that contains the detailed requirements.
- Phase change implementation card that provides a list of requirements to be performed to maintain the required inspection interval of critical components when an update changes the order of inspections.

NOTE: NALCOMIS OMA allows users to input, update, and delete maintenance requirement card information for special, phase, and conditional aircraft and engine inspections. This information provides pertinent information that is required to print inspection control and look phase MAFs. The QA work center verifies that MRC information is added or updated in the NALCOMIS database as changes occur to MRC decks.

Sequence Control Cards (SCCs)

Sequence control cards (SCCs) are graphic, sequential work displays. They help ensure the orderly planning and timely performance of aircraft and engine maintenance requirements. SCCs integrate all required periodic maintenance work to reduce the total out-of-service time that is required to complete unscheduled and scheduled maintenance jobs.

SCCs are used to control the assignment of work and personnel. SCCs provide the following information:

- Specific MRCs to be complied with
- Number of personnel and rating specialty that are required to complete the tasks
- Estimated task completion times
- Whether POWER/AIR OFF or ON conditions are required during tasks
- Affected areas where work will be performed

CARD 5	NAVAIR 01-XXX-6 DATE: 15 August 1997	CHANGE NO.	REMOVAL/REPLACEMENT SCHEDULE AND SPECIAL TRACKING REQUIREMENTS	
<u>NOMENCLATURE</u>	<u>PART/MODEL NUMBER</u>	<u>DISPOSITION</u>	<u>REMOVAL INTERVAL</u>	<u>REMARKS</u>
<u>CATAPULT SYSTEM</u>				
NOTE 1: A 10 percent extension is not authorized.				
*Catapult Launch Bar	134762-011 122781-110	Forward to Depot	200 Catapult Launches	See Note 1
*Catapult Launch Bar	134762-011 122781-110	Retire	4,000 Catapult Launches	See Note 1
*Catapult Holdback Socket	128694-101, -105	Retire	3,000 Catapult Launches	See Note 1
<u>ARRESTING GEAR</u>				
NOTE 1: Denotes requirement for Equipment History Record card.				
*Shank	1281155-101	Forward to Depot	150 Arrested Landings	
Drag Link Arresting Hook	1280555-109	Repair at Depot	500 Arrested Landings	See Note 1

Figure 4-2.—Periodic maintenance information card.

Checklists

The checklist format for inspections provides maintenance personnel with abbreviated requirements for turnaround inspections. Checklist inspection requirements are consecutively numbered and arranged in a logical working order.

AIRCRAFT INSPECTION PROCEDURES

As an AZ, you should be knowledgeable about the types of aircraft and aeronautical equipment inspections, PMS publications, and associated records

and reports. In many activities, AZs initiate inspection documents electronically through NALCOMIS. These documents deal with aircraft and aeronautical equipment inspections, inspection procedures, and authorized deviations to inspections.

Types of Aircraft and Equipment Inspections

Aircraft and aeronautical equipment undergo unscheduled and scheduled inspections.

Maintenance personnel use the Preflight/Daily/Turnaround/Postflight Maintenance Record, OPNAV

4790/38, (fig. 4-3) to certify daily and turnaround inspections. This record is destroyed upon completion of the next like inspection. Maintenance personnel record all other inspections on the Maintenance Action Form (MAF).

Table 4-1 lists the types of unscheduled inspections, the purpose of each type, and when each is done.

Maintenance personnel document a scheduled aeronautical equipment inspection or aircraft inspec-

Table 4-1.—Unscheduled Aeronautical Equipment and Aircraft Inspections

TYPE OF INSPECTION	PURPOSE OR WHAT'S INVOLVED	WHEN DONE
Preoperational (Pertains to equipment only)	To verify servicing (replenishment of oil, fuel, and other consumables expended in operation) of equipment and to detect defects that will adversely effect the operation of equipment.	Before each operation of equipment.
Postoperational (Pertains to equipment only)	To detect defects developed during each operation of equipment.	Immediately after each operation of equipment.
Turnaround	To ensure integrity of an aircraft for flight, to verify servicing, and to detect defects from the previous flight. Valid for 24 hours provided no flights or maintenance other than servicing occurred after the inspection.	Between flights.
Daily	To inspect for defects to a greater depth than the turnaround inspection. Valid for 72 hours provided no flights or maintenance other than servicing occurred after the inspection.	Before the first flight of the day.
Acceptance	Inspection to include: <ul style="list-style-type: none"> ● An inventory of all equipment listed in the aircraft inventory record ● Verification of cartridge-actuated devices (CADs) and aircrew escape propulsion systems (AEPSs) ● Configuration verification <p>(Note: Visual external inspection and record examination are the only required verifications of CADs, AEPSs, and configuration. Disassembly beyond the daily inspection requirements of the applicable PMS publication is not required.)</p> <ul style="list-style-type: none"> ● Hydraulic fluid sampling ● Daily inspection as required by the applicable PMS publication ● Verification of: <ol style="list-style-type: none"> (1) Monthly Flight Summary in the aircraft logbook and (2) Equipment Operating Records in the Aeronautical Equipment Service Record (AESR) ● A complete functional check flight ● More in-depth inspection when the equipment condition or record examination indicates that such action is warranted. 	When a reporting custodian accepts a newly assigned aircraft or equipment from any source as well as upon return of aircraft or equipment from standard depot-level maintenance (SDLM) or other major depot-level rework.

Table 4-1.—Unscheduled Aeronautical Equipment and Aircraft Inspections—Continued

TYPE OF INSPECTION	PURPOSE OR WHAT'S INVOLVED	WHEN DONE
Transfer	Inspection to include: <ul style="list-style-type: none"> ● An inventory of all equipment listed in the aircraft inventory record ● Verification of CADs and AEPSs ● Configuration verification ● Hydraulic fluid sampling ● Daily inspection required by the applicable PMS publication ● Verification of <ol style="list-style-type: none"> (1) Monthly Flight Summary in the aircraft logbook and (2) Equipment Operating Records in the Aeronautical Equipment Service Record (AESR) ● More in-depth inspection when the equipment condition indicates that such action is warranted 	When a reporting custodian transfers an aircraft or equipment. Includes aircraft or equipment transfers to SDLM.
Conditional	To inspect for unscheduled maintenance requirements when: <ul style="list-style-type: none"> ● An event occurs that creates an administrative requirement for an inspection or ● And overlimit condition occurs. (Examples of overlimit conditions are hard landing, engine overspeed, and engine overtemp.) (Note: Conditional inspection requirements that specify servicing or fluid sampling do not require logbook entries. Conditional inspection requirements that prescribe inspections to determine equipment condition requirements do require associated logbook entries.)	As required.
Zonal	To detect obvious defects, such as leaks, frayed cables, cracks, corrosion, or physical damage on a specific area of an aircraft.	As required. (Normally in conjunction with scheduled maintenance tasks)

tion by using the MAF. Table 4-2 lists the types of scheduled inspections, what each involves, and when each is done.

Deviations To Scheduled Inspections

It may not always be possible to perform a given inspection on the exact date or at the exact number of hours for which the inspection is scheduled. To meet these situations and to aid in workload scheduling, the following inspection deviations may be applied:

- For an inspection that is performed in increments of calendar days, a deviation of plus

or minus 3 days may be applied to the authorized inspection interval (inspections may be performed 3 days before or 3 days after the actual inspection induction date). The next inspection due should be scheduled as if NO deviation had occurred. This authorized deviation requires no logbook entry.

- For an inspection that is performed in increments of flying hours or operating hours, cycles, events, or rounds fired, a deviation of plus or minus 10 percent (or any portion of 10 percent) may be applied to the authorized inspection interval. The next inspection due should be scheduled as if NO deviation had occurred. For example, an equipment that has a

Table 4-2.—Scheduled Aeronautical Equipment and Aircraft Inspections

TYPE OF INSPECTION	PURPOSE OR WHAT'S INVOLVED	WHEN DONE
Phase	To inspect part of a total maintenance requirement. All components that have a Scheduled Removal Component (SRC) card, Equipment History Record (EHR), Assembly Service Record (ASR), Module Service Record (MSR), Parachute Record, Seat Survival Kit Record, Aircrew System Records, or Aircrew Personal Equipment Record are inventoried.	At intervals that divide the total maintenance requirement into small packages (phases) of approximately the same work content. Each phase is accomplished sequentially at specified intervals. The completion of all required phases at their specified interval completes the phase inspection cycle. Cycle is repetitive for the service life of the aircraft and is not interrupted during SDLM.
Special	To inspect aircraft or aeronautical equipment that requires inspection based on elapsed calendar time, flight hours, operating hours, or number of cycles or events. For example: <ul style="list-style-type: none"> ● Every 7, 14, or 28 days, ● 50,100, or 200 hours, ● 10 or 100 arrestments, or ● 5,000 rounds fired, and so forth. 	At a prescribed interval other than daily or phase as specified in the applicable PMS publication.
Aircraft Service Period Adjustment (ASPA) evaluation	To evaluate an aircraft's general material condition. A depot-level conditional maintenance action that is performed by certified ASPA evaluators and consists of record and logbook analysis and a physical examination of the aircraft. Results in one of the following recommendations: <ul style="list-style-type: none"> ● The aircraft period end date (PED) or operating service months (OSM) be adjusted 12 months (or equipment flight hours) beyond the current PED or 18 OSM from the date of the ASPA inspection, whichever is less. ● The aircraft be inducted for rework or preservation not later than 90 days after the current PED. ● The aircraft be immediately inducted into rework and its service tour terminated. 	As directed by <i>Policies and Peacetime Planning Factors Governing the Use of Naval Aircraft</i> , OPNAVINST 3130.11. OPNAVINST 3130.11 requires an ASPA evaluation between 6 months prior to and 3 months after the PED of ASPA aircraft. The 3-month window after the PED can only be allowed when no depot-level structural life-limited items will expire during that period.

150-flight-hour inspection interval and due for inspection may be performed as early as 135 flight hours or as late as 165 flight hours. The next scheduled inspection is due at 300 flight hours. This authorized deviation requires no logbook entry.

NOTE: A plus 10 percent extension is not authorized for a low cycle fatigue item that has

accumulated its assigned operating hours or for a structural life-limited component that has reached its basic life limit.

After the plus 3 days or 10 percent deviation has been applied and expired, the aircraft is restricted from further flight operations (downed) until completion of the subject inspection.

If it becomes necessary to accomplish an inspection earlier than the authorized deviation, the next inspection is due based on the date, hour, cycle, or event that the inspection began. In this case, a logbook entry is required on the Miscellaneous/History record.

If it is necessary to exceed the deviations to scheduled inspections because of priority operational commitments, a request should be submitted to the cognizant wing, carrier air wing, or aircraft controlling custodian (ACC). If this type of deviation is authorized, the next inspection is scheduled as if NO deviations had occurred, and a Miscellaneous/History logbook entry should be made.

To assist aircraft operating activities in preventing aircraft inspection deviation exceedances, an Inspections Near Due function is available to NALCOMIS OMA users. The Inspections Near Due function allows users to query the NALCOMIS database about scheduled aircraft inspections that are within the ± 3 days or ± 10 percent window and to initiate the appropriate inspection documents.

- Q4. *What program is designed to ensure that aircraft and aeronautical equipment is maintained throughout its service life by controlling degradation?*
- Q5. *What type of publication provides the basis for planning, scheduling, and performing scheduled maintenance tasks?*
- Q6. *What type of PMS publication includes the minimum requirements for the accomplishment of a scheduled maintenance task?*
- Q7. *What type of PMS publication contains mandatory removal and replacement intervals for components and assemblies and a conditional inspection listing?*
- Q8. *What type of PMS publication provides abbreviated instructions for the accomplishment of a turnaround inspection?*
- Q9. *Provided no flight takes place and no maintenance other than servicing is performed, for what maximum time are daily inspections valid?*
- Q10. *What (a) aircraft logbook page and (b) aeronautical equipment service record pages should be verified for accuracy during aircraft acceptance inspections?*
- Q11. *What type of inspection is required as a result of a specific overlimit condition or as a result of a*

circumstance or event that creates an administrative requirement for an inspection?-

- Q12. *Hard landing, engine overspeed, and engine overtemp are all examples of what type of inspection?*
- Q13. *What type of aircraft evaluation is required between 6 months prior to or 3 months after the period end date of ASPA aircraft?*
- Q14. *What type of inspection has a prescribed interval other than daily or phase and is based on elapsed calendar days, flight hours, operating hours, cycles, or events?*
- Q15. *What deviation may be applied to inspections performed in increments of calendar days?*
- Q16. *A phase inspection is due at 100 flight hours. This inspection may be performed as early as what number of flight hours without having to readjust the next "phase due" flight hours?*
- Q17. *An inspection is scheduled at 100 flight hours, but the inspection is performed early at 80 flight hours. After completion of the subject inspection, when is the next 100-hour inspection due?*
- Q18. *An inspection based on flight hours is performed earlier than the 10 percent authorized deviation. In this instance, what aircraft logbook record requires an entry?*

SOURCE DOCUMENTS

LEARNING OBJECTIVES: Identify source documents that provide data to the Maintenance Data System. Define the purpose of the maintenance action form (MAF). Identify the types of maintenance actions that are documented on the maintenance action form (MAF). Identify terms, data fields, and codes that are used on the maintenance action form (MAF). Identify maintenance action form (MAF) initiation and completion procedures in organizational maintenance activities (OMAs). Define the purpose of the Naval Aircraft Flight Record (NAVFLIR). Identify reports that are used in the Naval Aircraft Flight Reporting Subsystem (NAVFLIRS).

Useful management information such as scheduled and unscheduled aircraft inspections, technical directive compliance, material usage, and aircraft flight data are documented on forms that are called source documents. Source documents include the

Maintenance Action Form, OPNAV 4790/60, that documents maintenance data, the Single-Item Requisition System Document, DD Form 1348, that documents supply data, and the Naval Aircraft Flight Record, NAVFLIR, OPNAV 3710/4, that documents flight data. The data on these forms are source data for the Maintenance Data System (MDS). Source documents furnish the input information for the MDS and must be completely accurate.

Data collection and reporting systems ensure that the basic data that is generated by maintenance technicians and material control personnel is documented. Management uses this data to make decisions about the day-to-day maintenance effort as well as decisions about manpower and material needs. As an AZ, you should understand the types of information that are recorded on source documents since you will initiate or assist in their initiation. The information recorded on source documents is the source for entries recorded in aircraft logbooks, aeronautical equipment service records (AESRs), and other maintenance records.

MAINTENANCE ACTION FORM (MAF)

The Maintenance Action Form (MAF), OMA MAF, (fig. 4-4) documents an on-equipment maintenance action (a maintenance action that is performed on a complete end item) or a removal and subsequent processing of a repairable component (off-equipment maintenance) by an intermediate maintenance activity (IMA). MAFs document maintenance actions such as the following:

- Repair work on equipment that does not involve removal of defective or suspected defective repairable components
- That portion of a special, conditional, corrosion, phase acceptance, or transfer inspection that involves the search for (not repair) defects (commonly referred to as the look phase of an inspection)
- Fix phase maintenance action that involves the correction (repair) of a discrepancy that is discovered during the look phase of a scheduled inspection

MAFs often document a maintenance action taken such as the following:

- Removal of a component for check, test, or service

- Removal and replacement of an item for cannibalization
- Removal and replacement of repairable components within end items
- Removal or installation of a component for mission configuration change as designated by the aircraft controlling custodian (ACC); for example, the removal or installation of buddy stores in compliance with an ACC directive

MAFs also document man-hours such as in the following maintenance actions:

- Man-hours that are spent in troubleshooting
- Man-hours that are accumulated during a work stoppage for lack of a part or to complete other maintenance
- Accumulated man-hours on a job that is closed out due to an aircraft accident
- Accumulated man-hours during or at the end of a reporting period for a job, required by the ACC, that was not completed
- Maintenance action and man-hours by an assisting work center in support of a primary work center
- Maintenance action and man-hours in support of a repairable item that is processed through an IMA

Finally, MAFs document for-the-record action such as in the following maintenance actions:

- Incorporation of a technical directive change and associated maintenance action
- Collection of subsystem capability and impact reporting (SCIR) data
- Record of the ordering and the issuing of a repairable component, subassembly, or part
- Preservation and depreservation maintenance actions

Terms and Codes

Except for the Narrative Description of Discrepancy and Corrective Action portion of the MAF, maintenance data is recorded on the MAF in coded form. Below is a list of terms and codes that are used when maintenance actions are documented. For a detailed description of terms and codes that are used to

MCN QWOA0HB

ENTRIES REQUIRED SIGNATURE
NONE LOGS REC

MAF OPNAV 4790/60 (REV. 5-88)

X AZ2 PISTOL

LOCAL USE/REFERENCE

NAME	ACCUMULATED WORK HOURS				ACCUMULATED AWM HOURS		
	TOOL BOX	DATE	MAN HRS	ELAPSED M/T	DATE	TIME	REASON HOURS
DOOR	AF-7MEC	99327	2.0	1.0			

(H-Z) FAILED/REQUIRED MATERIAL

79	08	09	10	11	14	19	34	41	43	45	49	53	
INDEX	F/P	AWP	A/T	MAL	MFGR	PART NUMBER	REF SYMBOL	QTY	PROJ	PRI	DATE ORD	REQ NO	DATE REC
						55284 2606071-5		1	ZP0	02	99327	GF51	99327

FOLD

TECHNICAL DIRECTIVE INFORMATION

A22	A29	A32	A34	A35	A36	A39	A41	A45	F08	F09	F11	F15	F16	F17	F19
WORK UNIT CODE	ACTION ORG	TRANS	MAN/L	ACT TA	MAL CD	ITMS/P	MAN HOURS	ELAPSED M/T	INTERIM	CODE	BASIC NO	RV	AM	PART KIT	
13C1700	QWO	23	1	R	787	01	2.0	1.0							
A48	A52	A58	A59	A60	A62	A65	A69	SE MFGR	A74	INVENTORY			F28		
TYPE EQUIP	BU/SER NUMBER	DISCD	T/M	POSIT	FID	SAF/EI	SER	METER	TECH	F21	F22	PERM	UNIT CODE		
AMAA	161983	B	B												

REPAIR CYCLE

REMOVED/OLD ITEM

INSTALLED/NEW ITEM

	DATE	TIME	EOC	E08 MFGR	E13 SERIAL NUMBER	G08 MFGR	G13 SERIAL NUMBER
RECEIVED	99327	B12 1012	B16	55284	0209	55284	1398
IN WORK	99327	B19 B23 1027	B27	E23 PART NUMBER	E38 DATE REMOVED	G23 PART NUMBER	
		B30 B34		2606071-5	99327	2606071-5	
COMPLETED	99327	1127		E42 TIME/CYCE	E47 TIME/CYCE	E52 TIME/CYC	G38 TIME/CYC G43 TIME/CYC G48 TIME/CYC
				L4896		L4896	

AWAITING MAINTENANCE

DISCREPANCY

B38 B39 HRS B43 B44 HRS B48 B49 HRS

PT M/M WORN

MAINTENANCE/SUPPLY RECORD

JOB STATUS	DATE	TIME	EOC
B53	B54	B58	B62
B65	B66	B70	B74
C08	C09	C13	C17
C20	C21	C25	C29
C32	C33	C37	C41
C44	C45	C49	C53
C56	C57	C61	C65
D08	D09	D13	D17

CORRECTIVE ACTION
R&RED PORT MLG TIRE IAW MIMS.

PILOT/INITIATOR
AMS1 DOE

CORRECTED BY SGT BRUSH
INSPECTED BY AMS1 SMITH
SUPERVISOR AMS1 FROST
MAINT CONTROL GYSGT BOATE

CF REQ QA REQ

JOB CONTROL NUMBER
A08 ORG A11 DAY A14 SER A17 SUF
QWO 327 185 120

MODEX 983
PRI
TURN-IN DOCUMENT
SYSTEM REASON PT M/M WORN
MCN QWOA0HB

AZ10404

Figure 4-4.—Maintenance Action Form, OMA MAF.

document maintenance actions, refer to the Appendix of the *NALCOMIS End User Manual*.

TYPE MAF CODES.—Type MAF codes are two-digit codes that identify the type of maintenance action that is being initiated. For example, AC is used for an Acceptance Inspection Control MAF, DM for a Discrepancy Maintenance Action, and WR for Work Request Maintenance Action.

JOB STATUS CODES.—Job status codes indicate the status of a MAF during the repair cycle. Examples of Job Status codes include IW for in work, JC for a job complete status, and WP for an awaiting parts situation that indicates that work has been stopped due to a lack of parts or material.

TASK IDENTIFICATION (ID) CODES.—Tasks are plain language descriptions of functions that are performed within NALCOMIS. A task ID code is an abbreviation that describes the task. For example, the assignment of a job control number (JCN) by maintenance control is a task. The Task ID (abbreviation) code for assignment of a JCN by maintenance control is MCMAFAPP. In another example, the Task ID code for a MAF signed-off by logs and records personnel is LOGRECSO. Assigned by the system administrator, Task IDs are linked to Special Maintenance Qualification codes.

SPECIAL MAINTENANCE QUALIFICATION (SMQ CODES).—An SMQ code, assigned to a user, is linked to a Task ID to indicate that the user may perform a specific task. When a NALCOMIS OMA user is assigned an SMQ, the user may perform those tasks that are associated with the appropriate Task ID. In the example above, an AZ who has a Task ID of LOGRECSO (logs and records MAF sign-off) might have an SMQ code of LRSIG (logs and records signature). This indicates that the AZ is authorized to perform the tasks of screening MAFs for required aircraft logbook entries and signing the Entries Required Signature block of the MAF.

FLIGHT SUBSYSTEM.—This subsystem collects and processes flight-related data. This data may be shared with other subsystems. For example, flight hours that are reported into this subsystem directly affect the Maintenance Subsystem and the Logs and Records Subsystem. Some inspections and component removal intervals are based on flight hours that are reported in the system.

MAINTENANCE SUBSYSTEM.—The maintenance subsystem collects and processes maintenance

data. The maintenance subsystem allows the user to initiate, update, complete, and query MAFs.

LOGS AND RECORDS SUBSYSTEM.—This subsystem maintains configuration profiles on aircraft, equipment, engines, propellers, and components that are assigned to a squadron.

DATA ANALYSIS SUBSYSTEM.—This subsystem allows the data analyst to review, correct, and approve naval flight records and maintenance records (NAVFLIRs, MAFs, and so forth) before and after the records are submitted for AV3M and NAVFLIR processing.

REPORTS SUBSYSTEM.—This subsystem allows the user to select, execute, and submit reports for printing. Typical maintenance reports available include the Aircraft Material Status Report, Scheduled Inspection Report, Aircraft Phase Inspection Report, and the Work Center Work Load Report. Reports that are available through the Reports Subsystem include the Life Limited Components Inventory Report, Component Removal Due Report, the Component Near Due Report, the Installed Explosive Device Report, and the Technical Directive Outstanding Report. Some of these reports are generated upon acceptance and transfer of aircraft to aid in the verification of aircraft logbooks. For a complete list of available reports, refer to the *NALCOMIS End User's Manual*.

ASSET SUBSYSTEM.—This subsystem is an inventory tool that tracks assets other than aircraft-related assets. These assets include support equipment (SE), Aviation Life Support Systems (ALSS), and Individual Material Readiness List (IMRL) equipment.

Types of MAFs

There are two types of MAFs in use—the two-part and the five-part MAF. The type you use will depend on whether your activity is operating under NALCOMIS. The two-part MAF, used by NALCOMIS operating activities, is initiated and printed electronically. The five-part MAF is used primarily by non-NALCOMIS operating activities. Five-part MAFs are available through the Navy supply system. The use of the five-part MAF is NOT limited to non-NALCOMIS activities. The five-part MAF may be used in NALCOMIS operating activities during periods of system downtime or during backfit procedures.

All copies of the five-part MAF contain the same information. Copy 2 of the MAF is used for material usage reporting. At the organizational maintenance level, the five copies of the MAF are as follows:

- Copy 1—work center register and processing copy
- Copy 2—quality assurance suspense file copy
- Copy 3—maintenance control register
- Copy 4—aircraft discrepancy book copy
- Copy 5—work center daily audit copy

At the intermediate maintenance level, the five copies of the MAF are used as follows:

- Copy 1—control and processing copy
- Copy 2—supply department register
- Copy 3—production control register
- Copy 4—component RFI/BCM copy
- Copy 5—work center register/daily audit copy

MAF Data Fields

NALCOMIS system-generated MAFs and five-part MAFs are similar in appearance and content, but operating procedures for each are different. MAF data blocks and data fields apply to both NALCOMIS-generated and five-part MAFs. Each data field on the MAF serves a specific purpose. Most of the information in these data fields is entered in coded form. We will describe each data block or data field on the MAF. Refer to figure 4-4.

ENTRIES REQUIRED SIGNATURE block. Entries in this block ensure that historical records are updated and that required actions are accomplished before MAFs are forwarded to data services facilities for processing. Maintenance control logs and records personnel should screen all MAFs, check the appropriate block or blocks, and enter their name and rate in the signature portion of this block. This signature certifies that the MAF has been screened and that no further entries are required and that all applicable logs and records entries have been made. For OMA NALCOMIS users, this block is computer generated.

LOCAL USE block. This block may be used as desired.

REFERENCE block. This block contains the supply reference data to assist material control in requisitioning required material.

ACCUMULATED WORK HOURS block. This block contains the name/shift, toolbox inventory, date, man-hours, and elapsed maintenance time columns.

Name column. Contains the name and shift of personnel who perform the work.

Tool box column. This column is used to help ensure that tools are not left on the job. Each worker who uses a tool container on a job enters the number of the container in this column. Upon return to the work center, the work center supervisor or collateral duty inspector (CDI) does a sight inventory of the tool container and indicates a complete inventory by initialing or stamping to the right of the tool container number.

Date column. The Julian date on which the action takes place.

Man HRS (hours) column. The number of man-hours that were expended to correct the discrepancy (in hours and tenths of hours).

Elapsed M/T (Maintenance Time). The number of clock hours that were involved in making the repair (in hours and tenths of hours). For example, if three people worked together for 2.5 hours to make a repair, the total man-hours would be 7.5, and the elapsed M/T would be 2.5 hours.

ACCUMULATED AWM HOURS block. Contains a record of the hours that are accumulated during the SCIR-related time of a discrepancy. Includes the beginning date and time of the AWM period with the proper reason code. The accumulated AWM hours are entered in the hours section of this block.

NOTE: A complete list of AWM codes are contained in an appendix to the *NAMP*.

H-Z FAILED/REQUIRED MATERIAL section. The blocks in this section document the following information:

- A failed part occurs without an awaiting part (AWP) situation
- A failed part and an AWP situation occur simultaneously (IMA only)
- An AWP situation without a failed part occurs (IMA only)
- A supply request only, no failed part or AWP situation

This section is also used for engine identification and subsequent failed part reporting against the identified engine.

WORK UNIT CODE block. Contains the 1-, 3-, 5-, or 7-digit WUC that identifies the system, subsystem, or component on which work is being performed. Three-digit WUCs such as 030 and 049 are also used on a MAF to document a conditional inspection or a preservation or depreservation action.

ACT ORG (ACTION ORGANIZATION) block. Contains the ACT ORG code of the organization that performs the maintenance.

TRANS (TRANSACTION) block. Contains a two-character numeric transaction code that describes the type of action to be accomplished on the item or component.

MAN/L (MAINTENANCE LEVEL) block. Uses a numeric 1, 2, or 3 to describe the level of maintenance that is being performed (not necessarily the maintenance level that is assigned to the activity).

ACT TA (ACTION TAKEN) block. Contains a one-character alpha or numeric code to describe the action that was taken to correct the discrepancy.

MAL CD (MALFUNCTION DESCRIPTION CODE) block. Contains a three-character alphanumeric code to best describe the trouble or cause of trouble in the system or component that is identified in the WORK UNIT CD block.

ITMS/P (ITEMS PROCESSED) block. Specifies the number of times the action that is indicated in the action taken block was performed against the item that is described in the WORK UNIT CD block. MAFs that are submitted for close outs by work centers at the end of or during a reporting period should enter 0 in the items processed block.

MAN HOURS block. Documents the number of man-hours that were expended to correct a discrepancy (in hours and tenths of hours).

ELAPSED M/T (ELAPSED MAINTENANCE TIME) block. Reports the number of clock hours that were involved to make the repair (in hours and tenths of hours). For example, if three people worked together for 2.5 hours to make a repair, the total man-hours that were expended is 7.5 hours, and the elapsed maintenance time is 2.5 hours.

TECHNICAL DIRECTIVE INFORMATION section. Contains the 12- or 13-character code to identify the specific technical directive that has been incorporated or is being incorporated in the type of equipment that is identified in the Type Equipment code block. This section is divided into the interim, code, basic number, revision, amendment part, and kit fields that are completed as needed.

Interim block. An X indicates an interim type directive; otherwise this field is left blank.

Code block. A two-character code denotes the type of directive to be incorporated. For example, 50 denotes an airframe change and 74 denotes an airframe bulletin.

Basic No (number) block. A four-digit field identifies the basic technical directive. If the basic number is less than four digits, a zero or zeros are used to precede the number as necessary to complete the four-digit field.

RV (revision) block. A one-digit alpha character denotes the specific revision of the basic technical directive. Left blank if not applicable.

AM (amendment) block. A numeric one-digit character identifies the number of amendments of the basic technical directive. Left blank if not applicable.

Part block. A two-digit alphanumeric character of the basic directive. Left blank if not applicable.

Kit block. A two-character alphanumeric number of the specific kit to be incorporated. If no kit is required, 00 is entered in this field.

TYPE EQUIP (TYPE EQUIPMENT CODE) block. Contains a four-character code to describe the end item on which work is being performed.

BU/SER NUMBER (BUREAU/SERIAL NUMBER) block. Contains the bureau number of the aircraft or serial number of the equipment or end item on which work is being performed. If more than six digits, only the last six digits are used. A 0 is entered in this block when a MAF is used to document work on a group of like items (jacks, stands, common aeronautical equipment, or items that are not identified by bureau/serial number).

DISCD (WHEN DISCOVERED CODE) block. Contains a one-character alpha code to identify when the need for maintenance was discovered.

T/M (TYPE MAINTENANCE CODE) block. Contains a one-character alpha or numeric code to describe the type of maintenance action that is being performed.

POSIT (POSITION SENSITIVE INDICATOR [PSI]) block. Contains the two-digit PSI of a component that has been identified in the applicable WUC manual by a double asterisk (**). Position sensitive indicators are used to evaluate performance and/or logistics characteristics between identical components. A PSI identifies location by using a general position code or a specific position code.

General position code—A two-digit alphanumeric code that indicates a location by use of plain language. For example, LH/RH indicates left-hand or right-hand installations such as main landing gear components, tires, side-by-side cockpit components, and so forth; and FW/AF indicates fore and aft positions such as tandem cockpit components. UP/LW indicates upper or lower positions such as anti-collision lights or antennas. PR/SC/AL indicates primary, secondary, or alternate positions such as hydraulic components or multiple avionics component installations. Numbers 01, 02, 03, 04, and so forth indicate positions by using a numbering system; for example, rotor dynamic components are numbered as are the positions of fuel nozzles on a gas turbine engine.

Specific position code—A two-digit alphanumeric code that indicates a specific location by using alphanumeric sequencing to show the position.

FID (FAULT ISOLATION DETECTION) block. The block is reserved for future use and left blank.

SAF/EI SER (SAFETY/ENGINEERING INVESTIGATION SERIAL NUMBER) block. Contains the locally assigned four-digit safety EI serial number.

METER block. Contains the SE meter reading for on-equipment work on G, H, or S type equipment codes (TECS).

SE MFGR block—Is left blank.

INVENTORY CODE block. Contains a one-digit alpha or numeric code to describe the status of an

aircraft during a transaction. Inventory status codes denote the status of the aircraft or equipment at the time of inventory; for example at the inventory conducted because of gain, loss, or a change in material condition reporting status (MCRS). Inventory status codes for aircraft should coincide with the applicable OPNAV XRAY status reportable codes as specified in the *Aircraft Inventory Reporting System (AIRS)*, OPNAVINST 5442.2. There is an inventory status code for inventory only, fully operational, standard depot-level maintenance, special work, special rework at the reporting custodian site, and other (decision to strike, remove from service, bailment, loan, and so forth).

- 0—Inventory only. Equipment that is inventoried but no mission capability data is collected. These items will only be gained or lost and will require no change in MCRS reporting. This code is used for equipment only and should NOT be used for aircraft reporting.
- A—Fully operational. Aircraft or equipment in the inventory system that are in a fully operational status.
 - 1—Standard depot-level maintenance (SDLM). Those aircraft or equipment that are en route to, awaiting, or undergoing SDLM.
 - 2—Special work. Aircraft or equipment that are en route to, awaiting at, or undergoing special rework (modification, modernization, conversion, or repair) in the physical custody of a depot-level repair activity.
 - 3—Special rework at the reporting custodian site. Aircraft undergoing depot-level special rework that consists of modernization, modification, conversions, or incorporation of depot level technical directives while in the physical custody of the reporting custodian. Aircraft that receive depot-level repairs while in the physical custody of the reporting custodian remain in inventory code A.
 - 4—Other (decision to strike, remove from service, bailment, loan, and so forth). Those aircraft or equipment that are affected by reasons other than standard or special work.

PERM (PERMANENT) UNIT CODE (PUC) block. Contains a six-digit code that identifies the organization that completes the transaction.

REPAIR CYCLE fields. Include the RECEIVED, IN WORK, and COMPLETED blocks.

Received blocks—The Julian date and time the discrepancy was reported, along with the appropriate equipment operational capability (EOC) code (if applicable) that describes the degradation of the aircraft's mission capability. NALCOMIS automatically generates the received date and time blocks upon initiation of a MAF.

In Work blocks—The Julian date and time that work was begun on the discrepancy, and the proper EOC.

Completed blocks—The Julian date and the time the repair action was completed.

AWAITING MAINTENANCE field. Contains the awaiting maintenance (AWM) hours and reason codes for SCIR-related maintenance actions. This field should be completed at the end of the maintenance action or upon MAF close out. The order of significance is determined by local policy.

MAINTENANCE/SUPPLY RECORD. Contains a record of job status, date, time, and the EOC. NALCOMIS tracks all awaiting maintenance and supply time.

Job Status—Alpha character prefix for any change in job status. The alpha characters **M** (maintenance) and **S** (supply) are used. The prefix **S** is used when maintenance is halted due to awaiting parts. The prefix **M** is used to indicate the end of an AWP status or change in mission capability.

Date—The Julian date when the **S** or **M** situation begins.

Time—The time when the **S** or **M** situation begins.

EOC—A three-character alphanumeric code that, (1) identifies the degree of degradation to mission capability, and (2) identifies the system responsible for the degradation. The EOC describes the degradation to the aircraft's mission capability. These entries apply to SCIR-related discrepancies only.

REMOVED/OLD ITEM fields. Completed when a repairable component or part is removed from an end item or other major component on which work is being performed. The commercial and government entity (CAGE) code for the manufacturer (MFGR), the serial

number, and the part number (or lot number for aircraft cartridges, cartridge-actuated devices, or aircrew escape propulsion devices) are entered. If the part number is more than 15 characters, the last 15 are entered. If the serial number is more than 10 characters, the last 10 are entered. The time or cycle, preceded by an alpha character (time and cycle prefix code), found in an appendix in the *NAMP*, is entered. For warranty items, the second time or cycle field is followed by a **W**. The **W** is followed by four digits to indicate the length of the warranty period.

INSTALLED/NEW ITEM fields. Completed when a repairable component and/or part is installed on an end item or other major component on which work is being performed. The CAGE code, the serial number, and the part number (or lot number for aircraft cartridges, cartridge-actuated devices, or aircrew escape propulsion devices) are entered. If the part number is more than 15 characters, the last 15 are entered. If the serial number is more than 10 characters, the last 10 are entered. The time or cycle is entered. The time or cycle is preceded by an alpha character (time and cycle prefix codes can be found in an appendix in the *NAMP*). If the item is under warranty, a **W** is entered. This **W** is followed by four digits to indicate the length of the warranty period.

DISCREPANCY block. Contains a narrative description of what's wrong with the aircraft or equipment.

PILOT/INITIATOR block. Contains the name and rank or rate of the individual who originates a discrepancy.

CORRECTIVE ACTION block. Contains a narrative description of the action taken to correct a discrepancy.

CF REQ block. An **X** is entered if a check flight is required after completion of the maintenance action.

QA REQ block. An **X** is entered if the maintenance action requires a quality assurance representative (QAR) inspection. (Not applicable to a collateral duty inspection.)

CORRECTED BY block. Contains the signature and rate of the maintenance technician who performed the maintenance action. Signatures are posted to MAFs via NALCOMIS' electronic signature windows. The technician signs by logging in with his or her authorized password and posting his or her electronic signature.

INSPECTED BY block. Contains the signature and rate of the quality assurance representative (QAR) or collateral duty inspector (CDI) who inspected the job for proper standards. Signatures are posted upon entry of an authorized log in and password.

SUPERVISOR block. Contains the signature and rate of the work center supervisor (or his or her assistant) that indicates screening has been performed on the MAP and that the QA and tool control programs have been complied with. This field is accessed and completed through NALCOMIS' electronic signature window upon entry of an authorized log in and password.

MAINT (MAINTENANCE) CONTROL block. Contains the signature and rate of the maintenance control person who clears the discrepancy. NALCOMIS will electronically post the maintenance controller's name via the electronic MAF signature window upon entry of an authorized log in and password.

JOB CONTROL NUMBER field. Contains a 9-, 10-, or 11-digit alphanumeric code that identifies each individual maintenance action. The job control number is system generated upon initiation of some maintenance actions when NALCOMIS is used. The job control number is made up an organization code, a numeric Julian day, a serial number, and a suffix.

ORG code—A three-character code that identifies the organization that originally assigned the job control number to the maintenance action. In the case of a maintenance action that is being performed on transient aircraft (Navy or non-Navy), the action organization code of the reporting custodian is always entered in block A08. For subcustody support equipment or support equipment in the custody of another department that requires repair by an IMA, the job control number that is assigned should reflect the organization code of the IMA.

Day—The three-character numeric Julian day that specifies the day of the year. This day should reflect the day the job control number is assigned to the maintenance action, not necessarily the day work began on the maintenance action. For example, 9329 is the 329th day of 1999, or 25 November 1999. When used on the MAF as part of the job control number, the first position that identifies the year is omitted.

SER (serial number)—The serial number is either a three-character number that runs from 001 to 999 (assigned in sequence) or an alphanumeric three-character code, such as A00 and A01. A00 and A01 are job control number serial numbers that designate the "Look" and the "Fix" portions of a scheduled inspection, respectively.

SUF (suffix)—The suffix is an alphanumeric code that is added to the basic job control number. A suffix identifies a subassembly or sub-subassembly (component within a component) repair action that is performed independently of a major repair action.

WK CTR (WORK CENTER) block. Contains the three-digit code of the work center that performs the maintenance action.

STATUS (UP OR DOWN) block. Describes the status of the aircraft or equipment. If the discrepancy disables the aircraft or equipment, the aircraft or equipment is down (D). If the discrepancy does not make the aircraft or equipment totally inoperable, the aircraft or equipment is up (U).

MODEX block. Usually contains the three-digit side number of the aircraft.

PRI block. Used by IMAs to assign workload priorities.

TURN-IN DOCUMENT block. Contains the Julian date and requisition document number on which the specific item was ordered from the failed/required material field to assist in local supply control. The Turn-In Document field is automatically assigned by NALCOMIS OMA.

SYSTEM/REASON block. Contains a brief description of the reported discrepancy.

MCN (MAF CONTROL NUMBER) block. Contains a serial number that is assigned to each maintenance action. The MCN is system generated under NALCOMIS.

NALCOMIS Organizational Maintenance Activity (OMA) MAF Initiation Procedures

NALCOMIS assists maintenance managers to control the maintenance effort. NALCOMIS uses video display terminal workstations in maintenance control and material control and in work centers to communicate information on the maintenance effort. Maintenance technicians, work center supervisors,

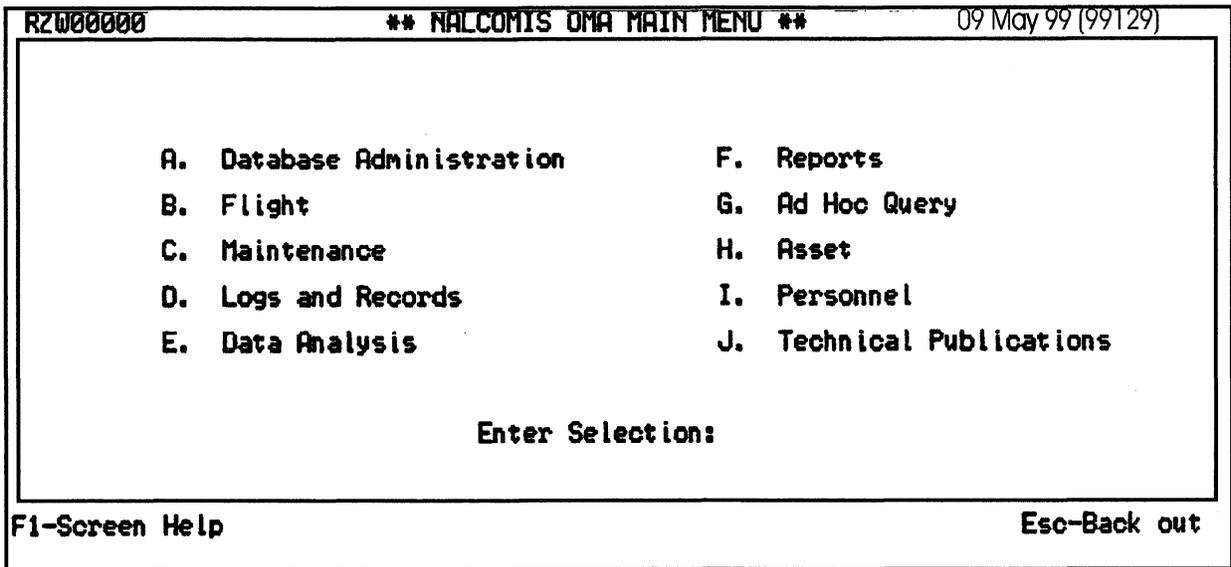


Figure 4-5.—NALCOMIS OMA main menu screen.

collateral duty inspectors (CDIs), quality assurance representatives (QARs), and maintenance control personnel are assigned passwords and special maintenance qualification (SMQ) codes that allow them to access the terminals to perform preassigned tasks (for example, MAF updates).

You initiate a MAF in NALCOMIS through interactive transactions with a standard series of video display screens. During MAF initiation, display screens will prompt you to input required data.

When you initiate MAF through NALCOMIS OMA for an unscheduled maintenance action, you

access the NALCOMIS OMA Main Menu (fig. 4-5). (Other subsystems such as Flight, Logs and Records, Data Analysis, and the Reports subsystem are also accessed through the MAIN MENU display screen). For MAF initiation, you should select "C" for MAINTENANCE. This display screen brings up the MAINTENANCE MENU (fig. 4-6). The MAINTENANCE MENU display screen allows you to select what type of action you want to perform. For example, Initiate Maintenance Action, MAF update, or Print MAF. From the MAINTENANCE MENU display screen, select INITIATE MAINTENANCE ACTION MENU. The INITIATE MAINTENANCE ACTION

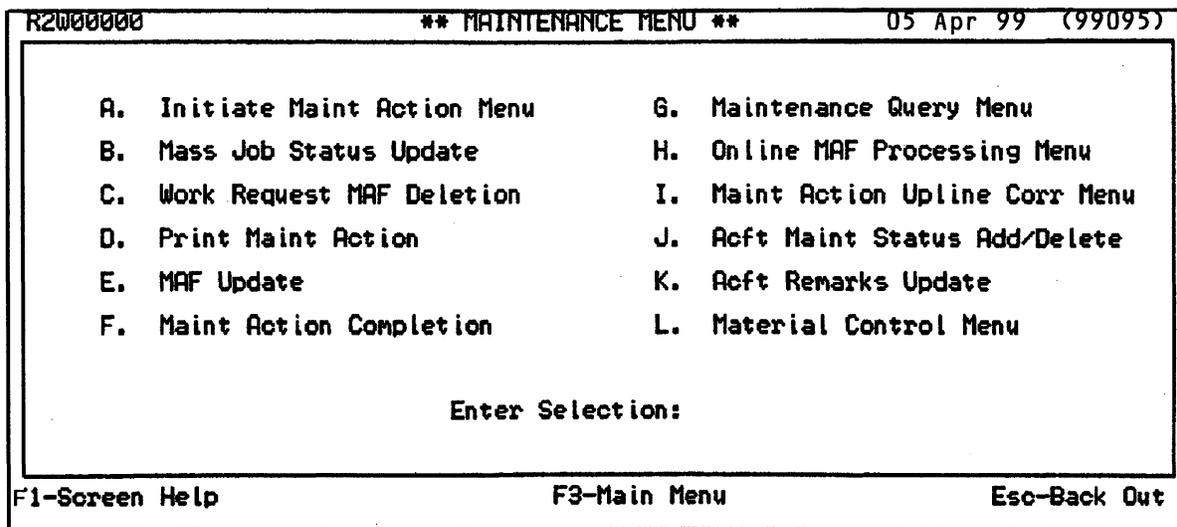


Figure 4-6.—NALCOMIS OMA maintenance menu screen.

menu (fig. 4-7) gives you the option to select what type of MAF you want to initiate. Options include: unscheduled maintenance MAFs, inspection MAFs, fix phase MAFs initiation, and onetime inspection MAFs. Examples of unscheduled MAFs are Discrepancy, Technical Directive Compliance, and Work Request. For our example, you should select Unscheduled Maintenance.

Once you select Unscheduled Maintenance option, enter the TYPE MAF (TM) code, modex (side number), and type equipment code (TEC), if required. From this point, NALCOMIS will prompt you for the other information that is required. Select ADD, and complete the data fields that are required. The TYPE EQUIPMENT CODE (TEC), BUNO, TYPE MAINTENANCE code, RECEIVED DATE and TIME, and MCN are system generated. You will also enter the work center that is assigned to the discrepancy, the initiator of the MAE, and Up or Down in the status field.

Maintenance control will review your MAF input for correctness. Once maintenance control approves the MAF, a JCN is system generated, and two copies of the MAF are printed. You place one copy of the MAF on the right side of the aircraft discrepancy book (ADB) where it will remain for as long as the discrepancy remains outstanding. You route the second copy of the MAF to the work center. An the electronic copy of the MAF is stored in the NALCOMIS database. The electronic copy of the MAF can be easily retrieved and completed by work center personnel via the work center's video display terminal workstation. The

complete NALCOMIS OMA MAF Initiation Cycle (electronic and paper) is shown in figure 4-8.

NOTE: The work center should report each change in aircraft status, such as in work status, awaiting maintenance status, or awaiting parts status, to maintenance control immediately by an update through NALCOMIS.

When corrective action of the discrepancy has been completed, the work center completes its portion of the MAF by entering the COMPLETION DATE and TIME, MAN-HOURS, EOC, and other information that is prompted by the video display screen. Maintenance control completes its portion of the MAF by retrieving the discrepancy MAF by using either the MAF's MCN or JCN. When maintenance control approves the MAF, two copies of the completed MAF are printed. You place one copy on the left side of the ADB, where it must remain for 10 subsequent flights. You discard the original outstanding copy of the MAF from the right side of the ADB.

Once the discrepancy MAF is completed and signed off by maintenance control personnel, the MAF is stored in the NALCOMIS database, where it will be processed online. After the MAF is screened for logbook entries, the activity's analyst will screen the MAF online for correctness and will either (1) approve and store the MAF in the NALCOMIS database for processing later at a data services facility or (2) reject the MAF and return the MAF to the work center for correction. Figure 4-9 shows the NALCOMIS OMA MAF completion cycle.

```

R2000100          ** INITIATE MAINT ACTION MENU **      29 Jan 99 (99029)
  
```

A. Unscheduled Maintenance	F. Duplicate MAF
B. Inspection Initiation	G. Inspections Near Due
C. Asset Inspection Initiation	H. Asset Inspections Near Due
D. Fix Phase MAF Initiation	I. Component Removal Near Due
E. One Time Inspection	J. Contingency MAF Process

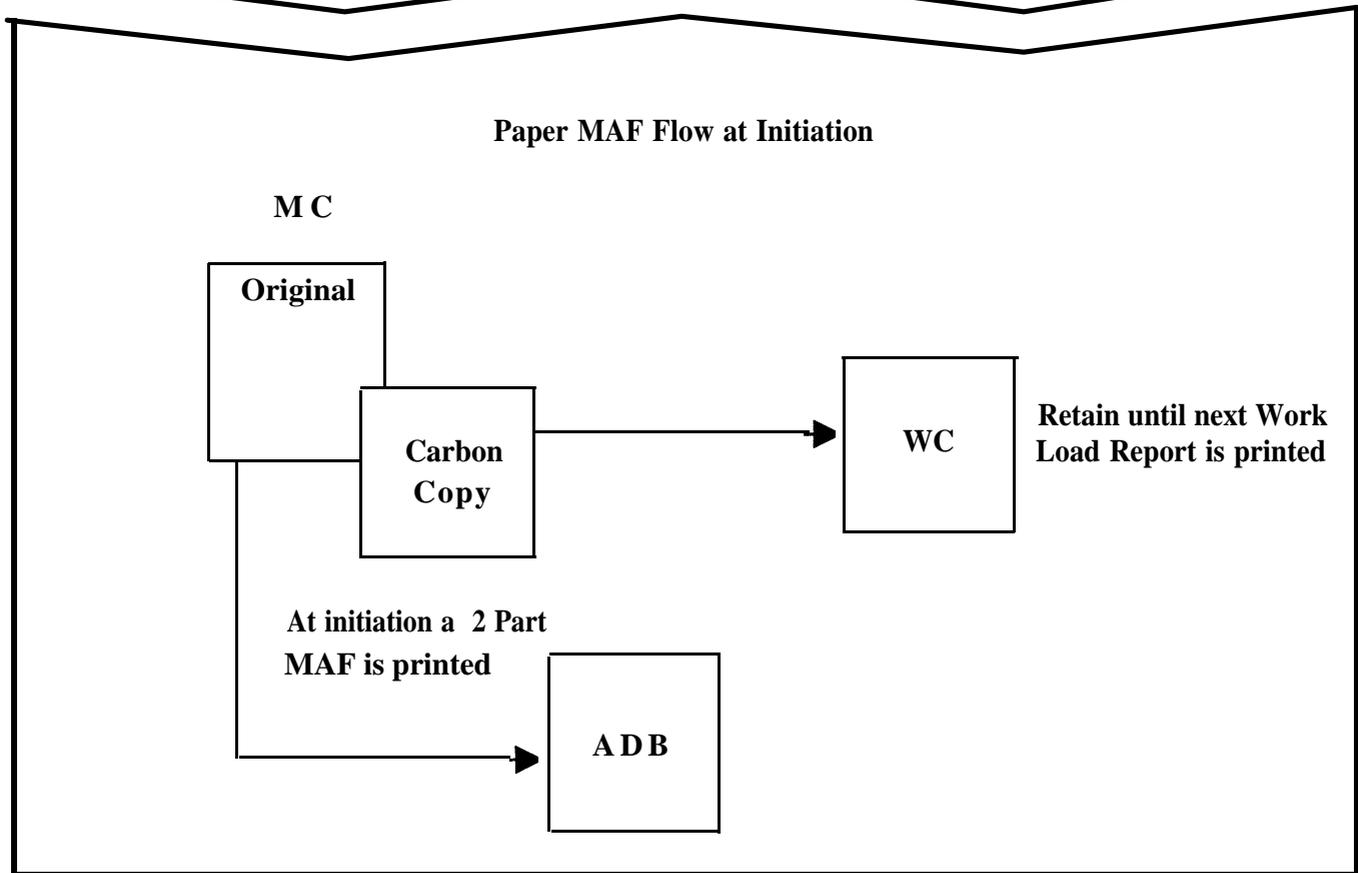
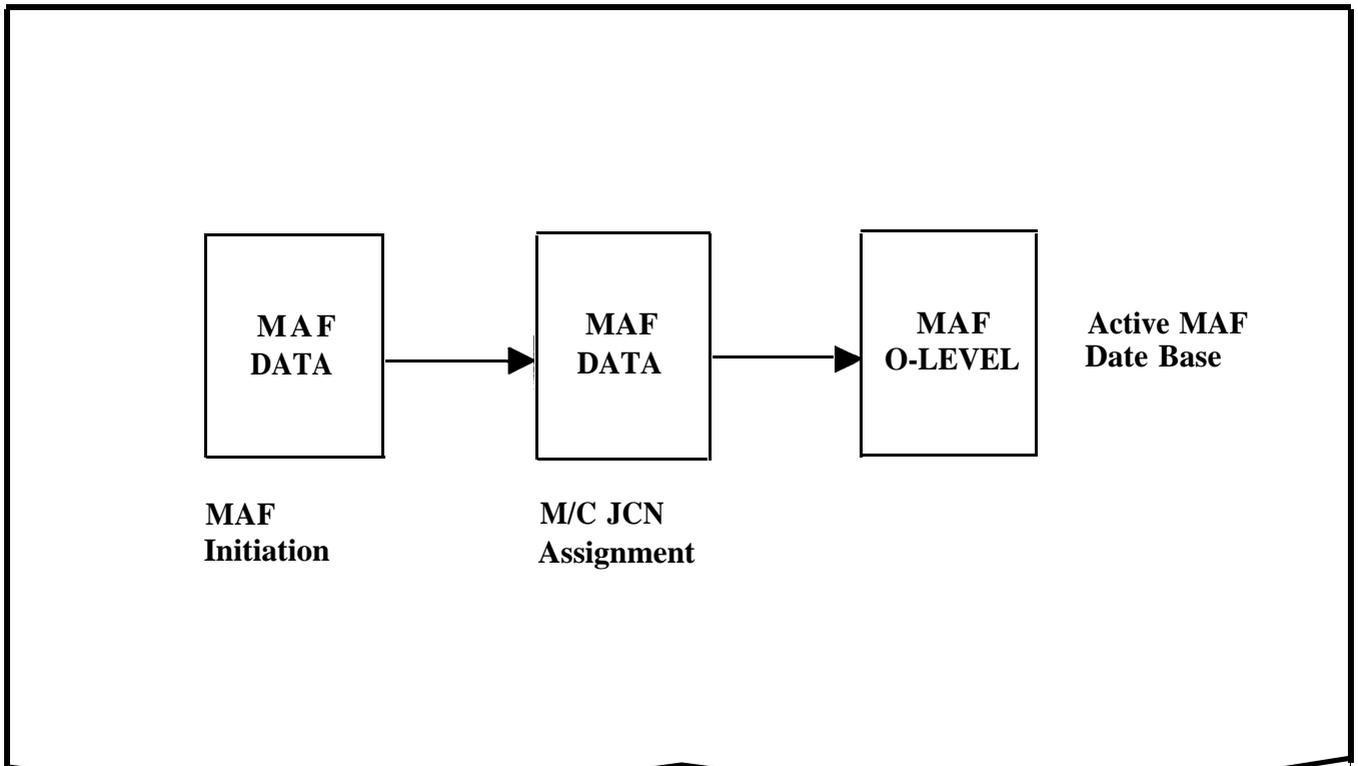
Enter Selection: _

```

F1-Screen Help          F3-Main Menu          Esc-Back Out
  
```

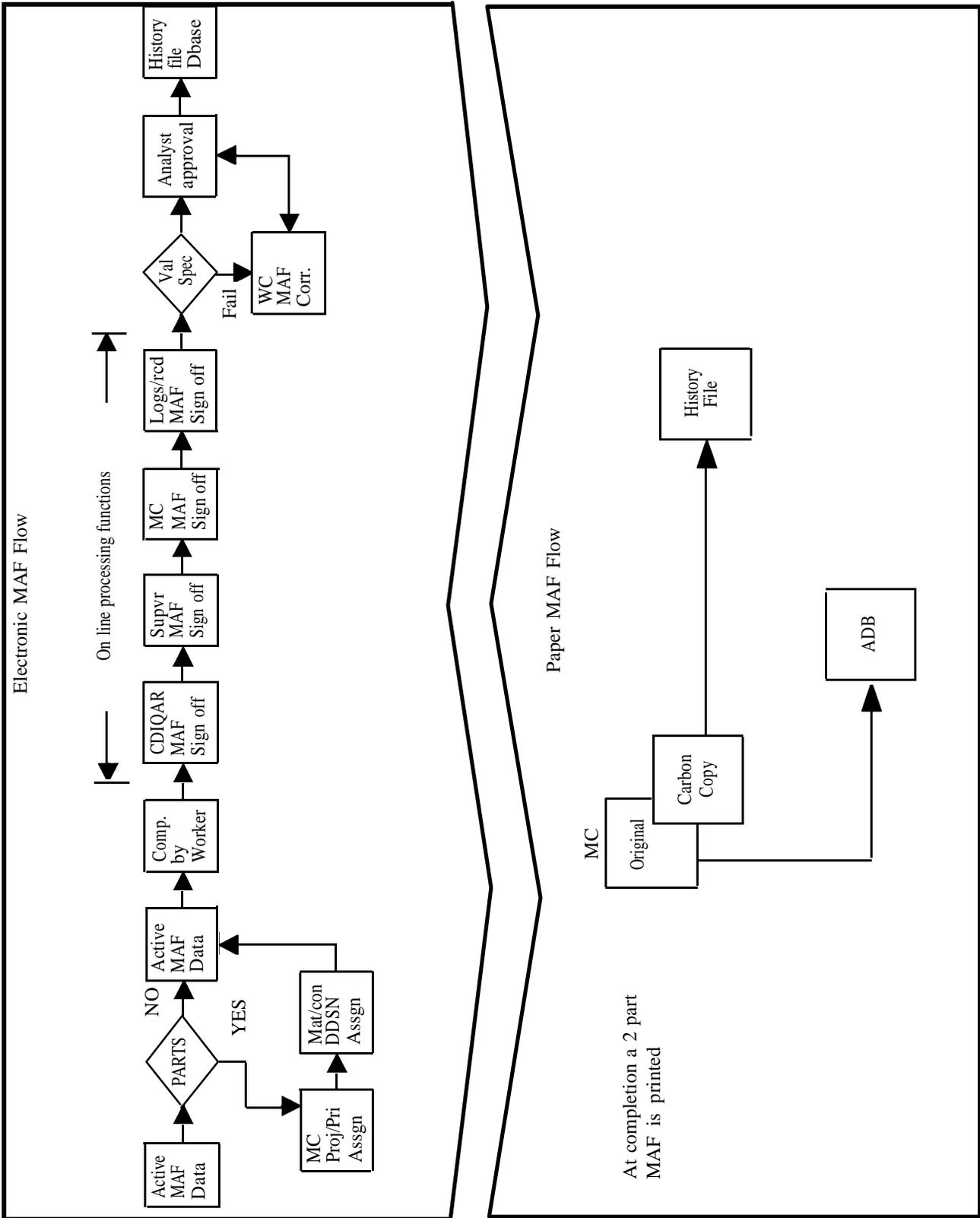
Figure 4-7.—NALCOMIS OMA initiate maintenance action menu screen.

AZf0407



AZf0408

Figure 4-8.—NALCOMIS OMA MAF initiation cycle.



AZF0409

Figure 4-9.—NALCOMIS OMA MAF completion cycle.

Activities that use NALCOMIS should refer to the *NALCOMIS End User's Manual* and the *NAMP* for detailed operating and documentation procedures.

NAVAL AIRCRAFT FLIGHT RECORD

One important way to measure naval aviation performance is by the use of flight data. Of all the ways to measure aviation activity, flight operation is directly proportional to the measure of supply support. Therefore, flight data is a basis for naval aviation's plans to adequately supply operating units.

Naval aircraft flight records (NAVFLIRs) are the sole source documents that are prescribed to collect flight data. The *Naval Air Training and Operating Procedures Standardization (NATOPS) General Flight and Operating Instructions*, OPNAVINST 3710.7, outlines procedures for documenting the NAVFLIR. The NAVFLIR (fig. 4-10) must be prepared for each attempt at flight of naval aircraft. No substitute forms are authorized. The NAVFLIR is used to collect the following types of data:

- A statistical description of the flight pertaining to the aircraft and crewmembers
- A record of all logistic actions that are performed during the flight
- A record of weapons proficiency
- A record of training areas that are used and other miscellaneous data

Documentation of the Naval Aircraft Flight Record

The Flight Add/Update Menu enables you to select options to initiate, update, and complete NAVFLIR

documentation. The flight hours that are annotated on a NAVFLIR directly affect the Maintenance subsystem and Logs and Records subsystem. The form should be prepared for each attempt at flight of naval aircraft or training evolutions for simulators.

The pilot or designated crew member maintains an accurate record of the flight. At the completion of the flight or simulator event, the pilot or mission commander signs the NAVFLIR to certify the NAVFLIR that is accurate. If the aircraft and crew member are assigned to different activities and are supported by different data services facilities (DSFs), the crew member provides his or her parent activity with a duplicate copy of the NAVFLIR for submission to the supporting DSF of the parent activity.

One record may be used for two or more flights under the following conditions:

- The total mission requirement (TMR) codes do not exceed three, and the pilot in command remains the same. (TMR codes are contained in an appendix of OPNAVINST 3710.7.)
- The operations (OPS) code (shipboard or shore operations) remains the same.
- No maintenance or servicing is performed at intermediate stops other than the addition of fuel, oil, or oxygen.

The upper left corner of the NAVFLIR contains a preprinted alphanumeric number that identifies each document. This number is required for computer processing. A document with this number missing or unreadable will be rejected by the DSF.

The upper right corner of the NAVFLIR has a section that is marked "PAGE _of_," and this section is

```

R1W02300          ** EXPERT DATA ENTRY **          U2 Mar 99 (99061)
AIRCRAFT DATA (Record Type 7B)
Exc  Modex  BUNO  TEC  Org  Sp  Ops  Document Number: AC189AU
AirMisNbr  Away  Event
Msn1  Hrs1  Msn2  Hrs2  Msn3  Hrs3  TF  CJ  Hst  Remarks
AIRCREW DATA (Record Type 7C)
Pg  Lg  Exc  SSN  FI  Last Name  Svc  Sq  FPT  CPT  SCT
Instrument  Night  Type/No Landing  Type/No Approach
ACT  SIM  Time  T  NO.  T  N  T  N  T  N  T  N  T  N
LOGISTICS DATA (Record Type 7E & 7F)
Pg  Lg  ImZn  Time  JDate  ICAO  Time  JDate  ICAO  SS  Dist
WEAPONS PROFICIENCY DATA (Record Type 7G)
Pg  Ln  Ln  No  Trng  Area1  Hrs1  Trng  Area2  Hrs2  Ordi  Del1  Runs1  Score1
Ord2  Del2  Runs2  Score2  Ord3  Del3  Runs3  Score3  Cd1  Data1  Cd2  Data2
F1-Screen Help  F2-Field Help  F3-Main Menu  F7-List  Esc-Back Out
  
```

Figure 4-10.—Naval aircraft flight record (NAVFLIR).

AZ0410

used when an additional record is required to supplement the documentation of multiple-entry data fields. Supplemental records may be attached to page 1 to provide additional space to document crew member names, additional flight legs and their associated records, or weapons proficiency.

Exception codes (EXC CODE) are used on the NAVFLIR for entries that require processing for other than routine flights. (These codes are contained in OPNAVINST 3710.7.) The following are examples of situations that would require the use of exception codes:

- Gaining or losing crew members to the squadron database.
- Correcting, deleting, or revising previously submitted data.
- Documenting staff member flight time, such as for an individual who is assigned to a type commander (TYCOM) functional wing.
- Documenting flight training simulator time. Simulator time only refers to approved simulators capable of logging flight time.
- Documenting cancelled flights. Exception code X is used to document the cancellation of a flight and is used only in the aircraft data section.
- Documenting flights when the crew member and the aircraft are assigned to different organizations.

The documentation for a routine flight consists of information from the following sections of the NAVFLIR:

- Aircraft Data-RECTYP (record type) 7B
- Aircrew Data-RECTYP 7C
- Logistics Data (Depart)-RECTYP 7E
- Logistics Data (Arrive)-RECTYP 7F. (This section is not completed in the submission of a cancelled flight.)

NOTE: Weapons proficiency data, RECTYP 7G, is not mandatory for every flight, but it should be completed, as applicable, to document time spent in restricted air space, miscellaneous data, and so forth.

Naval Aircraft Flight Record Documentation Flow

Following each flight, or attempt at flight, the pilot or mission commander signs the NAVFLIR to certify

that the record is correct. Two copies of the NAVFLIR are then printed. Copy 1 will go to operations for retention in the master files. Copy 2 is retained in the maintenance department for 3 months. Operations personnel screen the document for accuracy and transcribe the information into the aviators' logbook. If your command is an Enhanced Comprehensive Asset Management System (ECAMS) site, the NAVFLIR should be routed to the ECAMS operator for incorporation into the database. The analyst or system administrator forwards the NAVFLIR data diskette to the supporting DSF for processing. NALCOMIS OMA activities should refer to the *NAMP* and *NALCOMS End User's Manual* for automated NAVFLIR operating procedures.

NAVAL FLIGHT RECORD SUBSYSTEM REPORTS

The Naval Flight Record Subsystem (NAVFLIRS) serves as a single source of flight data for Aviation Standard Navy Maintenance and Material Management System (AV-3M), the Marine Corps Flight Readiness Evaluation Data System (FREDS), the Individual Flight Activity Reporting System (IFARS), the Navy Logistics Information System (NALIS), and other reporting systems.

Submission of a NAVFLIR or a MAF to a DSF provides the basic data to produce the Naval Flight Record Subsystem (NAVFLIRS) reports that display aircraft flight readiness and inventory information. These machine reports are prepared for requesting activities to ensure uniform reporting of basic aircraft inventory and flight data within the Naval Establishment. Daily and monthly NAVFLIRS reports are generated by the DSF.

NAVFLIRS Daily Audit Report

The NAVFLIRS Daily Audit Report (DAR), shown in figure 4-11, is prepared daily from the data submitted on the NAVFLIR. Each detail line represents a single record type (RECTYP). This report is used to validate the previous day's flight data form submission. The NAVFLIRS DAR is printed in three parts. Part I contains all data records that are found to be valid. Part II is a cumulative report that contains all flight records that were submitted during the current reporting period that contain errors that have not been corrected. In addition to current reporting period errors, NAVFLIRS DAR, Part II, reports errors that were not corrected

R6W02200 ** DAR Part I/II Corr/Del (7B) ** 24 Jul 99 (99205)

ACTION: UPDATE DELETE EXIT
Update NALCOMIS Flight Data and Generate Corrected Document for NAVFLIRS

Doc. No.	Exc	Modex	Buno/Ser	TEC	Org	Total Pages
AA20UL1		105	160891	ACWA	AA2	1

Total Mission Requirement(TMR)Data				Supt	Tot	Cat	Airlift	Away			
Msn1	Hrs1	Msn2	Hrs2	Msn3	Hrs3	Code	Flt	Ops	JATO	Mission #	Code
1A1	1.0					AL	1	1			

Engine #1	Engine #2	Engine #3	Engine #4	Engine #5	Engine #6	Engine #7	Engine #8	No. Hoists
Hrs								
1.0	1.0	1.0						

Remarks

F1-Screen Help F2-Field Help F3-Main Menu Esc-Back Out

R6W02400 ** DAR Part I/II Corr/Del (7c) ** 24 Jul 99 (99205)

ACTION: UPDATE DELETE EXIT
Update NALCOMIS Flight Data and Generate corrected document for NAVFLIRS

Doc. No.	Pg	In	Exc	Last Name	First Init	SSN	Spl Qual	Svc
AA20UL1	1	1		KIMM	A	234083033	A	1

Flight Time		Instrument		Night		Landings					
FPT	CPT	SCT	ACT	SIM	Time	T	NO	T	N	T	N
1.0						1	1				

Approaches				Training Codes						Away Code			
T	N	T	N	T	N	T	N	T	N	T	N		
				1ST	2ND	3RD	4TH	5TH	6TH	7TH	8TH	9TH	10TH
				F01	F02	F03	F04	F05	F06				

** SAFEGUARD IAW PRIVACY ACT **

F1-Screen Help F2-Field Help F3-Main Menu Esc-Back Out

R6W02500 ** DAR Part I/II Corr/Del (7D) ** 24 Jul 99 (99205)

Action: UPDATE DELETE EXIT
Update NALCOMIS Flight Data and Generate Corrected Document for NAVFLIRS

Doc. No.	Assigned Syllabus	Org	Exc	First Init	Last Init	SSN	SUC	Julian Date
AA20UL2		AA2	G	B	B	234234234	N	95200

Aircrew Status Code	Syllabus Status Code	Last Name	Pay Grade	NATOPS Qual Expir Date
		BULLDOG	E6	

Medical Qual Expir Date	Instr Qual Expir Date	Water Qual Expir Date	Physio Qual Expir Date	Away Code

** SAFEGUARD IAW PRIVACY ACT **

F1-Screen Help F2-Field Help F3-Main Menu Esc-Back Out

AZ70411

Figure 4-11.—NAVFLIRS daily audit report, parts I and II.

from the previous reporting period. Previous reporting period errors will not be removed from the DAR, Part II, until corrections are made. DAR, Part V, summarizes each NAVFLIRS document for the current reporting period that appears on the DAR, Part I, DAR, Part II, and all records that appear on the DAR, Part II, for the previous reporting period.

Individual Master Roster (NAVFLIRS-00)

The individual master roster (fig. 4-12) is prepared monthly. It identifies total aircrew assigned to an activity by rank or grade, social security number, service, hours flown, and flight qualifications. Each line of the roster reports an assigned aircrew member, the number of hours he or she has flown, and his or her flight qualification status. The NAVFLIRS-00 is kept up to date by the operations department to reflect current aircrews that are assigned to an activity and pilot flight status during the reporting period.

Monthly Aircraft Utilization Report (NAVFLIRS-1)

The Monthly Aircraft Utilization Report (fig. 4-13) contains summaries by BUNO, total mission requirements (TMR) code and hours flown with the mission name, landings (by code), total flight hours and flights, total ship flight hours and flights flown, catapult launches, training areas, and hours for each aircraft. Each line of this report represents a summarization for each type of landing (day or night) by BUNO.

Monthly Aircraft Mission Report (NAVFLIRS-2)

The Monthly Aircraft Mission Report, shown in figure 4-14, summarizes by total mission requirements code, the number of mission, hours flown, and average duration of each flight in each category by Type Equipment code. Each line of this report represents a summarization of each TMR within the Type Equipment code.

NAVFLIRS - 00		INDIVIDUAL MASTER ROSTER										OCT 99				
ORG: AN2 VS-22																
****NAME****	FST	INT	GRADE	****SSN****	SVC	HRS	NATOPS QUAL YYMM	MED EXAM YYMM	INST QUAL YYMM	WATER SURV YYMM	PHYSIOLOGY YYMM	ASC	SSC	SYLB	GAIN DATE	LOSS DATE
DOE	J	0-3	111-11-1111	1		28.9	9905	9902	9905	9908	9902				8123	
FROST	J	E-8	222-22-2222	N		22.0	9906	9903		9908	9903				8265	
PISTOL	W	E-9	888-88-8888	N		24.3	9908	9907		9906	9907				9006	
BRUSH	F	E-5	999-99-9999	N		26.2	9908	9908		9907	9908				7360	8299
BOATE	P	O-3	777-77-7777	6		22.6	9801	9901		9903	9901				9132	
TOTAL AIRCREW ASSIGNED 005																

AZf0412

Figure 4-12.—Individual Master Roster, NAVFLIRS-00.

MONTHLY AIRCRAFT UTILIZATION REPORT

NAVFILRS - 1
 ORG: BRO HSL - 34

Bureau Number	Type Equipment Code	Total Mission Requirement Code	Total Mission Requirement Hours	Mission Name	Type Landings (Day/Night)	Number of Landings By Type	Total Day or Night Landings	Total Landings	Training Area	Training Hours
BUNO 123455	TEC AHBH	CODE 1A1 1A9	TMR HRS 108.2 3.0	MISSION NAME TRNG SYL/EXE F/F/N TRNG SYL/EXC SP/EQUIP	DAY 1 NIGHT 1 DAY 1 NIGHT 1	LANDINGS 1 2 3 4 5 6 7 8 9 0 A B C D E F G H J K N P 1 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1 0	TOTAL LNDGS 3 TOTAL LNDGS 3	AREA COX NCTS PUNGO VEPCO	3.4 5.7 2.1 .5	
BUNO TOTALS:		HRS 111.0	FLT 201	SHIP HRS 6.0	SHIP FLT 1	CAT				
161112	AHBH	1A2 1B2 2P3 5Y1	9.3 12.6 8.7 14.2	TRNG SYL/EXC INST TRNG IUT INST SUPT SAR/WATER N-DOD CONT FLT ASW ROUT SEARCH	DAY 2 NIGHT 1	8 7 10 4	19 15	MERIDIW QUICKTN	3.1 2.7	
BUNO TOTALS:		HRS 44.8	FLT 10	SHIP HRS 9.4	SHIP FLT 2	CAT 3				
TEC TOTALS:		HRS 155.8	FLT 211	SHIP HRS 15.4	SHIP FLT 3	CAT 3				
ORG TOTALS:		HRS 155.8	FLT 211	SHIP HRS 15.4	SHIP FLT 3	CAT 3				
TRAINING AREA TOTALS:										
AREA COX		HRS 3.4	AREA NCTS 5.7	AREA PUNGO 2.1	AREA VEPCO .5	AREA MERIDIW 3.1	AREA QUICKTN 12.3	AREA	HRS	

Figure 4-13.—Monthly Aircraft Utilization Report, NAVFLIRS-1.

Monthly Individual Flight Activity Report (NAVFLIRS-3)

The Monthly Individual Flight Activity Report (fig. 4-15) details by individual aircrew member specific flight activity that he or she performed during the reporting period. Each line represents a summarization for each date and time departure by BUNO and Type Equipment code, first pilot time (FPT), copilot time (CPT), and special crew time (SCT). Night flight time is also represented on each detail line. This report also accumulates weapons and proficiency data, miscellaneous data, and a fiscal year summary.

Monthly Aircraft Logistics Data Report (NAVFLIRS-4)

The Monthly Aircraft Logistics Data Report (fig. 4-16) summarizes the flight hours, distance, confirmed/opportune payloads, and configuration data for each BUNO. Each line represents a summarization for each airlift mission number by BUNO.

- Q19. The MAF is used to document maintenance actions on complete end items. True or False?*
- Q20. What source document is used to document technical directive compliance?*
- Q21. In NALCOMS OMA, the signature of the maintenance controller who clears a MAF is electronically posted to the MAF after entry of what information?*
- Q22. The ORG code, block A08 on the MAF, should reflect the ORG code of the activity originally assigning a JCN to the maintenance action except on what occasion?*
- Q23. Passwords allow maintenance technicians to access NALCOMIS. What code allows a maintenance technician to perform preassigned tasks?*
- Q24. Upon initiation of a discrepancy MAF, two copies are printed. One copy is placed inside the aircraft discrepancy book (ADB). How long should the copy inside the ADB remain there?*
- Q25. What source document is used to record and report flight data?*
- Q26. What publication contains detailed procedures for initiating the naval aircraft flight record (NAVFLIR)?*
- Q27. The NAVFLIRS (Naval Flight Record Subsystem) Daily Audit Report contains data from the*

previous days data submission. Which part of the DAR contains valid data?

- Q28. What NAVFLIRS report identifies total aircrew assigned to an activity and special flight qualification?*

SUMMARY

Maintenance control is the nerve center for maintenance actions within an aviation maintenance activity. The maintenance material control officer is responsible for the overall production effort and material support of the maintenance department. The Naval Aviation Logistics Command Management Information System (NALCOMIS) is the automated management information system (MIS) that provides a maintenance activity with the information to aid in the day-to-day management of the maintenance effort for assigned aircraft and equipment.

The Planned Maintenance System (PMS) supports the maintenance of aircraft and aeronautical equipment all through their service life. PMS publications detail the requirements for planning, scheduling, and performing of scheduled maintenance. Maintenance requirements cards furnish the minimum requirements for scheduled maintenance tasks. Periodic maintenance information cards contain mandatory and replacement intervals for components and assemblies and conditional inspection listings. Checklists give abbreviated instructions for preoperational inspections and turnaround inspections.

Daily inspections are valid for a maximum of 72 hours. Monthly Flight Summary and Equipment Operating Records are verified for accuracy during aircraft acceptance inspections. Conditional inspections are done because a specific overlimit condition occurred or as the result of events that create an administrative requirement for the inspection. Example of overlimits are hard landing, engine overspeed, and engine overtemp. An Aircraft Service Period Adjustment (ASPA) evaluation is an evaluation between 6 months prior to and 3 months after the period end date (PED) of an ASPA aircraft.

A Maintenance Action Form (MAF), OPNAV 4790/60, documents actions on complete end items. The MAF also documents technical directive compliance. The signature of the maintenance controller who clears a MAF is electronically posted in NALCOMIS OMA on the basis of his or her log in and password. The ORG code on the MAF reflects the ORG code of the activity that originally assigned the

MONTHLY AIRCRAFT LOGISTICS DATA REPORT

NAVLIRS - 4
 ORG: AN2 VS-22
 TEC: ASBE

Bureau Number	Airlift Mission Number	Leg Number	Exception Code	Leg Flight Hours	Distance	Confirmed Payload Number of Priority 1 Passengers	Confirmed Payload Number of Priority 2 Passengers	Confirmed Payload Number of Priority 3 Passengers	Confirmed Payload Number of Priority 4 Passengers	Confirmed Payload Number of Priority 5 Passengers	Confirmed Payload Cargo Weight	Opportune Payload Number of Passengers	Opportune Payload Cargo Weight	Opportune Payload Code	Configuration Data Minimum Cargo	Configuration Data Maximum Cargo
BUNO	MSN NO	LEG NR	EX CD	LEG FH	DISTANCE	PRI 1 PAX NO	PRI 2 PAX NO	PRI 3 PAX NO	PRI 4 PAX NO	PRI 5 PAX NO	CARGO LBS	OPPORTUNE PAX NO	CARGO LBS	PAYLOAD CODE	MAX CARGO	MAX PAX
161112	AN2625302	1		3.5	1510						150					
	AN2625304	1		4.0	1570						110					
	*			7.5	3080						260					
	**			7.5	3080						260					
	***			7.5	3080						260					

Figure 4-16.—Monthly Aircraft Logistics Data Report, NAVFLIRS-4.

job control number (JCN) to a maintenance action unless the aircraft is in a transient status. SMQ codes allow maintenance personnel to perform preassigned tasks. Under NALCOMIS, two copies of a discrepancy MAF are printed—one for the aircraft discrepancy book (ADB) and one copy for the work center. When the discrepancy is cleared, the original copy of the MAF in the ADB is discarded.

The record and report of flight data is kept on a naval aircraft flight record (NAVFLIR). *Naval Air*

Training and Operating Procedures Standardization (NATOPS) General Flight and Operating Instructions, OPNAVINST 3710.7, contains procedures for initiating the NAVFLIR. Part I of the Naval Flight Record Subsystem (NAVFLIRS) Daily Audit Report (DAR) contains data that is found to be valid from the previous day's data submission. The individual master roster, NAVFLIRS-00, reports total aircrews who are assigned to an activity and special flight qualifications.

ANSWERS TO REVIEW QUESTIONS

- A1. *Maintenance control.*
- A2. *Maintenance material control officer (MMCO).*
- A3. *Naval Aviation Logistics Command Management Information System (NALCOMS).*
- A4. *Planned Maintenance System (PMS).*
- A5. *Planned Maintenance System (PMS) publications.*
- A6. *Maintenance requirements cards (MRCs).*
- A7. *Periodic maintenance information cards (PMCs).*
- A8. *Checklist.*
- A9. *72 hours.*
- A10. *(a) Monthly Flight Summary, (b) equipment operating records.*
- A11. *Conditional.*
- A12. *Conditional.*
- A13. *Aircraft Service Period Adjustment.*
- A14. *Special inspection.*
- A15. *Plus or minus (\pm) 3 days.*
- A16. *90 flight hours.*
- A17. *At 180 flight hours.*
- A18. *Miscellaneous/History record.*
- A19. *True.*
- A20. *Maintenance Action Form (MAF), OPNAV 4790/60.*
- A21. *An authorized log in and the use of his or her password.*
- A22. *When the aircraft is in a transient status.*
- A23. *Special maintenance qualification (SMQ) code.*
- A24. *As long as the discrepancy remains outstanding.*
- A25. *Naval aircraft flight record (NAVFLIR).*
- A26. *Naval Air Training and Operating Procedures Standardization (NATOPS) General Flight and Operating Procedures, OPNAVINST 3710.7.*
- A27. *NAVFLIRS Daily Audit Report, Part I.*
- A28. *Individual Master Roster, NAVFLIRS-00.*

CHAPTER 5

MAINTENANCE DATA SYSTEM (MDS)

An AZ who works in maintenance control or production control should have a working knowledge of the Maintenance Data System (MDS). Maintenance controllers initiate and complete much of the data that is generated through the MDS. As a maintenance or production controller, you might be called upon to research and extract critical information about aeronautical equipment from the Naval Aviation Logistics Command Management Information System (NALCOMIS), data services facility (DSF) machine-produced maintenance data reports, or maintenance or flight data historical files. A working knowledge of MDS procedures and available MDS products should prevent a simple search for needed data from becoming a lengthy evolution. At any rate, the most important thing you should remember is that the information taken from MDS is only as good as the information put into MDS. Accuracy in MDS documentation should be your primary concern.

MAINTENANCE DATA SYSTEM SCOPE

LEARNING OBJECTIVE: Define the function of the Maintenance Data System (MDS).

The MDS is a management information system provides statistical data on aeronautical equipment for use at all management levels. This statistical data is concerned with:

- Equipment maintainability and reliability
- Equipment configuration
- Equipment mission capability and utilization
- Material usage
- Material nonavailability
- Maintenance and material processing times
- Weapon system maintenance and material cost

MDS also assists maintenance managers in the day-to-day management of the maintenance effort. The

key ingredient to an effective MDS in a maintenance activity is the work center supervisor. Work center supervisors should have a working knowledge of the MDS, the proper use and documentation of source documents, and knowledge of the available content of machine reports. The sources of much of the data that is generated in the MDS include the maintenance action form (MAF), the naval aircraft flight record (NAVFLIR), and the MILSTRIP Requisition Form, DD Form 1348. These source documents are the tools that are used to collect, record, and report the information that is needed for the efficient and economical management of maintenance, material and manpower.

In the following pages, we will discuss three of the four reporting subsystems that make up the MDS—material reporting (MR), maintenance data reporting (MDR), and subsystem capability impact reporting (SCIR). A fourth subsystem, utilization reporting, is not dealt with here.

Q1. What management information system is designed to provide statistical data on aeronautical equipment for use at all maintenance levels?

MATERIAL REPORTING (MR)

LEARNING OBJECTIVE: Define the purpose of Material Reporting.

The Material Reporting (MR) subsystem reports all supply actions that support aviation maintenance. Using the MAF, material requisition (DD Form 1348), and NALCOMIS as its sources of information, the local supply organization submits repairable component control data and usage data to the supporting DSF. The DSF produces reports from the data that merge key elements of maintenance and supply. These reports provide local supply and aviation intermediate maintenance departments (AIMDs) with a means to monitor the flow of repairable components. The reports also provide management at higher commands with information on the material expenditures that are used in support of maintenance.

MR is a part of the MDS; however, the primary responsibilities for the detailed procedures that are involved in MR are NOT the direct responsibility of the AZ. Therefore, MR will not be discussed further.

Q2. *What reporting system is used to report all supply actions that support aircraft maintenance?*

MAINTENANCE DATA REPORTING (MDR)

LEARNING OBJECTIVES: Define the purpose of Maintenance Data Reporting. Identify the purpose of various Maintenance Data Reports. Identify the purpose of selected NALCOMIS reports.

MDR deals with the most complex and the widest range of data in the MDS. Maintenance data is generated at the most basic level—from the mechanic or technician who performs the maintenance task. Source documents that are used in maintenance data reporting include the MAF and the Metrology Equipment Recall (METER) card. By using coded information that is documented on these source documents, the local DSF compiles maintenance and material data reports. Aircraft maintenance workers use source documents to report the following information:

- What equipment was worked on (which system, subsystem, or component)
- What caused the failure or malfunction
- When the failure or malfunction was discovered
- What action was taken to repair the equipment
- What parts were used to repair the equipment
- The number of man-hours that were expended in repair

The identity of the work center or work centers that did the work

Once this information is compiled in a useable format (for example, monthly maintenance summaries), maintenance managers can use the information to manage aircraft maintenance organizations.

MAINTENANCE DATA REPORTS

Maintenance technicians at the local level generate large amounts of maintenance data. This data consists

of coded elements that the DSF summarizes into daily and monthly reports. For a detailed description and examples of MDS reports, refer to the *Naval Aviation Maintenance Program (NAMPP)*, OPNAV-INST 4790.2. Some of the DSF-generated MDS that we will discuss are available in both organizational- and intermediate-level maintenance activities.

MAF Copy 1 Daily Audit Report (DAR)

This MAF copy 1 DAR is prepared from data that was submitted on MAFs and is compiled in three parts. Part I and Part II are shown in figure 5-1. Part I contains data that have no errors, and each data element is considered valid. Part II contains records for the current reporting period that contain errors that have not been previously corrected. Part III will be produced only if there are correction or deletion records that cannot be applied to the local database due to erroneous data. In part III, an asterisk (*) indicates erroneous data. When erroneous data is indicated, the work center supervisor should verify the MAF copy 1 daily audit report to ensure that data that is contained on production work center MAFs has been correctly processed by the DSF.

Monthly Production Report (MDR-2)

The MDR-2, shown in figure 5-2, lists all maintenance actions in work center sequence, which includes technical directive compliance and data that has been entered in the (H-Z) Failed/Required Material blocks of the MAF. The MDR-2 also provides the work center supervisor with statistical data that pertains to the work center, for example, man-hours that were expended in repair of a subsystem.

Job Control Number (JCN) Consolidation Report (MDR-3)

The MDR-3 (fig. 5-3) is a consolidated list of all maintenance and technical directive compliance actions that were submitted during the month by the parent organization and the supporting activity. This report is prepared from data on all MAFs except those with transaction codes 00, 02, and 03 (inventory gain, change in material condition reporting status, and inventory loss). The MDR-3 gives the maintenance officer (MO) a record of maintenance on the equipment for which he or she is responsible.

ORG: C9N WORK CENTER: 520

	TEC	WUC	POS	AT	MAL	FID	WD	IP	MHRS	EMT	BUNO	TM	ICN	DATE	PART/IDC	AT2	MAL2	QTY	TR							
(1)	AHXD	4512D		C	105		J	1	1.5	1.5	161002	D	BG0022699	7022	MS9046A	R	020	2	32							
(2)																										
(3)	AHXD	4512D		C	255		H	1	3.0	1.5	161002	B	BG0022235	7022					31							
(4)	AHRG	4512D		A	127		D	1	1.0	1.0	151683	B	BG0022083	7022					31							
(5)	AHRG	4512D		C	374		H	1	1.0	1.0	151683	B	BF0022085	7024					31							
(6)	SUBSYSTEM TOTAL																									
(7)	AAEA	46132		C				1	8.5	4.0	151683		BG0022423	7023					41							
(8)	SUBSYSTEM TOTAL																									
(9)																										
(10)	TEC TOTAL																									
(11)	WC TOTAL																									
(12)	WD TOTAL		A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	Y	V	W	X	Y
(13)																										
(14)							***	5	15.0																	

Figure 5-2.—Monthly Production Report (MDR-2).

JOB CONTROL NUMBER CONSOLIDATION REPORT

MDR - 3

ORG: AC3

Job Control Number	JCN	T	M	TEC	BUNO	WUC	POS	A	W	D	MAL	FID	QTY/ IP	MHRS	EMT	MFGR	PART/SER/TDC	ORG	WC	DATE	P	S	R	A	T	TR		
Type Maintenance								Action Taken	When Discovered		Code	Isolation	Processed	Man-hours	Time	Code	Identif.	Org	Center	Date	Processing	Repair	Awaiting	Total	Transaction			
(1)	AC3008015	S	AAEK	151633	030	030	0	0	O	000	020	1	.0	2.5	2.5	26512	12468H	AC3	X20	7008					11	12		
(2)	AC3010235	B	AAEK	151686	29313	29313	C	D	D	020	020	1	6.0	3.0	3.0			AC3	X60	7010					23	32		
(3)							R			020	020	1	8.0	4.0	4.0	06481	5A3	AC3	X50	7012								
(4)	AC3010309	B	AAEK	151689	73632	73632	R	D	D	290	290	1	16.5	9.5	9.5			AC3										
(5)	AC3010309	B	AAEK	151689	73632	73632	C	D	D	290	290	1	16.5	9.5	9.5			AC3										
(6)							R			450	450	1				06481	5A3	AC3										
(7)																	AAAM025							0	0	2	1	2
(8)												*	4	16.5	9.5													
(9)												**	4	16.5	9.5													

Figure 5-3.—Job Control Number Consolidation Report (MDR-3).

TECHNICAL DIRECTIVE COMPLIANCE REPORT

MDR-4-1
JCNORG: AC3

	BUNO	TEC	INI	INTL	Interim	Directive Code	Directive Number	Revision	Amendment	Part/Kit	Work Unit Code	Status Code	IPO	MHRSO	IPI	MHRSI	EMT	ML	DATE	ORG	WC	ICN	TR
(1)	151688	AAEK	50	0047	A	1	13300	C	1	6.0	6.0	3.0	1	7015	AC3	120	AC3	015	061	47			
(2)	151688	AAEK	50	0047	A	1	13162	A	1	2.0	2.0	2.0	1	7015	AC3	210	AC3	015	061	47			
(3)								*		8.0		5.0											
(4)	151688	AAEK	54	0046	A	1	64485	C	1	13.0	13.0	6.0	1	7015	AC3	220	AC3	014	112	41			
(5)								*				6.0											
(6)	151688	AAEK	54	0046	A	2	64485	D	1	.5	.5	.5	1	7015	AC3	220	AC3	014	113	41			
(7)								*		.5	.5	.5											
(8)								**		21.5		11.5											
(9)	151689	AAEK	50	0047	A	1	13000	C	1	8.0	8.0	4.0	1	7025	AC3	120	AC3	015	060	47			
(10)	151689	AAEK	50	0047	A	1	13162	A	1	3.0	3.0	3.0	1	7025	AC3	210	AC3	015	060	47			
(11)								*		11.0		7.0											
(12)	151689	AAEK	54	0046	A	1	64485	D	1	.5	.5	.5	1	7025	AC3	220	AC3	014	111	41			
(13)								*				.5											
(14)	151689	AAEK	54	0046	A	2	64485	C	1	5.0	5.0	5.0		7025	AC3	220	AC3	014	110	41			
(15)								*		5.0		5.0											
(16)								**		16.5		12.5											
(17)	151690	AAEK	66	0135			96A10	C		1	2.5	2.5	2	7025	A98	820	A98	016	006	47			
(18)								*		1	2.5	2.5	1										
(19)								**		1	2.5	2.5	1										
(20)								***		6	38.0	26.5	1										

Figure 5-4.—Technical Directive Compliance Report (MDR-4-1).

Technical Directive Compliance Report (MDR-4-1)

The MDR-4-1 (fig. 5-4) gives a detailed list of technical directive compliance actions during the reporting period. This report aids the maintenance control officer in scheduling and maintaining positive control of technical directive compliance actions.

Intermediate Technical Directive Compliance Report (MDR-4-2)

The MDR-4-2 (fig. 5-4a) provides a detailed list of TDs that were complied with during the reporting period. The DSF generates the MDR-4-2 for intermediate maintenance activities (IMAs). This report aids IMA production control in scheduling TDs and maintaining positive control of TDs.

Maintenance Action By Bureau/Serial Number Report (MDR-5)

The MDR-5 (fig. 5-5) consolidates all maintenance actions by bureau number or serial number sequence. This report provides a history of maintenance actions and is intended for organizational- and intermediate-level managers, analysts, and MOs.

Maintenance Action By System And Component Report (MDR-6)

The MDR-6, shown in figure 5-6, consolidates all maintenance actions by component. This report provides the MO with a tool to identify troublesome systems or components within systems. A large number of maintenance actions or excessive man-hours that were expended for a system or component indicates a troublesome system or component.

Component Repair/Beyond Capability Of Maintenance (BCM) Report (MDR-7)

The MDR-7, shown in figure 5-7, provides a spread of Action Taken codes for maintenance actions taken by the intermediate level. This report also provides the MO and the maintenance material control officer (MMCO) with an overview of the entire production effort of the activity by work center and by Work Unit Code within type equipment. The report can be used to

determine the percentage of components that were received at an IMA that do not require any repair.

Failed Parts/Parts Required Report (MDR-8)

The MDR-8, figure 5-8, is prepared from data that is entered in the (H-Z) Failed/Required Material block of the MAF. Intended for the MO, MMCO, and work center supervisor, the report identifies parts with a high awaiting parts (AWP) time.

Repair Cycle Data Report (MDR-9)

The MDR-9, figure 5-9, is a monthly report and is a detailed list, by organization, that shows the number of days of turnaround time and the elements that compose the turnaround time for each repairable component that was processed through an IMA cycle. This report identifies components that appear repeatedly in the intermediate-level repair cycle.

Foreign Object Damage (FOD) Report (MDR-10)

The MDR-10, figure 5-10, measures the maintenance effort attributable to FOD. Components replaced, repaired, condemned, and so forth can be identified by data in this report. Indirectly, the report reflects housekeeping conditions (cleanliness of ramps, runways, hangar area, and so forth) or the maintenance methods of personnel (adherence to proper maintenance practices).

Corrosion Control/Treatment Report (MDR-11)

The MDR-11, figure 5-11, is designed for monitoring the Corrosion Control Program or for investigating the amount of corrective corrosion treatment necessary for aircraft. MAFs with a general work unit code of 040 (corrosion inspection) or MAFs with malfunction code 170 (corrosion treatment) are the two sources of information that identify these areas. By using this report, supervisors and managers determine whether a specific portion of an aircraft, identified by work unit code, needs a better corrosion control program.

INTERMEDIATE TECHNICAL DIRECTIVE COMPLIANCE REPORT

MDR-4-2
 ORC: P9Z

ITDC IDENT.....				S	IP	C	JCN	MHRS	EMT	M	L	SERIAL	OLD PART NUMBER	NEW PART NUMBER	WUC	ORG	WC	DATE	
	CD	BAS	R	A																PT
(1)	50	0125				00	ASBA	1	C	PL1009121	2.5	2	2720	14762-A-3A	14762-A-3B	61X1200	P9Z	610	7009	
(2)	50	0125				00	ASBA	1	C	PL1009122	1.7	2	17540	14762-A-3A	14762-A-3B	61X1200	P9Z	610	7009	
(3)	50	0125				00	ASBA	1	C	PL1009136	1.7	2	16	14762-A-3A	14762-A-3B	61X1200	P9Z	610	7009	
(4)	50	0125				00	ASBA	1	C	PL1009157	.2	2	755	14762-A-3A	14762-A-3B	61X1200	P9Z	610	7009	
(5)																				
(6)	50	0147	A			00	AHZA	1	C	PL2007210	.5	2	166	07-155625100	07-155625100A	6771500	P9Z	610	7008	
(7)	50	0147	A			00	AHZA	1	C	PL2007212	.3	2	1554	07-155625100	07-155625100A	6771500	P9Z	610	7008	
(8)																				
(9)																				
(10)																				
(11)																				

Figure 5-4a.—Intermediate Technical Directive Compliance Report (MDR-4-2).

MAINTENANCE ACTION BY BUREAU/SERIAL NUMBER REPORT

MDR-5

JCNORG: ATI

TEC	BUNO	TM	WUC	MFGR	POS	WD	AT	MAL	FID	ORG	WC	IPO	MHRSO	EMTO	IPI	MHRSI	EMTI	JCN	DATE	PART/TDC	TR		
(1)	APBD	161011	B	4214100		D	A	799		ATI	X20	1	3.5	3.5	1	4.0	2.0	AT1008127	7008		11		
(2)	APBD	161011	B	4214120	96906	A	C	127		A9C	X20	1	7.4	3.7	1	4.0	2.0	AT1009131	7010	MS34721-14	31		
(3)	APBD	161011	B	4214120	96906	R	R	615		ATI	X20	1	10.9	7.2	1	4.0	2.0	AT1009131	7009	MS34721-14	23		
(4)	SUBSYSTEM TOTAL																						
(5)	APBD	161011	B	42153		D	A	799		ATI	X20	1	5.2	2.6	1	12.2	5.0	AT1023110	7023		11		
(6)	APBD	161011	B	42153		D	C	615		ATI	X20	1	2.5	2.5	1	16.2	7.0	AT1027142	7028		12		
(7)	SUBSYSTEM TOTAL																						
(8)	APBD	161011	B	42172	47315	A	C	615		A9C	X20	1	1.0	1.0	1	12.2	5.0	AT1015123	7017		31		
(9)	APBD	161011	B	4217K		D	C	127		ATI	X10	1	3.0	1.5	1	16.2	7.0	AT1016124	7016		11		
(10)	APBD	161011	B	42172	47315	R	R	615		ATI	X20	1	4.0	2.5	1	16.2	7.0	AT1015123	7015		23		
(11)	SUBSYSTEM TOTAL																						
(12)	TEC TOTAL																						
(13)	BUNO TOTAL																						
(14)	WD	TOTAL																					
(15)	4																						
(16)	TEC TOTAL																						
(17)	ORG TOTAL																						
(18)	NO DEFECTS TOTAL																						
												33.3	INT TOTAL		0	INT PERCENT							.0

Figure 5-5.—Maintenance Action by Bureau/Serial Number Report (MDR-5).

COMPONENT REPAIR/BEYOND CAPABILITY OF MAINTENANCE REPORT

MDR-7

ORG: A9F

	ORG	JCNORG	WC	WUC	POS	TEC	MFGR	PART	123456789	BCM	ABCIKZ	RPR	OTH	TOT	MH	EMT
(1)	A9F	AT1	431	3251366		APBD	94585	TF3400-4				1		1	2	1
(2)				WUC/TEC/JCNORG TOTAL								1		1	2	1
(3)	A9F	AT1	431	325136C		APBD	54112	390897-2	1	1				1	4	2
(4)				WUC/TEC/JCNORG TOTAL					1	1				1	4	2
(5)	A9F	AT5	431	3251200		APBC	54331	4418-31				1		1	1	1
(6)	A9F	AT5	431	3251200		APBC	54331	4418-32				3		3	5	4
(7)	A9F	AT5	431	3251200		APBC	54331	4418-33A				1		1	1	1
(8)				WUC/TEC/JCNORG TOTAL								5		5	7	6
(9)	A9F	AT5	431	3251200		APBD	54331	4418-33A	1	2	1	3		5	14	10
(10)				WUC/TEC/JCNORG TOTAL					1	2	2	3		5	14	10
(11)				WC TOTAL					1	3	8	9		12	27	19
(12)				DIVISION TOTAL					1	3	8	9		12	27	19
(13)				ORGANIZATION TOTAL					1	3	8	9		12	27	19

Figure 5-7.—Component Repair/Beyond Capability Of Maintenance Report (MDR-7).

FAILED PARTS/PARTS REQUIRED REPORT

MDR-8

ORG: A9D

	ORG	WC	WUC	POS	TEC	Type Equipment Code	Type Maintenance	Action Taken	Malfunction	When Discovered	Bureau/Serial Number	Part Number	CAGE Code	Reference Symbol	Quantity	Job Control Number	Completion Date	Priority	Date Ordered	Requisition Number	Date Received	Failed Parts	Awaiting Parts Indicator	Transaction Code
							TM	AT	MAL	WD	BUNO	PART	MFGR	REFSYM	QTY	JCN	DATE	PRI	DATE	REQN	RECD	F	A	TR
(1)	A9D	650	7363100	AAEK	B	R	B	R	649	D	141687	3537A-0	82227	527	1	AC3007626	7008	03	7007	G973	7007	1	1	32
(2)	A9D	650	7363100	AAEF	B	R	B	R	561	H	151776	3537A-0	82227	527	1	AB3020622	7029	03	7021	G735	7029	1	1	32
(3)														PART TOTAL	2									
(4)	A9D	650	7363200	AAEK	B	R	B	R	450	D	151687	866542	49671	523	1	AC3004763	7008	03	7005	G974	7007	1	1	32
(5)	A9D	650	7363200	AAEK	G	R	G	R	450	M	151689	866542	49671	523	1	AC3010A17	7029	03	7010	G988	7028	1	1	32
(6)	A9D	650	7363200	AAEF	B	4	B	4	602	E	151778	866545	49671	523	1	AC3023844	7030	03	7029	G910	7029	1	1	32
(7)														PART TOTAL	3									
(8)	A9D	650	73X2P00	AAEK	B	R	B	R	958	D	151776	866554	29146	381	1	AC3006612	7029	03	7006	G975	7028	1	1	32
(9)	A9D	650	73X2P0073	AAEK	B	R	B	R	064	H	151778	866554	29146	381	1	AC3010819	7018	03	7011	G990	7011	1	1	32
(10)	A9D	650	X2P00	AAEF	B	R	B	R	450	D	151834	866554	29146	381	1	AC3019436	7028	03	7019	G907	7027	1	1	32
(11)	A9D	650	73X2P00	AAEF	Q	R	Q	R	602	N	151879	866554	29146	381	1	AB3022B20	7027	03	7022	G744	7026	1	1	32
(12)														PART TOTAL	4									
(13)	A9D	650	73X4C10	AAEK	B	R	B	R	450	D	151776	869993	72726	734	1	AC3019437	7028	03	7019	G908	7027	1	1	32
(14)	A9D	650	73X4C10	AAEF	B	R	B	R	561	D	151778	869993	72726	734	1	AB3022921	7027	03	7022	G745	7026	1	1	32
(15)														PART TOTAL	2									

Figure 5-8.—Failed Parts/Parts Required Report (MDR-8).

ORG: A9D WORK CENTER: 610

Part Number	Type Equipment Code	Component Serial Number	Job Control Number	Work Unit Code	Malfunction Code	Items Processed	Action Taken	Transaction Code	Elapsed Maintenance Time	Man-hours	Processing	Scheduling	Repair	Awaiting Parts	In Work	IMA TAT	Total Turnaround Time	Completion Date
PART	TEC	SER	JCN	WUC	MAL	IP	AT	TR	EMT	MHRS	PRO	SCH	REP	AWP	WORK	IMA	TOT	DATE
1267	AAEK	1063	AC3003022	7236400	127	1	C	31	8.4	16.8	3		1	1	1	1	4	7008
1267	AAEK	2276A	AC3003214	7236400	255	1	C	32	4.4	13.2	1		1	1	2	2	3	7008
1267	AAEK	4322	AC3004110	7236400	962	1	C	32	1.8	5.4		1	1	1	1	2	2	7009
TEC TOTAL						3			14.6	35.4	4	1	3	1	4	5	9	
TEC AVERAGE										1.3	.3	1.0	.3	1.3	1.7	1.7	3.0	
1267	AAEF	78	AC3003021	7236400	806	1	A	31	1.1	2.2			1	1	1	1	1	7007
1267	AAEF	965A	AC3004421	7236400	127	1	C	32	1.7	5.1			1	1	1	1	1	7012
TEC TOTAL						2			2.8	7.3			2	2	2	2	2	
TEC AVERAGE										.0	.0	.0	1.0	.0	1.0	1.0	1.0	
PART NUMBER TOTAL						5			17.4	42.7	4	1	5	1	6	7	11	
PART NUMBER AVERAGE										.8	.2	1.0	.2	1.2	1.4	1.4	2.2	
WORK CENTER TOTAL						5			17.4	42.7	4	1	5	1	6	7	11	
WORK CENTER AVERAGE										.8	.2	1.0	.2	1.2	1.4	1.4	2.2	
ORG TOTAL						3064			734.5	11466.4	3370	2451	4289	7660	11949	14400	17770	
ORG AVERAGE										1.1	.8	1.4	2.5	3.9	4.7	4.7	5.8	
TOTAL TIME IN DAYS																		
		0-3		4-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150
		RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM	RFI BCM
		1265	616	230	83	61	51	108	58	48	23	15	8	13	1	18	9	OVER 150

Figure 5-9.—Repair Cycle Data Report (MDR-9).

FORNIGN OBJECT DAMAGE REPORT

MDR-10

ORG: AC3

	WUC	Position	Type Equipment Code	Bureau/Serial Number	When Discovered	Type Maintenance	Action Taken	Malfunction	Fault Isolation Detection	Items Processed	Man-hours	CAGE Code	Part Number	Reference Symbol	Job Control Number	Action Organization	Work Center	Completion Date	Transaction Code
		POS	TEC	BUNO	WD	TM	AT	MAL	FID	IP	MHRS	MFGR	PART NUMBER	REFSYM	JCN	ORG	WC	DATE	TR
(1)	11421		AAEK	151687	E	B	R	301		1	4.5	26512	128H100555		AC3022622	AC3	120	7022	23
(2)	11421		AAEK	151687	E	B	C	301		1	12.0	26512	128H100555	215	AC3022622	A9D	540	7023	32
(3)							R	301				26512	128H41						
(4)	14814		AAEK	151688	E	B	C	301		1	2.5				AC3022629	AC3	120	7022	11
(5)	23500		AAEK	151689	J	B	C	301		1	5.0				AC3024024	AC3	110	7024	12
(6)							0	000				JHHA1	673498						
(7)	23500		AAEK	151689	C	B	R	301		1	16.0	JHHA1			AC3025123	AC3	110	7026	23
(8)	23500		AAEK	151689	C	B	C	301		1	122.0	JHHA1			AC3025123	A9D	410	7026	32
(9)							R	301				73481	135HA10						
(10)	2358100		AAEK	151690	J	B	R	301		1	2.0	77224	184A150		AC3025127	AC3	110	7026	25
(11)								000				JHHA1	673473 E0258						
(12)	2358100		AAEK	151690	J	B	C	301		1	10.0	77224	184A150		AC3025127	A9D	410	7026	32
(13)							R	301				77224	184A150-1						
(14)										* 8	174.0								
(15)									** 8		174.0								

Figure 5-10.—Foreign Object Damage (FOD) Report (MDR-10).

CORROSION CONTROL/TREATMENT REPORT

MDR-11

ORG: AC3

	WUC	POS	TEC	BUNO	WD	TM	AT	MAL	FID	IP	MHRS	EMT	ML	DATE	MFGR	PART NUMBER	ORG	WC	JCN	TR
(1)	1111C		AAEK	151692	F	B	Z	170		2	4.0	4.0	1	7122			AC3	X2A	AC3122636	11
(2)	1111C		AAEK	151692	J	D	Z	170		1	1.0	1.0	1	7122			AC3	X2A	AC3122011	11
(3)	1111C		AAEK	15692	M	G	Z	170		1	1.0	1.0	1	7122			AC3	X2C	AC3122A30	11
(4)									*	4	6.0	6.0								
(5)	11930		AAEK	151692	J	D	Z	170		1	3.5	3.5	1	7122			AC3	X20	AC3122012	11
(6)									*	1	3.5	3.5								
(7)	11221		AAEK	151692	F	B	Z	170		1	2.0	2.0	1	7122			AC3	X10	AC3122637	11
(8)	11221		AAEK	151692	R	B	Z	170		1	1.5	.9	1	7122			AC3	X10	AC3122009	11
(9)									*	2	3.5	2.9								
(10)	2951C		AAEK	151692	J	D	Z	170		1	3.0	1.5	1	7122			AC3	X10	AC3122665	11
(11)	2951C		AAEK	151692	J	D	Z	170		1	3.0	3.0	1	7122			AC3	X10	AC3122061	11
(12)									*	2	6.0	4.5								
(13)									**	9	19.0	16.9								
(14)									***	9	19.0	16.9								

Figure 5-11.—Corrosion Control/Treatment Report (MDR-11).

NO DEFECT REPORT

MDR-12

ORG: AC3

	WUC	POS	TEC	BUNO	WD	TM	AT	MAL	FID	IP	MHRS	EMT	ML	DATE	MFGR	PART NUMBER	SERIAL	WC	JCN	TR
(1)	11910		AAEK	151687	E	B	A	799		1	1.5	1.5	1	7022				X20	AC3022431	11
(2)	11A10		AAEK	151687	E	B	A	799		1	.5	.5	1	7022				X20	AC3022435	11
(3)	11A21		AAEK	151685	J	D	A	799		1	1.0	1.0	1	7022				X20	AC3022102	11
(4)									*	3	3.0	3.0								
(5)	29310		AAEK	151689	J	D	A	799		1	1.0	1.0	1	7022				X10	AC3022112	11
(6)	29620		AAEK	151687	B	B	A	799		1	.5	.5	1	7022				X10	AC3022361	11
(7)									*	2	1.5	1.5								
(8)									**	5	4.5	4.5								
(9)	1122110		AAEK	151686	O	B	S	800		1	3.0	1.5	1	7022				X30	AC3022023	11
(10)									*	1	3.0	1.5								
(11)									**	1	3.0	1.5								
(12)	12110		AAEK	151698	O	B	S	804		1	3.5	1.5	1	7022				X30	AC3022315	11
(13)									*	1	3.5	1.5								
(14)									**	1	3.5	1.5								
(15)	51114		AAEK	151686	O	B	T	814		1	1.0	1.0	1	7022	06275	A2165	193742	X20	AC3022019	11
(16)	51114		AAEK	151686	O	B	T	814		1	1.0	1.0	1	7022	82430	18744	BAH1990	X20	AC3022020	11
(17)									*	2	2.0	2.0								
(18)									**	2	2.0	2.0								
(19)									***	9	13.0	9.5								

Figure 5-12.—No Defect Report (MDR-12).

No Defect Report (MDR-12)

The MDR-12, shown in figure 5-12, shows the amount of time and effort that were expended on maintenance for which there is no malfunction. This report is used to determine man-hours that were expended in removing or installing items with no known malfunction or defect to carry out other maintenance.

When Malfunction Was Discovered Report (MDR-13)

The MDR-13, shown in figure 5-13, shows the action taken by category for each When Discovered code. This report is prepared from data that was submitted on the METER card and the MAF. The MO can use the MDR-13 to determine how many missions were aborted due to mechanical failures, what caused them, whether these malfunctions were discovered before flight or while in flight, and whether the malfunctions could have been eliminated by better inspections of the aircraft.

NALCOMIS PRODUCTION REPORTS

MDRs are prepared monthly by DSFs for aviation maintenance activities; however, maintenance managers (MOs, MMCOs, maintenance control officers, maintenance chiefs, and so forth) need maintenance and supply data to make decisions about the day-to-day maintenance effort. NALCOMIS fills this need. NALCOMIS provides a Reports Subsystem Menu from which maintenance managers can generate daily maintenance, material, and flight data reports. For a complete description and list of available NALCOMIS reports, refer to the *NALCOMIS OMA End User's Manual, section 10*. Below is a list of selected maintenance reports available to a maintenance activity through NALCOMIS:

- **Aircraft Daily Status Report**—provides data on each aircraft that is assigned to your activity
- **Aircraft/Equipment Workload Report**—lists outstanding MAFs on a specific aircraft or equipment
- **Scheduled Inspections Report**—lists scheduled aircraft inspections and inspections due dates
- **Inspections by Type Equipment Code (TEC)**—lists inspections that have been established for each type equipment code (TEC)

- **Aircraft Phase Inspection Report**—lists hours that remain until phase inspections are required for assigned aircraft
- **Aircraft Material Status Report**—lists the status of material status requisitions against aircraft that are assigned to your activity

- Q3. *What MDS reporting subsystem involves the most complex and widest range of data in the MDS?*
- Q4. *What maintenance data report is divided into three sections, contains data in Part I that has no errors, and is considered valid?*
- Q5. *What maintenance data report is a detailed list of technical directive compliance during a reporting period?*
- Q6. *What NALCOMIS report provides a listing of all outstanding MAFs for a specific aircraft or equipment?*

SUBSYSTEM CAPABILITY IMPACT REPORTING (SCIR)

LEARNING OBJECTIVES: Define Subsystem Capability Impact Reporting (SCIR). Identify terms and codes that are used in aircraft and equipment inventory reporting. Identify the purpose of the Equipment Master Roster (E-00). Identify the purpose and content of SCIR reports.

The supporting DSF produces SCIR reports from data, which is documented on the MAF, to provide information about aircraft and equipment inventory, subsystem performance, and specific aircraft or equipment mission capability. SCIR also tracks full mission capable (FMC), partial mission capable (PMC), and not mission capable (NMC) data for specific type and model aircraft or equipment. In addition, SCIR tracks certain training devices. Management above an aviation maintenance activity level use SCIR reports to oversee mission capability of the activity.

An aviation maintenance activity reports the degradation of equipment mission capability by recording an equipment operational capability (EOC) code in the Repair Cycle section and in the Maintenance/Supply Record section of a MAF. An EOC code is a three-position code that documents when a discrepancy in a specific system or subsystem impacts the mission capability of an equipment. The maintenance activity documents the first position of the

WHEN MALFUNCTION WAS DISCOVERED REPORT

MDR-13
ORG: AC3

	TEC	WD	WUC	POS	AT	MAL	FID	ICNORG	ACTORG	IP	MHRS	EMT
(1)	AAEK	B	76931		R	561		AC3	AC3	2	1.0	1.0
(2)	AAEK	B	76931		C	127		AC3	AC3	5	5.0	5.0
(3)										**	6.0	6.0
(4)	A	C	F	J	K	R	S	T		7	6.0	6.0
(5)		2		L	N	2	Y	Z		***		
(6)	AAEK	D	29313		C	167		AC3	AC3	1	4.0	2.0
(7)	AAEK	D	29313		R	020		AC3	AC3	1	6.0	3.0
(8)										**	10.0	5.0
(9)	AAEK	D	41171		R	167		AC3	AC3	2	6.0	3.0
(10)										**	6.0	3.0
(11)	AAEK	D	46634		B	105		AC3	AC3	3	2.5	2.5
(12)	AAEK	D	46634		C	070		AC3	AC3	1	.5	.5
(13)										**	3.0	3.0
(14)	AAEK	D	72361		R	383		AC3	AC3	4	3.0	3.0
(15)										**	1.5	1.5
(16)	AAEK	D	73364		R	383		AC3	AC3	2	1.5	1.5
(17)										**	1.5	1.5
(18)	A	C	F	J	K	R	S	T		2	1.5	1.5
(19)		3	2	L	N	6	Y	Z		***	22.0	14.0
(20)	AAEK	E	11921		B	381		AC3	AC3	3	12.0	5.0
(21)	AAEK	E	11921		C	381		AC3	AC3	2	10.0	10.0
(22)	AAEK	E	11921		R	381		AC3	AC3	1	6.0	3.0
(23)										**	28.0	18.0
(24)	A	C	F	J	K	R	S	T		6	28.0	18.0
(25)		3	2	L	N	1	Y	Z		***	56.0	38.0
(26)										****		

Figure 5-13.—When Malfunction Was Discovered Report (MDR-13).

EOC on the MAF. This first position is derived from the mission essential subsystem matrices (MESMs) that are published as an enclosure to *Mission Essential Subsystem Matrices (MESMs)*, OPNAVINST 5442.4. The second and third positions of the EOC codes are computer generated from the first two positions of the Work Unit Code (WUC) on the MAF.

INVENTORY AND READINESS REPORTING

Effective management of the maintenance effort requires the following information:

- The degree of aircraft or equipment mission impairment
- The length of time the aircraft or equipment was impaired
- The system or subsystem that caused the mission impairment
- The maintenance and supply impact on the aircraft capability

The SCIR system is used to monitor the mission capability of selected end items. Navy and Marine Corps aircraft that are listed in OPNAVINST 5442.4 require SCIR documentation. The work center that performs the corrective maintenance documents SCIR on the MAF concurrently with the maintenance action that caused the reduction of the equipment's mission capability. SCIR is also used by maintenance or production control to report inventory data on both aircraft and items of SE. Both inventory and readiness data is documented on the MAF.

TERMS AND CODES

To help you understand the relationship between SCIR and inventory and readiness reporting, an explanation of the terms and codes that are commonly used in the SCIR system is given in the following paragraphs.

The *controlling custodian* manages and distributes fleet assets. A controlling custodian exercises administrative control over the assignment, employment, and logistic support of aircraft. The Chief of Naval Operations (CNO) assigns the area of responsibility for each controlling custodian. Examples of controlling custodians include Commander, Naval Air Force, U.S. Atlantic (COMNAVAIRLANT) and

Commander, Naval Air Force, U.S. Pacific (COMNAVAIRPAC).

The *reporting custodian* is the activity that has primary custody of an aircraft. The reporting custodian is responsible for maintenance and readiness reporting as well as day-to-day maintenance of aircraft. Examples of reporting custodians include VF-101, VS-22, and VFA 136.

Inventory codes define the reporting requirements and current status of an aircraft or equipment at the time of inventory, for example, Gain, Loss, or change in Material Condition Reporting Status.

The term *IN Material Condition Reporting Status (IN MCRS) (inventory code A)* means that an aircraft is in the inventory system and that the aircraft requires SCIR documentation. IN MCRS is the normal status of aircraft.

The term *OUT Material Condition Reporting Status (OUT MCRS) (inventory codes 1 through 4)* means that an aircraft is in the inventory reporting system but does not require SCIR documentation. An aircraft is placed OUT MCRS for depot-level maintenance. When an aircraft is placed OUT of MCRS, EOC code A applies to all existing SCIR discrepancies.

Transaction codes describe inventory transactions. Transaction codes for inventory transactions are listed below.

- An *inventory gain* (transaction code 00) occurs when a reporting custodian receives an aircraft into its inventory. Aircraft are gained in any inventory status code category.
- An *inventory loss* (transaction code 03) occurs when a reporting custodian transfers an aircraft or strikes it from naval service. An inventory loss is documented only if the aircraft has been previously gained and is in the inventory system. Aircraft may be lost in any inventory status code category.
- A *change in MCRS (OUT and IN)* (transaction code 02) does not involve a change of reporting custodian. Aircraft are only IN MCRS if the aircraft is in OPNAV XRAY status code A. Aircraft in all other OPNAV XRAY status codes are OUT MCRS.

NOTE: Each instance of aircraft or equipment gain, loss, or change in MCRS requires an update of the Equipment Master Roster (E-00).

A reporting custodian must submit an aircraft inventory MAF for each reportable incident of inventory change. An aircraft inventory is required whenever an aircraft undergoes one of the following actions:

- Is gained (is received into the unit that reports custody)
- Is lost from unit reporting custody (transfer or strike)
- Changes MCRS

The submission of SCIR inventory data is in addition to the OPNAV XRAY report that must be submitted in accordance with the latest edition of OPNAVINST 5442.2.

NOTE: OPNAV XRAY data is used to maintain a perpetual inventory of aircraft, custody, status, and other logistical information about naval aircraft.

For documentation procedures and examples of “GAIN,” “LOSS,” or changes in “MCRS” MAFs, refer to the *NAMP* and the *NALCOMIS OMA End User’s Manual*.

SUPPORT EQUIPMENT INVENTORY REPORTING PROCEDURES

The support equipment (SE) inventory-reporting system provides the SE-reporting custodian with a list of major assets on hand. Except for selected training devices that require inventory and SCIR, SE is inventoried by using an inventory transaction code of 00, (inventoried—no mission capability data collected).

SE that is listed in OPNAVINST 5442.4 requires SCIR. Terms and codes that are used in SE inventory reporting under SCIR and aircraft inventory reporting under SCIR are similar. Reporting requirements in the Aircraft Maintenance Material Readiness Listing (AMMRL) program still apply as do Naval Air Systems Command (NAVAIR)-issued reporting requirements in *Naval Air Systems Command Aircraft Maintenance Material Readiness List Program*, NAVAIRINST 13650.1. For detailed documentation procedures for SE inventory-reporting procedures, refer to the *NAMP* and the *NALCOMIS OMA End User’s Manual*.

EQUIPMENT MASTER ROSTER (E-00)

DSF prepares the E-00 (figure 5-14) by using data from MAFs that reflect the inventory of aircraft or equipment as of 0001 on the first day of the month. The E-00 reflects the aircraft or SE that is gained into the inventory during the previous month. The E-00 also reflects the current number of hours an assigned aircraft was IN or OUT MCRS. Since the E-00 indicates the inventory (aircraft and SE that are assigned to an activity) at the beginning of each month, equipment lost from the inventory during the previous month is excluded. The report is sorted by organizational code, permanent unit code (PUC), TEC, serial number, and METER (SE only) and should be used to verify data that is contained in the master files of the local DSF. Those activities that use NALCOMIS should refer to the *NALCOMIS OMA End User’s Manual* for procedures to establish and maintain equipment master rosters.

If an E-00 contains errors, the reporting activity should make corrections by submitting MAFs that use an inventory transaction code (TRCODE) of 00, 02, or 03. For correction of the PUC, corrections are made on the MAF daily audit report by using audit report correction procedures. For corrections to the action organization code, TRCODE, TEC, bureau or serial number, time, and date, a NEW inventory transaction MAF must be submitted and the incorrect transaction deleted.

Maintenance control should update the E-00 daily. Whenever an inventory change takes place, maintenance control should annotate the E-00 with the TRCODE, date, and time of the change. Remember, only those transactions with a TRCODE of 00, 02, and 03 should be entered on the E-00. Inventory gains should be annotated as a new line entry as shown in figure 5-14. Inventory loss transactions and inventory code changes should also be annotated.

SCIR REPORTS

SCIR reports provide data to determine mission capability and system or subsystem reliability. SCIR reports serve as a management tool at all levels of management. The following paragraphs briefly discuss SCIR reports that are available from the DSF.

E-00		EQUIPMENT MASTER ROSTER				JUN 97	
ORG	PUC	TEC	SERIAL	METER	INVENTORY CODE		
					0A12345678		
AF1	000916	AFPB	150950		720		
AF1	000916	AFPB	150951	(Sample LOSS)	301 720	TRF'D TO VF-86 03, 13 JUN, 1300	
AF1	000916	AFPB	150952		720		
AF1	000916	AFPB	150953	(Sample Inventory Code Change)	320 720	RETURN FM SPEC RWK 02, 14 JUN, 0800	
AF1	000916	AFPB	150955		720		
<i>AF1</i>	<i>000916</i>	<i>AFPB</i>	<i>158456</i>	(Sample GAIN) *	561 2880	REC'D FM VA-34, 00, 7 JUN, 1500 720	

NOTE

Enter the whole hours remaining in the reporting period when reporting a GAIN (TRCODE 00) or when annotating the new Inventory Code on an Inventory Code Change (TRCODE 02). Enter the whole hours elapsed in the reporting period when reporting a LOSS (TRCODE 03) or when annotating the old Inventory Code on an Inventory Code Change (TRCODE 02).

AZf0514

Figure 5-14.—Equipment Master Roster (E-00) (Aircraft).

Monthly Equipment Discrepancy and Utilization Report (SCIR-3)

The SCIR-3, figure 5-15, shows by bureau or serial number the number of discrepancy hours that an equipment was limited from performing its assigned mission or function for a reporting period. The report is a tool for the MO to determine the impact of maintenance or supply on the mission capability of the equipment. Equipment in and out of service hours, flight hours, and number of flights are also shown. The SCIR-3 is one of the sources of information for the record type (RECTYP) 79 report.

Monthly Equipment Capability Report (SCIR-4)

The SCIR-4 (fig. 5-16) reflects percent of mission capability of equipment by bureau or serial number and overall totals for that type of equipment for the reporting period. The report is prepared from MAFs that have valid equipment operational capability (EOC) codes that are documented in the in Repair Cycle sections or Maintenance/Supply Record sections.

Monthly Equipment Mission Capability Summary Report (SCIR-5-1)

The SCIR-5-1, figure 5-17, displays SCIR hours by mission category and awaiting maintenance (AWM) hours by reason codes, summarized for a given EOC code and associated WUC during a reporting period. This report is prepared from MAFs that have valid EOC codes that are documented in the in Repair Cycle sections or Maintenance/Supply Record sections.

Monthly Equipment Mission Capability Bureau/Serial Summary Report (SCIR-5-2)

The SCIR-5-2, shown in figure 5-18, shows SCIR hours by mission category and AWM hours by reason codes, summarized by a given EOC code and associated WUC by bureau or serial number. This report is prepared from MAFs that have valid EOC codes that are documented in the in Repair Cycle sections or Maintenance/Supply Record sections.

SCIR - 3	MONTHLY EQUIPMENT DISCREPANCY AND UTILIZATION REPORT	MAY 97																							
ORG: AD7	PUC: 008077	TOTAL																							
BUNO	TEC	SCH	UNS	NMC	SUP	PMNT	PMC	SUP	MNT	FMC	SUP	EIS	EOS	IND	INV	MTR	UB	EQUIP	UTL	FLT	HRS	NR	FLTS	SHPOP	TOTAL
(1)	164211	AMAF	117	174	9	18	18	18	18	A	744	744	744	744	A	A	A	A	A	A	6	4	4	4	1407
(2)	164233	AMAF	37	93	81	18	18	18	18	A	744	744	744	744	A	A	A	A	A	A	35	15	15	9	682
(3)	164242	AMAF		168	27	148	148	148	148	A	744	744	744	744	A	A	A	A	A	A	12	5	5	2	2877
(4)	164243	AMAF	2	632	10	10	10	10	10	A	744	744	744	744	A	A	A	A	A	A	8	4	4	4	1747
(5)	164244	AMAF	26	45	144	294	294	294	294	A	744	744	744	744	A	A	A	A	A	A	63	21	21	14	805
(6)	165002	AMAF	2	142	21	21	21	21	21	A	744	744	744	744	A	A	A	A	A	A	29	11	11	4	245
(7)	165110	AMAF	28	92	209	41	41	41	41	A	744	744	744	744	A	A	A	A	A	A	153	60	60	29	8818
(8)		**	212	1346	491	519	519	519	519	5208	5208	5208	5208	5208	153	60	60	60	60	60	153	60	60	76	8818

AZ0515

Figure 5-15.—Monthly Equipment Discrepancy and Utilization Report (SCIR-3).

Monthly Mission And Maintenance Data Detail By Bureau/Serial Report (SCIR-5-3)

The SCIR-5-3, figure 5-19, shows mission capability and maintenance data for each MAF that is submitted for a given EOC code and associated WUC by bureau or serial number within TEC and JCN organization.

- Q7. *What subsystem provides information about aircraft and equipment inventory, subsystem performance, and aircraft and equipment mission capability?*
- Q8. *What is indicated by an inventory status code?*
- Q9. *Submission of an aircraft inventory MAF is required whenever an aircraft is gained or lost from a reporting custodian's inventory. On what other occasion is an aircraft inventory MAF required?*
- Q10. *What MDR reflects the aircraft or equipment that was gained into an activity inventory during the previous period?*
- Q11. *What work center updates the Equipment Master Roster (E-00)?*
- Q12. *What SCIR report lists the total number of hours that equipment was limited from performing its intended mission during a reporting period?*

MAINTENANCE CONTROL AND PRODUCTION CONTROL GENERAL OPERATING PROCEDURES

LEARNING OBJECTIVES: Define the purpose and contents of monthly maintenance summaries. Define the purpose and contents of OMA and IMA monthly maintenance plans. Identify the types of work requests. Identify procedures for submitting monthly flight and summary data (RECTYP 79). Identify procedures for submitting the Aircraft Material Readiness Report (AMRR). Define the purpose of the Navy Oil Analysis Program (NOAP). Define minimum requirements for conducting a functional check flight (FCF). Identify and discuss the content of the aircraft discrepancy book (ADB). Identify the contents of support equipment (SE) records. Identify various historical record retention requirements.

As the central offices at aviation maintenance activities, maintenance control (in OMAs) and production control (in IMAs) use records such as the

monthly maintenance summaries, monthly maintenance plans, work requests, the Aircraft Material Readiness Report, aircraft discrepancy books, support equipment records and historical files. Maintenance control and production control also deal with management tools such as the Technical Directive Status Accounting system, and the Navy Oil Analysis Program. Key persons in maintenance control and production control are the systems administrator and analysts in OMAs and the maintenance database administrator and analysts in IMAs.

SYSTEMS ADMINISTRATOR/ANALYST AND MAINTENANCE DATABASE ADMINISTRATOR/ANALYST

The systems administrator and analyst (SA/A) in OMAs and the maintenance database administrator and analyst (MDBA/A) in IMAs manage all phases of the MDS and are the contact points between aviation activities and the local DSF. One of the SA/A's and MDBA/A's primary responsibilities is to provide aviation maintenance managers with graphic and narrative data about the unit's aircraft and equipment readiness, material condition, utilization, and failure trends. In some activities, the analyst presents this data orally to a group of maintenance managers. In others, the analyst's presentation is through the monthly maintenance summary.

MONTHLY MAINTENANCE SUMMARIES

Maintenance and flight data that is collected and reported through the MDS in its raw form is of little use to anyone who is untrained in MDS analysis procedures. To obtain a more efficient use of maintenance, material, and flight data, information must be arranged to permit easy interpretation by even the most inexperienced maintenance technician. The process of data selection, extraction, translation, examination, and presentation is called data analysis. Data analysis is performed by the activity's maintenance data analyst.

The monthly maintenance summary combines data from a combination of MDS reports to highlight specific problem areas where overall maintenance management can be improved. Through analysis, adverse trends may be detected and corrected before they reach crisis levels. The monthly maintenance summary uses displays such as charts, graphs, and tables to present the results of analyzed data. The *NAMP* contains procedures for constructing some of the graphs, charts, and tables that are used in monthly maintenance summaries.

The content and format of the monthly maintenance summary should be based on what maintenance managers need to know. These requirements should include some form of each of the following areas:

- Repair of systems and components that are high man-hour consumers
- Components and systems that have high failure rates
- Average man-hours per flight hour, per flight, or per departure
- Efficiency of the maintenance effort

The following additional areas, at the discretion of preparing activities, may be included in the monthly maintenance summary:

- Cannibalized components
- Malfunctions of components causing aborts (flight cancellations)
- Man-hours that were expended on components without malfunctions
- Shop repair capability
- Average turnaround time per component
- Activity mission capability

These are only a few of the many areas that might be part of your activity's monthly maintenance summary. The MO may prescribe additional requirements depending on what he or she needs to know.

MONTHLY MAINTENANCE PLANS

The monthly maintenance plan (MMP) provides for scheduled control of the predictable maintenance workload. This predictable maintenance workload includes inspections, transfer and receipt of aircraft, and incorporation of technical directives. By scheduling the predictable maintenance, maintenance managers can determine the capability for unscheduled work. Additionally, maintenance managers can determine requirements for SE, material, manpower, and other factors that affect the maintenance operation in advance of actual need. The MMCO prepares the monthly maintenance plan; however, the format and detailed arrangement of the MMP are the prerogative of the MO.

Organizational Maintenance Level MMP

The MMCO should ensure that a monthly planning meeting is held each month to put the finishing touches on the MMP. Two meetings should be held. The first meeting is held within the maintenance department. All maintenance supervisors attend this meeting. The purpose of the first meeting is to present the proposed plan and to discuss problems, support, and other factors that are involved in the overall maintenance effort. The second meeting is held with the supporting IMA to discuss the quality and types of support that are required as well as the schedule of components due for check and test. The organizational-level MMP should contain, as a minimum, the following general requirements:

- Projected known operational commitments, which includes number of flights, flight hours, and aircraft use (This information may be obtained from the operations department.)
- Dates of scheduled inspections
- Schedule of preinspection meetings
- Dates of scheduled receipt or transfer of aircraft and type of work to be accomplished on these aircraft
- Precision Measuring Equipment (PME) calibration requirements
- Schedule of technical training
- Forced removal items (high time and so forth)
- Technical directive compliance requirements
- Current list of quality assurance (QA) personnel, quality assurance representatives (QARs), collateral duty quality assurance representatives (CDQARs), collateral duty inspectors (CDIs)
- List of personnel who are scheduled for ejection seat safety checkout
- Dates of scheduled SE inspections
- Scheduled nondestructive inspection (NDI) requirements
- Schedule of currently assigned plane captains
- A list of QA-audited programs and program managers

The MMP should be prepared and distributed by the 25th day of the month prior to the month to which it applies. For example, the MMP for April should be distributed by the 25th of March. The MMP should be distributed to maintenance supervisors within the activity and to the supporting IMA and the station/ship supply officer.

Although the MMCO has the responsibility for the preparation of the MMP, AZs who are assigned to maintenance control or maintenance administration usually prepare a rough draft of the plan for the MMCO's approval. Production work centers provide some input for the MMP, however other information, such as scheduled inspection due dates, may be extracted directly from NALCOMIS. After the MMP is completed, the finished product is submitted to the MO for signature.

Intermediate Maintenance Activity (IMA) Monthly Maintenance Plan

The MMP is published by an IMA for use by its production divisions and activities that it supports. The IMA officer holds a monthly meeting. This meeting provides the planning and coordination to improve the overall maintenance program. Representatives of the maintenance and supply departments of supported activities attend this meeting.

The organizational maintenance representatives who attend this meeting discuss the quantity and types of support required. The discussion also includes the contents of organizational maintenance activity (OMA) monthly maintenance plans. Squadron representatives should discuss all factors that affect the anticipated IMA workload. This meeting is a valuable tool in planning the monthly maintenance schedule. The following are minimum information that should be included in the IMA monthly maintenance plan:

- A projected schedule of items to be inducted for check and test from supported squadrons and the supply activity.
- Anticipated changes in the operational commitments of supported activities.
- A schedule of technical training.
- A schedule of maintenance requirements for shop-installed SE.
- Other known or anticipated factors that affect the production effort of the IMA.

- All known technical directives incorporation requirements.
- A current list of QARs, CDQARs, and CDIs.
- Forced removal (high-time) components.
- Weapons department inputs. These inputs should include the following: a projected schedule of armament weapons support equipment (AWSE) inspection, items that require test and check, anticipated receipts or transfers, all known weapons support equipment (WSE) TD incorporation requirements, and identification of known or anticipated AWSE end items or components that will be returned to the IMA for maintenance beyond the capability of the weapons department.

The IMA MMP should be completed and distributed not later than the last day of the month prior to the month to which it applies. For example, an IMA MMP for April should be distributed not later than the 31st day of March.

WORK REQUESTS

Frequently, OMAs and IMAs request the help of higher levels of maintenance to complete work that is beyond their capability of maintenance due either to the lack of facilities, expertise, or authorization. Refer to the *NALCOMIS End User's Manual* and the *NAMP* for detailed documentation procedures for work requests. A brief discussion of each type of work request follows.

MAF Work Request (OPNAV 4790/60)

The maintenance action form (MAF) work request is used by a supported maintenance or supply activity to request work or assistance from a supporting IMA for work that is beyond the requesting maintenance or supply activity's capability. The MAF work request, shown in figure 5-20, is used for, but not limited to, the following requests:

- To request check, test, and service of items that are removed from an aircraft, equipment, or SE for scheduled maintenance when the requested work is beyond the capability of the requesting activity

NOTE: Work requests for items that are removed for check, test, service, and local manufacture or fabrication must be approved and signed by the requesting activity's maintenance control supervisor

and the supporting activity's production control supervisor.

- To induct items not part of the aircraft or SE that require check, test, and service, for example, pilot's personal equipment, oxygen masks, life preservers, and parachutes
- To induct components from supply for check, test, and service
- To induct components from supply for buildup, for example, engine quick engine change kit (QECK) or tire and wheel assembly
- To induct components and items that do not have a WUC (or not identifiable to a specific type of equipment) for check, test, and service actions or for local manufacture or fabrication, for example, local manufacture of hydraulic lines (type MAF code WR)
- To request nondestructive inspections (NDI), either on-site or at the IMA, as required by supported maintenance activity, when a TD is not involved
- To induct items for ready-for-issue (RFI) certification prior to installation in an aircraft that was returned from standard depot level maintenance (SDLM)

Work Request Customer Service (OPNAV 4790/36A)

IMAs (and supply departments) use the Work Request Customer Service form (fig. 5-21) to request customer service support from depot-level maintenance activities. Support is limited to services beyond the capability of the requesting IMA. Heat treatment, plating, magnetic particle inspection, and machine shop services are examples of such depot-level services.

Standard Depot-Level Maintenance (SDLM) Special Work Request (OPNAV 4790/65)

One month before the scheduled induction date of an aircraft for SDLM, a SDLM Work Request Form (figs. 5-22 and 5-23) should be submitted to the designated rework activity. One copy of the form is forwarded to the cognizant functional wing, one copy to the aircraft controlling custodian (ACC), and one copy to Commander, Naval Air Systems Command (COMNAVAIRSYSCOM). Look at figures 5-22 and 5-23. Notice that blocks A through L and O through R

are self-explanatory. The reporting activity completes these blocks. The rework activity completes blocks M and N.

Special rework items are those items that are normally beyond the capability of the operating activity. The following are examples of such items:

- Incorporation of certain changes or modifications
- Correction of continuing or recurring discrepancies
- Special painting
- Tests that require special equipment.

Special rework items requested in Block O are listed in order of priority. Refer to the *NAMP* for detailed procedures to complete the SDLM Special Work Request.

Q13. The content of monthly maintenance summaries should be based on what type of information?

Q14. What document provides a scheduled control of the predictable workload for an aviation maintenance activity?

Q15. In aviation OMAs, when is the MMP due?

Q16. What type of work request form is used by a supported aviation activity to request work from a supporting aviation IMA for work that is beyond the capability of the requesting activity?

Q17. What type of work request form is used by an IMA or supply department to request work from a depot-level maintenance facility?

AIRCRAFT FLIGHT AND SUMMARY REPORTING PROCEDURES

As an AZ, one of your duties as a maintenance controller will be preparation of the Monthly Report of Aircraft Summary Data (RECTYP 79 report). The RECTYP 79 report (fig. 5-24) provides the aircraft controlling custodian (ACC) with a summarization of statistical information about an aircraft's capability to perform the missions for which it was intended. Although the actual RECTYP 79 report may be prepared by a more senior AZ, you may provide assistance or, in case of the senior AZ's absence, prepare the entire report. Below is a list of terms that you should become familiar with before preparing an aircraft flight summary report.

N2R22502

MCN

SWP4826

VIDS/MAF OPNAV 4790/60 (REV 2-82)

ENTRIES REQUIRED SIGNATURE

NONE LOGS REC

ACCUMULATED WORK HOURS		MAN		ACCUMULATED AWM HOURS	
NAME/SHIFT	TOOLBOX/INT	DATE	HOURS	DATE	TIME REASON HOURS

LOCAL USE

REFERENCE

FAILED / REQUIRED MATERIAL

INDEX	F/P	AWP	A/T	MAL	REF	SYMBOL	QTY	PROJ	PRI	DATE ORD	REQ NO	DATE REC
-------	-----	-----	-----	-----	-----	--------	-----	------	-----	----------	--------	----------

FSCM PART NUMBER

FSCM PART NUMBER

FSCM PART NUMBER

WORK ACT	MAL		TECHNICAL DIRECTIVE ID													
UNIT CD	ORG	TRANS	M/L	A/T	CODE	I/P	HOURS	EMT	INT	CODE	BASIC	NO	RV	AM	PART	KIT

TYPE	BU/SER	W/D		T/M	POSIT	FID	SFTY/EI	METER	SE	FSCM	TECH	INV	CD	PERM	CD
------	--------	-----	--	-----	-------	-----	---------	-------	----	------	------	-----	----	------	----

REPAIR CYCLE			REMOVED/OLD ITEM				INSTALLED/NEW ITEM			
RECD	DATE	TIME EOC	FSCM	SERIAL NUMBER			FSCM	SERIAL NUMBER		

IN WORK			12499	0						
---------	--	--	-------	---	--	--	--	--	--	--

COMP	AWAITING MAINTENANCE HRS		PART NUMBER			DATE	REMOVED			PART NUMBER		
------	--------------------------	--	-------------	--	--	------	---------	--	--	-------------	--	--

			4123161-A			96190						
--	--	--	-----------	--	--	-------	--	--	--	--	--	--

MAINTENANCE/SUPPLY REC	TIME/CYCLES		A2630			TIME/CYCLES		TIME/CYCLES		TIME/CYCLES	
------------------------	-------------	--	-------	--	--	-------------	--	-------------	--	-------------	--

STATUS	DATE	TIME	EOC	TIME/CYCLES				TIME/CYCLES			
--------	------	------	-----	-------------	--	--	--	-------------	--	--	--

DISCREPANCY MANUFACTURE HYD LINE AS PER PILOT/INITIATOR
 SAMPLE. POC AK1 WILSON, EXT 9-7457 AZ3 SMITH
 (SQDN DDSN 6190G352)
 CORRECTIVE ACTION

CORRECTED BY	INSPECTED BY	SUPERVISOR	MAINT CONTROL	CF	QA	REQ	REQ
--------------	--------------	------------	---------------	----	----	-----	-----

JOB CONTROL NUMBER	WORK	INSPT	SYSTEM/REASON		MCN				
ORG DAY SER SUF	CENTER	STATUS	JCN	PRI	TURN-IN	DDSN	HYD LINE	RFI	BCM

D 8 8 1 9 0 4 5 1

SWP4826

AZ10520

Figure 5-20.—MAF Work Request, OPNAV 4790/60.

WORK REQUEST CUSTOMER SERVICE
OPNAV 4790/36A (REV. 10-74) S/N 0107-LF-047-9180

PART I: TO BE COMPLETED BY IMA (INTERMEDIATE MAINTENANCE ACTIVITY)

1. DATE		2. JCN		3. ISSUE DOCUMENT NUMBER	
4. PART NUMBER		5. PART SERIAL NUMBER		6. MANUFACTURE CODE	
7. NOMENCLATURE					
8. NATIONAL STOCK NUMBER		9. QUANTITY		10. TYPE AIRCRAFT/EQUIPMENT	
				11. BU/SER NUMBER	
12. CATEGORY <i>(Amplify on back of form)</i>					
<input type="checkbox"/> NORS		<input type="checkbox"/> NFE		<input type="checkbox"/> WORK STOPPAGE	
				<input type="checkbox"/> OTHER	

13. WORK REQUESTED: JUSTIFICATION FOR WORK REQUESTED. *(Attach amplifying instructions if required.)*

14. CERTIFICATION: I CERTIFY THAT THIS WORK IS BEYOND THE CAPABILITY OF IMA.
 SIGNATURE _____ DATE _____

15. FOR FURTHER INFORMATION CONTACT- <i>(Activity and telephone number)</i>		16. REQUIRED COMPLETION DATE		AUTHORIZED BY	

PART II: TO BE COMPLETED BY SSC (SUPPLY SUPPORT CENTER)

18. LOCAL AREA AVAILABILITY CHECKED SUPPLY AVAILABILITY CHECKED REQUIREMENT SATISFIED FROM ABOVE SOURCES REQUIREMENT FORWARDED TO NARF FOR ACTION

SIGNATURE _____ DATE _____

19. CERTIFICATION/APPROVAL: I CERTIFY THAT THIS REQUIREMENT CANNOT BE SATISFIED FROM OTHER SOURCES
 SIGNATURE *(Supervisor)* _____ DATE _____

PART III: TO BE COMPLETED BY NARF (NAVAL AIR REWORK FACILITY)

20. RECEIVED BY		20a. DATE		20b. PCN/WORK ORDER		20c. PRIORITY		20d. DATE WORK STARTED	

21. ACTION TAKEN

22a. COMPLETED BY		22b. DATE		22c. INSPECTED BY		22d. SUPERVISOR		22e. MAN-HOURS		22f. EMT	

23. SUPPORTED ACTIVITY NOTIFIED THAT WORK HAS BEEN COMPLETED BY PERSON NOTIFIED _____ DATE _____ TIME _____ CHARGE TO FAN _____

24. DISPOSITION

WORK COMPLETED F/J UNIT PROVIDED SUPPORTED ACTIVITY NOTIFIED TO ORDER FROM SUPPLY *(Explain in Remarks)*

25. RECEIVED FROM SUPPORTING ACTIVITY: BY _____ DATE _____ TIME _____

26. REMARKS:

27. <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED		27a. REASON <i>(if work disapproved)</i>		27b. SIGNATURE <i>(Supporting Activity)</i>	

AZf0521

Figure 5-21.—Work Request Customer Service, OPNAV 4790/36A.

STANDARD DEPOT LEVEL MAINTENANCE SPECIAL WORK REQUEST

A. REPORTING CUSTODIAN		B. AIRCRAFT MODEL		C. BUREAU NUMBER	
D. SCHEDULED INDUCTION DATE	E. PERIOD	F. EXTENSION		G. TIME SINCE ACCEPTANCE MONTHS_____ HOURS_____	
H. TIME SINCE SDLM MONTHS_____ HOURS_____		I. TOTAL CATAPULTS	J. CATAPULTS THIS PERIOD		K. MONTHS DEPLOYED THIS PERIOD
L. ENGINE DATA					
ENGINE POSITION	MODEL	SERIAL NUMBER	HOURS SINCE NEW	HOURS SINCE OVERHAUL	
M. TECHNICAL DIRECTIVES INCORPORATED (LIST)					
N. TECHNICAL DIRECTIVES NOT INCORPORATED					
DIRECTIVE	REASON	DIRECTIVE	REASON		

OPNAV 4790/65 (REV. 4-87) S/N 0107-LF-047-9336

Copy to: **COGNIZANT WING
TYPE COMMANDER
NADOC
AZ10522**

Figure 5-22.—SDLM Special Work Request (front).

O. SPECIAL WORK ITEMS		
ITEM NUMBER	DISCREPANCY	REMARKS
P. SIGNATURE (REPORTING OFFICER)	Q. TELEPHONE AUTOVON _____ COMMERCIAL _____	R. DATE (DAY/MONTH/YEAR)

Figure 5-23.—SDLM Special Work Request (back).

**FROM SEACONRON TWO THREE
 TO COMNAVAIRLANT NORFOLK VA
 INFO COMSEACONWING ONE JACKSONVILLE FL
 UNCLAS//NO4790//
 MSGID/GENADMIN/-//
 SUBJ/MONTHLY AIRCRAFT SUMMARY DATA REPORT//
 REF/A/DOC/OPNAV/01JUN95//
 AMPN/OPNAVINST 4790.2G//
 POC/AZ1 M. CHRISTMAS/DSN 922-1593//
 RMKS/1. VS-23 AN9 000023 JUL 97//**

2.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S
156614	ASBE	032	120	029	019	005	010	002	744	000	A	000	000	000	213	002134	PJC
158244	ASBE	029	057	101	032	008	016	004	744	000	A	000	000	000	120	000946	PJC

Figure 5-24.—Monthly Report of Aircraft Summary Data (RECTYP 79, message).

Mission Capable (MC). The material condition of an aircraft that can perform at least one, and potentially all, of its intended missions.

Optimum Performance Capable (OPC). An aircraft's material condition is OPC if the aircraft can perform all of its assigned missions with all equipment operational.

Full Mission Capable (FMC). When an aircraft can perform all of its intended missions, the aircraft's material condition is said to be FMC. FMC has two subcategories—full mission capable maintenance (FMCM) and full mission capable supply (FMCS).

Partial Mission Capable (PMC). When an aircraft can perform at least one, but not all of its intended missions, its material condition is partial mission capable. PMC has two subcategories—partial mission capable maintenance (PMCM) and partial mission capable supply (PMCS).

Not Mission Capable (NMC). The material condition of an aircraft that is not capable of performing any of its intended missions. NMC has two subcategories—not mission capable maintenance (NMCM) and not mission capable supply (NMCS).

- *Not Mission Capable Maintenance (NMCM).* Material condition of an aircraft that is not capable of performing any of its intended missions due to maintenance requirements. NMCM has two additional subcategories—not mission capable maintenance scheduled (NMCMS) and not mission capable maintenance unscheduled (NMCMU).

- *Not Mission Capable Maintenance Supply (NMCS).* The material condition of an aircraft that is not capable of performing any of its intended missions because maintenance cannot be completed due to lack of parts or materials.

In addition to NMC, PMC, and FMC data for each aircraft, the RECTYP 79 report lists the following information:

- Total flight hours and flights flown
- Hours and flights flown while operating shipboard
- Equipment "IN" and "OUT" of service (EIS and EOS) hours
- Inventory code
- SCIR hours

The sources of this data are the SCIR-3 and NAVFLIRS reports. Procedures for computing EIS and EOS, NMC, PMC, FMC are outlined in the *NAMP*.

When an aircraft squadron is based inside the continental United States (CONUS) and is supported by a DSF with Streamlined Alternative Logistics Transmission System (SALTS) capability, the squadron should ensure that the DSF forwards RECTYP 79 data to arrive at the ACC not later than 2400 hours on the 10th day of the month after the report date. When an aircraft squadron is supported by a DSF without SALTS capability, the squadron should submit

RECTYP 79 data by message in the format that is outlined in the *NAMP*. The RECTYP 79 message has the same submission deadline as RECTYP 79 data that is submitted by a DSF.

Q18. What material condition describes an aircraft that is not capable of performing any of its intended missions due to a lack of parts or materials?

AIRCRAFT MATERIAL READINESS REPORT (AMRR)

The aircraft material readiness report (AMRR) enables supporting commanders (ACCs and type commanders [TYCOMs]) to assess current aircraft material condition and identify aircraft support deficiencies. Preparation of the AMRR is normally a joint project between personnel in the squadrons, supply department, AIMD, and carrier air group (CAG). Usually a worksheet is prepared each morning by Maintenance Control Personnel and submitted to either the wing or CAG. The wing or CAG will incorporate the data of all applicable squadrons and submit the information by a message to higher authority. An understanding of the content of the AMRR should enable you to understand the relationship between maintenance and supply and how this relationship impacts total unit readiness.

The AMRR allows ACCs and TYCOMs to readily identify problem areas (maintenance and supply related) that hurt an aviation activity's ability to perform its assigned mission. ACCs and TYCOMs can then provide assistance to correct the deficiencies. When an airwing is deployed, the AMRR should be submitted daily by unclassified message for the entire airwing and should reflect the status as of the first flight of the day or 1200 local time, whichever comes first. *Aircraft Material Readiness Reporting*, COMNAVAIRLANTINST/COMNAVAIRPACINST 5442.5, outlines reporting procedures for submission of the AMRR. The AMRR includes the following information:

- Physical location of the ship and the next port arrival date
- Number and types of aircraft that are assigned to the airwing
- Number of aircraft that are temporarily assigned ashore
- Number of MC and FMC aircraft onboard

- Sorties (flights) that were scheduled and sorties that were flown
- Flight hours that were flown since last report
- Number of NMCS and NMCM as well as PMCS and PMCM aircraft
- Significant maintenance or support problems that affect unit readiness

NAVY OIL ANALYSIS PROGRAM

The Navy Oil Analysis Program (NOAP) is used to monitor and diagnose the condition of equipment or oil without the removal or extensive disassembly of the equipment. Activities that operate aeronautical equipment must participate in the NOAP. Maintenance requirements cards (MRCs) and maintenance instruction manuals (MIMs), provided by the cognizant field activity (CFA), furnish information on oil sampling. For information on the NOAP, you should refer to the *Navy Oil Analysis Program*, OPNAVINST 4731.1. OPNAVINST 4731.1 covers the Joint Oil Analysis Program (JOAP) and its interrelationship with the Army, Air Force, and other activities. Operating procedures are outlined in the *Joint Oil Analysis Program Laboratory Manual*, NAVAIR 17-15-50. Additional information about the NOAP can found in the *NAMP*.

Operating activities schedule routine oil sampling according to the information that is contained in the MRCs. Special oil samples are submitted to the laboratory when such samples are required by NAVAIR 17-15-50. Special oil sampling should be accomplished whenever the following occurs:

- Whenever requested by the JOAP laboratory or the CFA
- Whenever directed by the unit maintenance activity to check out suspected deficiencies
- Immediately before and after maintenance that affects the oil lubricating system, which includes removal and replacement of an oil-lubricated system component
- Before and after a test cell run
- After the flight test that follows the installation of a new, repaired, or overhauled engine
- Immediately following an aircraft incident that involves failure of internally enclosed lubricated

parts or unplanned shutdown that affects the operation of internally enclosed lubricated parts

- Immediately after an accident regardless of cause and resulting damage
- Prior to overseas deployment or redeployment of equipment already being monitored by oil analysis
- Whenever excessive vibration or chip detector light indication is experienced on an aircraft engine during flight, ground, or test run
- Immediately following an operation in which an abnormal condition or incident occurred that resulted from either malfunction of the oil lubrication system or damage to the oil-lubricated system from excessive engine oil loss, low engine oil pressure, or zero engine oil pressure.

Whenever oil analysis is initiated or terminated or when the monitoring laboratory changes, the logs and records clerk should make an entry to indicate the changed oil analysis status on the Miscellaneous/History record in the aircraft logbook or equipment aeronautical equipment service record (AESR). For assembly service record (ASR) and scheduled removal component (SRC) card items, this entry is made in the Repair/Rework/Overhaul section of the record or card. For equipment history record (EHR) card items, this entry should be made in the maintenance record section of the record. Whenever equipment is removed or transferred, a specific entry is made concerning the NOAP analytical status of the equipment. An Oil Analysis Request, DD Form 2026, shown in figure 5-25, should accompany each oil sample that is sent to the JOAP laboratory. Equipment logbooks are the sources of much of the data that is entered on the DD Form 2026.

FUNCTIONAL CHECK FLIGHT

A functional check flight (FCF) determines whether an aircraft airframe, engine or engines, accessories, or equipment is functioning according to established standards while the aircraft operates in its intended environment. The flight is performed when it is not possible to determine proper operation by a ground check.

A functional check flight is NOT required after a phase inspection unless the corrective action for the discrepancy that was discovered during the inspection requires one, or unless the item that is inspected

requires removal, disassembly, adjustment, alignment, reinstallation, or re-assembly. Some of the situations that require a check flight include the following:

- After completion of aircraft rework
- When a reporting custodian accepts a newly assigned aircraft and when an aircraft returns to a reporting custodian from rework
- After the installation or reinstallation of an engine, propeller, propeller governor, major fuel system component, helicopter drive train, transmission, or gearbox
- When a fixed flight surface has been installed or reinstalled
- When a movable flight control surface has been installed, reinstalled, or re-rigged
- When an aircraft with a single primary attitude source per pilot station has had the attitude indicator or display, attitude source, subsystem, or component removed, replaced, or adjusted
- When an aircraft with dual or multi-independent attitude reference sources has had the indicators or displays, attitude sources, subsystems, or components removed, adjusted, or replaced in two or more of the attitude systems
- When an aircraft has not flown in 30 days or more and is returned to flight status
- When any condition that is cited in the applicable naval air training and operating procedures standardization (NATOPS) manual occurs

NAVAIR issues functional check flight (FCF) checklists as NAVAIR 01-XXX-1-F NATOPS FCF checklists. These checklists are constructed by abbreviating the FCF procedures that are contained in the applicable NATOPS manual. FCF checklists should be prepared locally for aircraft that do not have published checklists, for example, aircraft that are on loan from other services.

The check flight checklist contains provisions for listing pertinent items or aircraft systems to be observed during the check flight and for recording instrument indications. Additionally, space should be provided for indicating satisfactory or unsatisfactory performance of all listed items or systems. Finally, a "remarks" section is required so that detailed comments and recommendations about the flight can be made in narrative form if desired.

OIL ANALYSIS REQUEST						KEYPUNCH CODE	
TO	OIL ANALYSIS LABORATORY					1-3	
	FROM	MAJOR COMMAND					4
		OPERATING ACTIVITY <i>(Include ZIP Code / APO / DODAAD)</i>					5-10
EQUIPMENT MODEL / APPLICATION						11-14	
EQUIPMENT SERIAL NUMBER						15-20	
END ITEM MODEL / HULL NUMBER							
END ITEM SERIAL NUMBER / END ITEM CODE							
DATE SAMPLE TAKEN <i>(Day, Mo., Yr.)</i>				LOCAL TIME SAMPLE TAKEN		21-24	
HOURS / MILES SINCE OVERHAUL						25-29	
HOURS / MILES SINCE OIL CHANGE						30-33	
REASON FOR SAMPLE <input type="checkbox"/> ROUTINE <input type="checkbox"/> LAB REQUEST <input type="checkbox"/> TEST CELL <input type="checkbox"/> OTHER <i>(Specify)</i>						34	
OIL ADDED SINCE LAST SAMPLE <i>(Pts, Qts, Gals)</i>						35-36	
ACTION TAKEN							
DISCREPANT ITEM							
HOW MALFUNCTIONED							
HOW FOUND <input type="checkbox"/> LAB REQUEST <input type="checkbox"/> AIR OR GROUND CREW							
HOW TAKEN <input type="checkbox"/> DRAIN <input type="checkbox"/> TUBE		SAMPLE TEMPERATURE <input type="checkbox"/> HOT <input type="checkbox"/> COLD		TYPE OIL		37-38	
REMARKS							
<i>FOR LABORATORY USE ONLY</i>							
SAMPLE RESPONSE TIME						39-40	
FE 41-43	AG 44-46	AL 47-49	CR 50-52	CU 53-55	MG 56-58	NI 59-61	
PB 62-64	SI 65-67	SN 68-70	TI 71-73	MO 74-76			
LAB RECOMMENDATION						77-78	
SAMPLE NO.		SIGNATURE		FILE MAINT 79	DATA SEQ 80		

DD FORM 2026
NOV 77

PREVIOUS EDITION WILL BE USED.

S/N 0102-LF-002-0261
AZf0525

Figure 5-25.—Oil Analysis Sample Request (front), DD Form 2026.

A completed check flight checklist must be kept in the aircraft maintenance file for one phase inspection cycle or 6 months, whichever is longer.

AIRCRAFT DISCREPANCY BOOK (ADB)

An ADB provides maintenance and aircrew personnel with a comprehensive chronology of flights

that were flown and maintenance that was performed on each aircraft for at least its last 10 flights. These flights are separated by the Aircraft Inspection and Acceptance Record, OPNAV 4790/141 (fig. 5-26). The separator includes spaces for the signature, rank or rate, and date of certification of safe for flight condition. The signature must be that of the MO, MMCO, maintenance control officer, or any other person who is designated in writing by the commanding officer to certify aircraft safe for flight.

Maintenance control maintains an ADB for each assigned aircraft. Once a discrepancy MAF is initiated, maintenance control places a copy of the discrepancy (MAF) inside the ADB on the right side. The discrepancy MAF should remain there for as long as that discrepancy remains outstanding. After a discrepancy is completed (sign-off), the original discrepancy MAF is removed from the right side of the ADB and discarded. A new discrepancy completion MAF (sign-off) is then printed and placed on the left side of the ADB to indicate that the discrepancy has been corrected. The maintenance control supervisor should verify the ADB with NALCOMIS daily. The ADB for each specific aircraft should also be screened for accuracy of completed and outstanding MAFs before maintenance control certifies an aircraft safe for flight. The ADB should accompany the aircraft upon transfer of the aircraft to another activity.

The ACC and TYCOM need the following information concerning a CAG that they support:

- The number of aircraft that are assigned to the CAG
- The MC and FMC data for the CAG's aircraft

- Significant maintenance and supply deficiencies that are being encountered by the CAG

Q19. What report will provide the needed information to the ACC and TYCOM?

Q20. Whenever oil analysis is initiated, terminated, or the monitoring laboratory changes, an entry should be made in what aircraft logbook or Aeronautical Equipment Service Record (AESR)?

Q21. What type of flight is conducted to determine if an aircraft and its installed equipment are functioning properly in its intended environment in accordance with established standards?

Q22. An aircraft discrepancy book (ADB) provides maintenance and aircrew personnel with a comprehensive chronology of flights that were flown and maintenance that was performed on aircraft for what period?

Q23. Once initiated, how long should a discrepancy MAF remain on the right side of an ADB?

SUPPORT EQUIPMENT RECORDS

Weapon systems require support equipment (SE) to maintain them in an operationally ready condition. Also, practically all jet aircraft require SE to furnish an external power and air source for starting. Without SE, the aircraft would be of little value as an offensive or defensive weapon.

Generally, support equipment (SE) is maintained and repaired locally by the using and supporting activities. The depth of maintenance that is performed on SE does not correspond to the depth of maintenance

AIRCRAFT INSPECTION AND ACCEPTANCE RECORD										
1. A/C BU/SER NO.	2. T/M/S	3. RPT. CUST.	4. OXY	5. FUEL		6. OIL				7. DATE
				GRADE	QTY	GRADE	1	2	3	
8. ORDNANCE / SPECIAL EQUIPMENT / LIMITATIONS / REMARKS:				9. I have personally inspected this aircraft IAW the applicable MRCs/ checklists. Any discrepancies noted have been entered on OPNAV 4790/38.						
				SIGNATURE OF PLANE CAPTAIN						RANK/RATE
				10. Certification of safe for flight condition by the MO, MMCO, or MCO Other persons may sign this form if authorized.						
				SIGNATURE						RANK/RATE
				11. I have reviewed the discrepancy reports of the 10 previous flights, insured proper filing of weight and balance data, and accept this aircraft for flight.						
				SIGNATURE OF PILOT IN COMMAND						RANK

OPNAV 4790/141 (12-89)

S/N 0107-LF-008-4600

AZ10526

Figure 5-26.—Aircraft Inspection and Acceptance Record, OPNAV 4790/141.

that is performed on aircraft. OMAs perform only servicing and preoperational inspections on assigned SE. IMAs perform all functions that relate to minor adjustments, removal and replacement of minor parts, periodic inspections, and removal and replacement of components. IMAs have intermediate maintenance responsibility for all SE that is checked out on a subcustody basis.

Sets of MRCs for each major type of SE make inspections and repairs easier. These card sets are updated as a result of SE maintenance experience. When the sequence found in the card sets is followed, the minimum inspection requirements of the equipment are satisfied. MRCs specify the requirements for preoperational inspections that are performed by the supporting ship or the AIMD of the station.

If all of the support equipment programs presently in use by the Navy were presented here, a complete book would be needed to explain them. To keep the discussion to a minimum, SE inventory data reporting and of maintenance and custody records is emphasized. It is with these types of records that you, the AZ, will be primarily involved. You should keep an accurate maintenance history and custody or subcustody record on each unit of SE for which MRCs are provided.

SE Custody and Maintenance History Record

The SE Custody and Maintenance History Record, OPNAV 4790/51 (figs. 5-27, 5-28, 5-29, and 5-30) is used to record information on acceptance, custody and transfer, record of rework, preservation and depreservation, TD compliance, and other miscellaneous history information that should accompany an SE item throughout its service life. The OPNAV 4790/51 record should accompany all items of SE that have maintenance requirements and applicable technical directives, for example, MRCs and MIMs. The only exceptions are precision measuring equipment (PME), engine test cells, and engine test stands.

OPNAV 4790/51 cards provide a record of each periodic maintenance requirement (inspection), the date that the requirement was completed, the due date of the next periodic maintenance (PM), the activity that accomplished the PM, and the signature of the person who is authorized to make entries. When an OPNAV 4790/51 card contains no space for further entries, a new card is initiated. Accumulated data is then transcribed to the new card. Reporting custodians should retain the latest completed copy and along with the current copy of the record.

SE Preoperational Record

The work center that performs preoperational inspections holds the SE Preoperational Record, OPNAV 4790/52, in a card file or filing container. The activity that has physical custody of the SE makes the entries in the record. Entries reflect all preoperational inspections performed. This form is also used when SE is issued or received on a subcustody basis. The reporting custodian issues a new card when the card in use is completely filled.

Support Equipment Standardization System

The Support Equipment Standardization System (SESS) is a computer-based asset control system that tracks inventory of SE. SESS, used in conjunction with NALCOMIS, provides an electronic method for scheduling periodic maintenance, subcustody management, technical directive accounting, and inventory management. For detailed information on SESS, refer to the *SESS User's Guide*.

NOTE: When the SESS asset control system is not available, the SE Transaction Report, OPNAV 4790/64, is used to record SE issue and receipt transactions. When SE is issued on a subcustody basis, the user signs the transaction report (TR) in the inspector block. The issuing activity retains the white, green, and yellow copies of the TR for local record-keeping purposes. The using activity retains the pink copy for its records. When SE is returned to the reporting custodian (usually the IMA), the supervisor's block of the TR is signed by receiving personnel. All of the discrepancies that are noted during issue, receipt, or preoperational inspections should be annotated on a MAF by IMA production control.

HISTORICAL FILES

Most of the forms, records, and reports that you as an AZ will complete will have some type of retention requirement. That is, the original form, records, and reports must be kept on file for a certain period of time in case the need arises to refer back to these documents. No longer are only paper copies of documents retained on file. With computer-based systems such as NALCOMIS and SESS, electronic copies of source documents (data tapes, databases, and so forth) are maintained on file and have retention requirements. In the following paragraphs, we will discuss some retention periods of some of the more common records and forms. For retention requirements for forms, records, and reports not listed, refer to appendix B in the *NAMP*.

Activities that operate NALCOMIS should store the current month and the two preceding months of flight data on the host computer in historical data format. For example, if the current month is March, January and February data should be retained and December database should be transferred to storage. This electronic database must be stored for one complete inspection cycle or 12 months, whichever is longer.

Upon transfer of the aircraft, ensure that the aircraft inspection files, TD compliance files, aircraft general files, and electronic history data tape files are forwarded with the aircraft. In addition, activities should produce an Aircraft Transfer Report and forward it along with the other aircraft logbook records.

The NALCOMIS OMA database will automatically retain 6 months of historical data. Activities that operate NALCOMIS OMA are not required to maintain paper copies of MAFs.

Q24. What level of maintenance has responsibility for functions that are related to adjustments, removal and replacements of parts, and periodic maintenance of support equipment?

Q25. Records are kept on the acceptance, transfer, and custody of SE. Records are also kept on the rework, preservation, and depreservation of SE. Further, records are kept of TDs and the miscellaneous history of SE. On what record is this information concerning SE recorded?

SUMMARY

The maintenance data system (MDS) is the maintenance information system that provides statistical data on naval aircraft and equipment. Of primary interest to the AZ is the maintenance data reporting (MDR) system and subsystem capability impact reporting (SCIR) system.

The MR subsystem reports all supply actions that support aircraft maintenance. AZs do NOT have direct responsibilities in maintaining the MR subsystem.

The MDR subsystem of the MDS deals with the most complex range of MDS data. The MAF Copy 1 Daily Audit Report has three parts: Part I contains data that have no errors and each data element is considered valid. Part II contains records that were submitted for the current reporting period with errors that have not been previously corrected. Part III is produced when there are correction or deletion records that cannot be

applied to the local database due to erroneous data. The MDR 4-1 is a detailed list of technical directive compliance during a reporting period. The Aircraft/Equipment Work Load Report is the Naval Aviation Logistics Command Management Information System (NALCOMIS) report that provides a listing of all outstanding Maintenance Action Forms (MAFs) for a specific aircraft or equipment.

The SCIR subsystem provides information about aircraft and equipment inventory, subsystem performance, and mission capability of specific aircraft or equipment. The status of an aircraft or equipment at the time of inventory is indicated by an inventory status code. An aircraft inventory MAF is required when an aircraft is gained or lost from the reporting custodians inventory or when the aircraft undergoes a change in material condition reporting status (MCRS). The Equipment Master Roster, E-00, reflects the aircraft or equipment on hand as of 0001 on the 1st day of the reporting period. Maintenance control updates the E-00. SCIR-3 reports the hours in a reporting period where equipment was limited in performing its intended mission.

The monthly maintenance summary provides information that maintenance managers need to know. The monthly maintenance plan (MMP) for an aircraft maintenance activity provides for scheduled control of its predictable maintenance workload. The MMP for an organizational maintenance activity (OMA) must be prepared and distributed not later than (NLT) the 25th of the month prior to the month where the plan applies. A supported aviation activity uses the MAF to request work from a supporting IMA. The IMA or supply department uses a Work Request Customer Service, OPNAV Form 4790/36A, to request work from a depot-level maintenance facility.

An aircraft that is not capable of performing any of its intended mission due to lack of parts or materials is described as "not mission capable supply."

The aircraft readiness report (AMRR) identifies the number of aircraft that are assigned to a carrier air group (CAG) and informs the aircraft controlling authority (ACC) and the type commander (TYCOM) of mission capable (MC) and full mission capable (FMC) data as well as significant maintenance and supply deficiencies.

Whenever oil analysis is initiated, terminated, or the monitoring laboratory changes, an entry should be made in the Miscellaneous/History record for the aircraft or equipment.

When a ground check cannot determine if an aircraft and its installed equipment are functioning properly, a functional check flight is conducted to provide this information.

The aircraft discrepancy book (ADB) provides maintenance and aircrew personnel with a comprehensive chronology of flight and maintenance performed on an aircraft for the aircraft's last 10 flights. Once initiated, a discrepancy MAF should remain in the right side of and ADB until the discrepancy is

corrected. When a discrepancy action is completed the discrepancy MAF is removed from the ADB and a discrepancy completion MAF is placed in the left side of the ADB.

An IMA is responsible for the maintenance of support equipment to include adjustments, removal and replacement of parts, and period maintenance. The SE Custody and Maintenance History Record, OPNAV 4790/51, is a record of rework, preservation and depreservation, TD, and miscellaneous history for support equipment.

ANSWERS TO REVIEW QUESTIONS

- A1. *Maintenance Data System (MDS).*
- A2. *Material Reporting.*
- A3. *Maintenance Data Reporting.*
- A4. *MAF copy 1 Daily Audit Report.*
- A5. *MDR 4-1.*
- A6. *Aircraft/Equipment Work Load Report.*
- A7. *Subsystem Capability Impact Reporting (SCIR).*
- A8. *The status of an aircraft or equipment at the time of inventory.*
- A9. *Change in Material Condition Reporting Status (MCRS).*
- A10. *Equipment Master Roster (E-00).*
- A11. *Maintenance control.*
- A12. *Monthly Equipment Discrepancy and Utilization Report (SCIR-3).*
- A13. *What maintenance managers need to know.*
- A14. *Monthly Maintenance Plan (MMP).*
- A15. *Not later than (NLT) the 25th of the month prior to the month it applies.*
- A16. *MAF Work Request, OPNAV Form 4790/60.*
- A17. *Work Request Customer Service, OPNAV 4790/36A.*
- A18. *Not Mission Capable Supply (NMCS).*
- A19. *Aircraft material readiness report (AMRR).*
- A20. *Miscellaneous/History.*
- A21. *Functional check flight.*
- A22. *Last 10 flights.*
- A23. *Until the discrepancy is completed.*
- A24. *Intermediate maintenance activity (IMA).*
- A25. *SE Custody and Maintenance History Record, OPNAV 4790/51.*

CHAPTER 6

AIRCRAFT LOGBOOKS

All activities that have reporting custody of naval aircraft and related aeronautical equipment and components maintain aircraft logbooks, records, and associated forms in an up-to-date condition. In addition, commands utilizing Naval Aviation Logistics Command Management Information System (NALCOMIS) must also maintain an applicable logs and records subsystem in a proper and up-to-date status.

AIRCRAFT LOGBOOK ROLE

LEARNING OBJECTIVES: Define the purpose of the aircraft logbook. Identify procedures to correct erroneous aircraft logbook entries.

Aircraft logbooks, records, and forms provide a complete history of aircraft inspections, flight hours or hours of operation, modifications, and major repairs. These records provide maintenance personnel with a source of information for scheduling future periodic inspections and component replacement. In addition, these logs, records, and forms, when maintained properly, provide management with information related to the aircraft's and equipment's service age.

Incomplete or poorly maintained records can result in unnecessary inspections and overhaul of aeronautical components, even loss of aircraft and pilot or aircrew. Obvious mistakes in record keeping may be corrected by the current custodian and initialed or signed off without further reference to the previous custodian. Discrepancies that require corrective action should be researched immediately by the current custodian. The discrepancies should be corrected after receipt of correspondence from the previous custodian that specifies the appropriate corrective action.

As you can see, properly maintained aircraft logbooks and records provide a critical function in aviation maintenance and aircrew safety. As an AZ assigned to the logs and records section of maintenance control, you will be responsible for maintaining logbook accuracy. To effectively perform as logbook clerk, you should have an in-depth working knowledge of the technical directive (TD) compliance system,

naval correspondence formats, classified material handling, technical manuals and directives, and the NALCOMIS Organizational Maintenance Activity (OMA) Logs and Records subsystem. A complete listing of the responsibilities of the aircraft logbook clerk can be found in *The Naval Aviation Maintenance Program (NAMP)*, OPNAVINST 4790.2.

- Q1. *What record provides a complete history of aircraft inspections, flight hours flown, modifications, and major aircraft repairs?*
- Q2. *What activity may make corrections to obvious errors in aircraft logbook record keeping?*

AIRCRAFT LOGBOOK DESCRIPTION

LEARNING OBJECTIVES: Identify the activity that originates the aircraft logbook. Identify who maintains custody of aircraft logbooks.

The aircraft logbook is a hard-cover, loose-leaf ring binder that contains separators and page insert forms. The logbook contains data that is needed to monitor an aircraft's operation throughout its service life. The logbook also contains historical data about the aircraft's rework, major repairs, and flight operational data. In addition, the logbook contains a record of the TDs that affect the aircraft, its components, and its accessories.

ORIGIN

Aircraft logbooks are initiated by the activity that originally accepts the aircraft. The original accepting activity is defined as either the naval plant representative office (NAVPRO), if at a contractor's plant, or a designated Navy representative at any other delivery point.

- Q3. *When an aircraft is accepted into the Navy inventory, what organization initiates the aircraft logbook?*

CUSTODY

The logbooks are kept in the maintenance control office of the station, ship, squadron, or detachment to

which the aircraft is assigned. The maintenance department's maintenance material control officer (MMCO) is responsible for maintaining all aircraft logbooks and associated records. Normally, the MMCO sets up a section or branch in maintenance control to maintain aircraft logbooks and other records. This section is referred to as the logs and records work center. The logs and records work center of small stations, squadrons, or detachments may be manned by only one AZ, while larger activities may require several AZs to handle a larger record-keeping workload. If the logbooks contain classified information, the logbooks are safeguarded in accordance with applicable security regulations.

Q4. In an organizational-level maintenance activity, what officer oversees upkeep of aircraft logbooks and associated records?

TRANSFER

LEARNING OBJECTIVE: Identify the documents to accompany aircraft logbooks upon aircraft transfer.

When aircraft are transferred between activities, the logbooks and records are transferred with the aircraft. Logbooks must then be brought up-to-date and closed-out by the transferring activity before the records are turned over to the receiving activity. When ferry flights are involved in the transfer, the records are transferred to the physical custody of the ferry pilot of the aircraft. The ferry pilot is responsible for providing ferry flight time to the receiving activity. Upon completion of the ferry flight, the ferry pilot turns the records over to the receiving activity.

Usually, logs and records personnel assemble all records into a transfer package for aircraft transfer and delivery to the receiving activity. Administrative records transferred with an aircraft should include some form of each of the following records:

- Aircraft logbook with the applicable Aeronautical Equipment Service Records (AESRs)
- Assembly Service Records (ASRs)
- Equipment History Records (EHRs)
- Scheduled Removal Component (SRC) cards
- Modular Service Records (MSRs)

NOTE: The AESR is an insert to the basic aircraft logbook. The AESR is a service record for various aircraft equipment such as power plants and propellers. The MSR is used for modular engines. The MSR provides a system to record maintenance data on interchangeable modules installed on modular engines and the life-limited components and assemblies installed within them.

- Aircraft inventory record
- Weight and balance records
- Current contents of the aircraft discrepancy book (ADB)
- Inspection, TD compliance, and aircraft general files (or electronic files)
- Updated TD requirements lists Nos. 02 and 04
- Record of all check flights for past 6 months or one complete phase cycle, whichever is greater
- A duplicate of the current record "A" card
- Parachute records, seat survival kit records, and aircrew systems records for installed equipment
- Current hydraulic fluid trend analysis records
- A copy of the current Flight Loads/Launch/Landing Data (NAVAIR 13920/1)
- Appropriate Enhanced Comprehensive Asset Management System (ECAMS) reports
- Engine configuration base line entered in NALCOMIS
- Aircraft historical data tapes for activities using NALCOMIS
- Downloaded SEATS/ICAPS module data disk
- Other requirements specified by the Aircraft Controlling Custodian or Type Command

Q5. What is the disposition of an aircraft logbook when an aircraft is transferred between activities?

Q6. *When an aircraft is transferred, and a ferry flight is involved, what person provides flight time to the accepting activity?*

DISPOSITION

LEARNING OBJECTIVE: Describe procedures to dispose of aircraft logbooks upon sale, transfer, or destruction of aircraft.

Logs and records for aircraft stricken from the Navy inventory are disposed of as follows:

Destroyed aircraft. Logs and records are disposed of locally after necessary investigation and preparation of required reports.

Sale or Transfer. When an aircraft is sold or transferred to other than Navy custody, the logs and records accompany the aircraft unless otherwise directed by the aircraft controlling custodian (ACC) or type commander (TYCOM). Classified information is removed from the records or cleared for release before the sale or transfer of the aircraft.

Special Categories. A special category provides for the disposition of logs and records of experimental aircraft, those logs and records that have historical value, and logs and records of aircraft or equipment that have been lost in combat. Also included in this category are the logs and records of aircraft involved in an accident that results in death, missing in action, injury to any person, or substantial damage to other than government property. These logs and records are retained by the operating activity for a period of 1 year, and then forwarded to the Washington National Records Center. Refer to *Navy and Marine Corps Records Disposition Manual*, SECNAVINST 5212.5, for detailed procedures for transferring records to the Washington National Records Center.

Q7. *The logs and records for an experimental aircraft that is involved in an accident that results in the death of civilian personnel should be retained by the operating activity for a period of 1 year. What is the disposition of these logs and records at the end of 1 year?*

RECONSTRUCTION PROCEDURES FOR LOST OR DESTROYED LOGBOOKS

LEARNING OBJECTIVE: Describe procedures for reconstruction of lost or destroyed aircraft logbooks.

When an aircraft logbook is lost, destroyed, or damaged, the following sources of information can be used to reconstruct the logbook:

- Inspection, TD, and aircraft general files.
- Aircraft Record “A” card.
- Contents of the ADB.
- Technical Directives Requirements Lists 02 and 04. These lists can be obtained from the Commander, Naval Air Systems (COMNAVAIRSYSCOM).
- SRC cards, ASRs, and MSRs information obtained from the Aeronautical Time Cycle Management (ATCM) Central Repository at COMNAVAIRSYSCOM.
- EHR information, which can be obtained from the applicable maintenance engineering cognizant field activity (MECFA) repository.
- File of OPNAV XRAY reports and Engine Transaction Reports (ETRs).
- Records maintained by the cognizant field activity (CFA) and rework activity.
- Aircraft manufacturer.
- Other available data sources, such as Naval Aviation Logistics Data Analysis (NALDA), Enhanced Comprehensive Asset Management System (ECAMS), and NALCOMIS OMA databases.

Q8. *An aircraft logbook has been lost. Reconstruction procedures are underway. What activity can provide information for reconstruction of ASRs, MSRs, and SRC cards?*

ENTRIES AND SIGNATURES

LEARNING OBJECTIVE: Identify personnel authorized to make entries and sign aircraft logbook records.

The logbook should be neat and clean. The necessary entries should be made under the direction of the maintenance officer of the station or unit to which

the aircraft is assigned. The MAP is the source of information for most entries in the aircraft logbook; for flight and operating hour entries, utilization reports should be used.

Entries must be typewritten or printed in black ink, except in those cases where temporary entries are allowed to be made in pencil. Entries are NOT to be made with felt-tipped pens.

In most operating activities, the logbook clerk will make the actual aircraft logbook entries. However, rarely will logbook clerks be authorized to sign aircraft logbook record entries. The following personnel are authorized to sign aircraft logbooks and records:

- Commanding officer
- Organizational-level maintenance officer
- Intermediate-level maintenance officer
- Depot-level director of operations
- Operations maintenance division (OMD) officer

Additional personnel may be authorized to sign aircraft logbooks and records if they have been designated in writing to do so by one of the personnel listed above. When the contractor or naval aviation depot (NADEP) field team supervisor is not authorized or does not sign the required logbooks and records, the reporting custodian verifies the work performed and signs the necessary logbook and record entries. **Rubber stamp signatures are not authorized.**

Signatures are not transcribed when a new logbook is initiated or when old logbooks or records are consolidated. The same date is used for all entries on the Inspection and Technical Directives pages, and in the Date Completed column of the Repair/Rework Record. The signature that appears on the Repair/Rework Record is certification that entries in the Inspection and Technical Directives pages are complete and correct as of that date. Subsequent record changes are treated as separate line items and signed accordingly. If logbooks or records must be transcribed, the person's name who originally signed the entry should be typed or printed onto the new page preceded with /s/ to indicate that the page was transcribed. Use original documented dates only.

Q9. Logbook entries should be made under the direction of what officer of the station or unit to which the aircraft is assigned?

Q10. The commanding officers, O-level maintenance officers, I-level maintenance officers, D-level directors of operations, and operations maintenance division (OMD) officers have authority to sign aircraft logs and records. What additional personnel may be authorized to sign aircraft logs and records?

AIRCRAFT LOGBOOK FORMS

LEARNING OBJECTIVE: Define the purpose of each record maintained in the aircraft logbook.

An aircraft logbook is made up of forms for recording essential data. No other pages or forms, other than those described in OPNAVINST 4790.2, are to be inserted, stapled, or otherwise attached to the logbook. Additional data for which there is no designated place in the logbook are inserted in a manila envelope. This envelope is pasted inside the back of the logbook binder. This envelope should not become a catchall for data that should be an entry in the logbook, or that is not pertinent to the purpose of the logbook.

A brief description and example of each logbook form is contained in the following paragraphs. Maintenance history cards (SRCs, MSR, ASR, EHRs) should appear in the order stated in the applicable Periodic Maintenance Information Card (PMIC). Remember, you should always refer to the latest edition of OPNAVINST 4790.2 for detailed instructions when making entries in the aircraft logbook.

NOTE: The aircraft logbook is in loose-leaf form; therefore, the model and bureau serial number (BUNO) of the applicable aircraft should be inserted on each page (in the spaces provided). This action ensures ready identification when pages are removed for entries or if logbook pages become separated from its logbook.

STRUCTURAL LIFE LIMITS (OPNAV 4790/142)

The Structural Life Limits form is generated at the squadron level. This form is used to maintain a current record of aircraft structural life-limited components designated for depot-level replacement that do not require SRC card or ASR documentation. These components, with their respective life limits, are listed in the applicable PMICs, interim rapid action changes, TDs, and *Fixed Wing Aircraft Structural Life Limits*, NAVAIRINST 13120.1, and *Rotary Wing Aircraft Structural Life Limits*, NAVAIRINST 13130.1. The record is shown in figure 6-1.

Part I of this form is used to record information that is established for each type/model/series (T/M/S) aircraft. Such information includes references used as well as basic life limitations, such as catapult cycles, arrestment cycles, and flight hours.

Part II lists all components with life limits tracked in flight hours or calendar time, and components measured in number of catapult and arrestment/landing cycles.

MONTHLY FLIGHT SUMMARY (OPNAV 4790/21A)

The reporting custodian maintains the Monthly Flight Summary form. This form is designed to permit the monthly compilation of significant flight operational data throughout the service life of the aircraft. Reporting custodians must ensure that all monthly totals have been entered on this form before the aircraft is inducted into rework. This form, shown in figure 6-2, is a permanent part of the aircraft logbook.

The Monthly Flight Summary form is divided into four parts. Part I contains information about an aircraft's service period and accumulated operating service months (OPSERMOS). Only fleet support (FS) activities make entries in Part I.

Reporting custodians (squadrons) use part II to record the receipt, revision, or adjustment of a service period. Period end dates (PEDs) may be adjusted when aircraft complete special rework that requires 30 days or more at a naval aviation depot (NADEP) facility or as a result of an Aircraft Service Period Adjustment (ASPA) inspection. Entries in this section reflect the ending date of the current operating service period (month and year) and the total number of OPSERMOS the aircraft has accumulated as of the ending date.

Part III is self-explanatory and reflects an extension of an operational service period beyond the period end date. Extensions, when authorized, are granted in increments of 3 months.

Part IV of the Monthly Flight Summary record is used to record monthly flight and landing data. All months are accounted for in chronological order. The Monthly Aircraft Utilization Report, NAVFLIRS-1, is the source of information for entries in this section of the form. Entries must be typewritten or printed in black ink. The exception to this procedure is when aircraft and logbooks are closed out and transferred. In this case, the close-out entry should be made in pencil.

INSPECTION RECORD (OPNAV 4790/22A)

The purpose of the Inspection Record form is to record periodic and conditional inspections performed on the aircraft. Routine turnaround, daily, servicing, engine wash, and oil sampling are not logged in any logbook. Phase and conditional inspections are maintained on separate pages. The form, illustrated in figures 6-3 and 6-4, provides space for identification as to whether the listed inspections are periodic or conditional. The left column on the form is titled TYPE OR DESCRIPTION OF INSPECTION to facilitate proper descriptive entries for individual inspections.

Phase inspections are conducted at a stipulated number of flight hours. Such inspections are entered sequentially, and should reflect the type phase and flight hours at time of inspection; for example, Phase A/4105.5. Records of this inspection are removed from the aircraft logbook at the time of standard depot-level maintenance (SDLM), and a new record is initiated.

Conditional inspections are unscheduled events required as a result of a specific overlimit condition (hot start, overtemp, hard landing, etc.) or as a result of circumstances or events that create an administrative requirement for an inspection. Precarrier, predeployment, acceptance, transfer, and aircraft service period adjustment (ASPA) inspections are logged as conditional inspections. A rework activity will remove this page from the aircraft logbook upon completion of SDLM and insert a new record containing data necessary for determining when the next inspection due will be initiated. A minimum of 2 years of data should be maintained at all times on the conditional inspection page.

The following inspections, performed on aircraft, are NOT logged in the inspection pages in the aircraft logbook.

- Inspections performed on equipment for which an AESR is required are logged in the AESR. This procedure provides one correct place in the logbook for recording any particular inspection. The procedure also ensures that inspection records for major aeronautical equipment are current and available with such equipment after the equipment has been removed from an aircraft.
- Bulletins that specify conditional inspections are logged in the TD section of the

aircraft logbook or in the technical directives section of the AESR.

Some TDs direct conditional or periodic inspections of the aircraft, assembly, equipment, or component until the TD is incorporated. These inspections are logged on the TD form of the logbook. In instances where continuing inspections are required, you should perform the initial conditional inspection and make a logbook entry on the conditional inspection page. Initiate a local MRC, add the card to the applicable MRC deck, and comply with the continuing requirements as part of that required inspection. No additional inspection entries are required.

All inspection entries in the logbook must be certified by a signature.

- Q11. In what place should documents that contain additional data for which there is no designated place be stored?*
- Q12. On what form should monthly flight operational data be compiled throughout the service life of an aircraft?*
- Q13. The Inspection Record is used to record periodic and conditional inspections performed on the aircraft. On what designated page should phase inspections be logged?*
- Q14. When a phase inspection is recorded on the inspection record, flight time should be entered in the "Type or Description of Inspection" block. What additional information should appear in this block?*
- Q15. Hot start, hard landing, and overtemp are examples of conditions that require what type of inspection?*
- Q16. Conditional inspection record data should be retained in the aircraft logbook for what minimum period of time?*

REPAIR/REWORK RECORD (OPNAV 4790/23A)

The Repair/Rework Record form (fig. 6-5) contains a complete record of all repair, reconditioning, SDLM, conversion, modification, modernization, and ASPA inspections performed on the aircraft by an overhaul activity or commercial contractor. When an aircraft is transferred to a NADEP or contractor activity for rework, the aircraft logbook accompanies the aircraft. This logbook is brought up to date as necessary by the activity that performs the work. This procedure should be followed even though there is no change in

reporting custodian. This record is retained permanently.

TECHNICAL DIRECTIVES (OPNAV 4790/24A)

Technical Directives forms, which make up the TD section of the logbook, contain records of all Naval Air Systems Command (NAVAIRSYSCOM) TDs that affect the airframe structure and its integral parts. A separate form is used for each type of directive in this section.

The system for recording TD data is called the Technical Directive Status Accounting (TDSA) system. TDSA Lists Nos. 02 and 04 (figs. 6-6 and 6-7) are prepared and distributed to reporting custodians by the COMNAVAIRSYSCOM, which is the TDSA program manager. List No. 02 contains a listing of directives that apply to a specific bureau number and are not incorporated; and List No. 04 contains a listing of directives that apply to a specific bureau number and are reported as incorporated. Lists Nos. 02 and 04 are distributed to activities on a quarterly basis.

Upon receipt of the initial lists Nos. 02 and 04 of the same date, you should remove TD (airframe changes and bulletins) forms from the logbook; and after verification against the new lists, retain or destroy them at the discretion of the reporting custodian. Lists Nos. 02 and 04 may then be inserted in the TD section of the aircraft logbook, with List No. 02 preceding List No. 04. Whenever a new TD is received, add the TD to List No. 02. As TDs are complied with, annotate List No. 02 with the TD Status code (C) to the left of the Series (SER) column, and transcribe the information that applies to List No. 04. This provides a complete and up-to-date configuration listing of the aircraft at any given time.

A TD that affects a component for which an MSR, ASR, EHR, or SRC card is required is recorded in the TD section of the applicable MSR, ASR, EHR, or SRC card and on the applicable logbook or AESR TD record (multiply entry). In this instance, TD identification data is entered in the logbook or AESR TD record and a notation to refer to the applicable MSR, ASR, EHR, or SRC card is entered in the Title/Remarks column.

TDs are logged in numerical sequence except on pages titled "Revisions." Revisions are logged in the order in which the revisions are received.

Initiation and maintenance of the Technical Directives form is described in the following paragraphs. You should refer to figure 6-8 as you read these paragraphs.

TEC: ASBE RPT-CUST: VS-41 PUC: 000041
 MODEL: S-3B CTL-CUST: P PED: 07/01
 BUREAU: 158814 INV-RMK: AUD WC5

S E R	TD CD	BASC	PT IRA	KIT	P R I	ISSUE DATE	MAN HRS	M L	RESC DATE	WORK UNIT CODE	NINC	REMARK
*	50	0121 AND ALL PRIOR TRCODE 50'S IN HISTORY										*
E	50	0216		A1	R	04/92	45	3	2Q01	722C000		GFE REQUIRED
E	50	0221		00	I	06/92	12	1	4Q96	13A6K00		
E	50	0242		00	I	07/92	15	1	3Q96	6436000		
E	50	0247	I	A1	U	10/92	9	3	3Q97	739F400		
E	50	0269	IA	A1	U	10/92	21	1	2Q95	62X6		
*	74	0183 AND ALL PRIOR TRCODE 74'S IN HISTORY										*
E	74	0192	I	00	U	04/92	15	1	3Q96	1181100		
E	74	0195		00	U	06/92	10	1	3Q96	7481200		
		NINC-TOTAL				5	NINC-MANHRS			102		

Figure 6-6.—TDSA List 02.

TEC: ASBE RPT-CUST: VS-41 PUC: 000041
 MODEL: S-3B CTL-CUST: P PED: 07/01
 BUREAU: 158814 INV-RMK: AUD WC5

S E R	TD CD	BASC	PT IRA	KIT	P R I	ISSUE DATE	MAN HRS	M L	INC DATE	ACTION ORGI PUC	INC	REMARK
E	50	0181		A1	R	04/91	13	3	10/92	000041		
E	50	0182		00	I	06/91	12	1	07/93	WC5120		
E	50	0183		00	I	07/93	11	1	09/93	WC5120		
E	50	0184		A1	U	10/92	8	3	10/93	000041		
E	50	0185	A	A1	U	10/93	20	1	10/94	WC5120		
E	50	0186		A1	R	11/94	22	1	12/95	WC5120		
E	50	0187		00	R	01/94	10	3	02/95	AZ4120		
E	50	0269	I	A1	U	10/92	8	1	02/96	000041		
*	74	0183 AND ALL PRIOR TRCODE 74'S IN HISTORY										*
E	74	0188		00	U	06/90	12	1	07/94	WC5120		
E	74	0189		00	U	07/90	11	1	08194	WC5120		
		INC-TOTAL				7	INC-MANHRS			96		

Figure 6-7.—TDSA List 04.

BASIC INFORMATION. The information that you are required to enter at the top of each page is basic information. Enter the complete aircraft model designation, type of directive, and the aircraft BUNO. A separate sheet is required for each type of directive; therefore, when initiating a new sheet, you should enter the same basic information on both sides of the sheet at that time. This procedure prevents someone else from using the reverse side of the sheet for another type of directive at a later date.

TECHNICAL DIRECTIVE IDENTIFICATION. You should enter the TD identification data in this block. All TDs are accounted for in numerical sequence. To do this, you will need to leave spaces for TDs not yet received. You should enter the following information in the Technical Directive Identification block:

- The applicable kit number that is given on the TD. If there is no kit number assigned, enter “00.”
- A priority code: I for immediate, U for urgent, R for routine, or K for record purposes.

NOTE: Priority code K is used when a modification has been completely incorporated by the contractor in all accepted equipment before the TD is issued.

STATUS. In this block, enter the Status code. Only the Status codes shown in table 6-1 should be used in

the aircraft logbook. Do not confuse codes in table 6-1 with codes used to annotate List No. 02.

TITLE/REMARKS. You should enter the title of the TD in this block. The title does not have to be the complete subject of the TD.

COMPLIANCE. In this block, you should enter the short title of the activity that complied with the TD and the date of compliance.

SIGNATURE. A person who has aircraft logbook signature authority signs in this block.

Only original accepting activities and NADEPs can use block entries on the Technical Directives form. This type of entry provides for a consolidated accounting of directives when the aircraft is new and upon completion of each standard rework. Block entries are used only when a series of consecutively numbered directives that have the same Status code are being documented. This enables subsequent custodians to determine the configuration of the aircraft without being required to screen the entire file of directives for applicability.

Some TDs consist of several parts. Logbook accounting of this type of directive presents special problems when the separate parts are assigned different priorities and are to be accomplished at different times. When this happens, you should use the following procedures:

- If all parts of the TD are to be accomplished by the same activity and at the same time,

Table 6-1.—Technical Directive Status Codes

CODE	DEFINITION	REMARKS
INC	Incorporated	Indicates a specified TD has been completely incorporated.
NINC	Not incorporated	Is a temporary pencil entry to indicate a TD has not yet been complied with.
PINC	Previously incorporated	Identifies TDs that were previously incorporated.
NA	Not applicable	Indicates that a TD is not applicable to a particular model aircraft or BUNO.
NIS	Not issued	Identifies TDs that have not or will not be issued, and TDs that have not been received.
CANX	Canceled	Identifies when a previously issued TD is canceled before it is incorporated.
Q	TD removal	Documents TDs that were installed, but subsequently removed.

use a regular single-line log entry for each part. The priority that appears in the log entry is the overall category assigned to the TD.

- When a TD is composed of several parts to be accomplished at different times, make separate consecutive log entries for each part, indicating the priority and status of each. Never include a multiple-part TD in a block entry unless all parts of the TD have been incorporated.
- In instances where a single line has been left for a directive that has not been received and a multiple-part TD is subsequently received, enter part 1 on the applicable TD page. Reference to the remaining parts of the TD should be made in this entry. The remaining parts of the TD should be recorded on the applicable TD revisions page.

Occasionally, your activity may need to remove a TD. This is especially true with power plant changes (PPCs). Document the removal of a TD much like the incorporation of a TD. On the TD logbook page, simply draw a single line through the previous Status code, and enter Status code "Q" in the same block, along with the initials of anyone authorized to sign logbooks. Finally, you must make an entry on the Miscellaneous/History record, specifying reason for removal of the TD, location of parts removed, the authorizing reference, and any other pertinent information.

For a detailed description of the TDSA system, you should refer to OPNAVINST 4790.2 and *The NAVAIR Technical Directives System*, NAVAIR 00-25-300.

- Q17. *What document contains a listing of technical directives applicable to a specific bureau number and reported as not incorporated?*
- Q18. *What document contains a listing of technical directives applicable to a specific bureau number and reported as incorporated?*
- Q19. *A technical directive is being removed from an aircraft. What information should be entered in the Status Code block of the Technical Directive form?*

MISCELLANEOUS/HISTORY (OPNAV 4790/25A)

This section of the logbook (fig. 6-9) is used by operating activities to record significant information

that affects the aircraft for which no other space is provided in the logbook.

Examples of such information include:

- Abnormal flight characteristics
- Peculiar troubles of an undetermined nature
- Damage to the aircraft
- Major component changes not logged elsewhere
- Instance of aircraft or equipment exposure to large quantities of salt water, fire extinguishing agents, or other corrosive elements
- Authorizations for service period extension and PED, and operational service months (OPSERMOS) adjustment as a result of an ASPA inspection
- Verification of flight hours in period and since new on acceptance and transfer

The original activity that accepts an aircraft for the Navy should make a Miscellaneous/History logbook entry that shows the date the acceptance check flight was flown. A date, signature, and activity accomplishing the action will accompany all entries in this section. At the time of standard rework, items of historical value are transcribed to a new form and retained as a permanent part of the logbook.

When making entries on the Miscellaneous/History record, you should make sure that you accurately describe the situation that led to the entry. Some situations require specific wording to accurately describe the situation. Specific wording assists maintenance crews in the repair process by accurately describing what happened and at what maintenance level the situation occurred. Such wording also provides uniformity of entries from activity to activity. Some situations that require specific wording include:

- Changes in the aircraft's or equipment's authorized inspection interval.
- Change in the inspection induction date or hourly sequence of aircraft or equipment.
- Hydraulic contamination testing reveals Navy standard class V contamination has been exceeded.

MISCELLANEOUS / HISTORY

AIRCRAFT MODEL OR EQUIPMENT NAME SH-3H	EQUIPMENT MODEL / TYPE	BOND OR SERIAL NO. 152039
DATE	REMARKS	
960828	EFFECTIVE THIS DATE, PHASE C INDUCTION HOURS RESCHEDULED FROM 8025.5 TO 8010.5 AS	
	AUTHORIZED BY OPNAVINST 4790.2G. NEXT PHASE DUE IS PHASE D AT 8110.5 HOURS.	
	<i>LCDR W. E. HAVENS, HS-5</i>	

Figure 6-9.—Miscellaneous/History.

- Completion of compass calibration. One of two entries is required. The correct entry depends on whether the compass is in or out of limits (see OPNAVINST 4790.2 for specific statement). As a minimum, record the type of compass calibrated, method of calibration, date compass was calibrated, and location where calibrated.
- Acceptance or transfer. An entry should be made that states that flight hours on the Monthly Flight Summary page and operating hours on the Equipment Operating Record have been verified to be correct.

A minimum of 2 years of data should be maintained in the Miscellaneous/History record. OPNAVINST 4790.2 contains a complete listing of situations that require a Miscellaneous/History page entry. OPNAVINST 4790.2 also includes the specific wording to be used for each situation.

Q20. An entry on the Miscellaneous/History record of the aircraft logbook should be made upon receipt and transfer of an aircraft that states that what two records have been verified to be correct?

PRESERVATION/DEPRESERVATION RECORD (OPNAV 4790/136A)

This form is used in three records—the aircraft logbook, AESR, and MSR. The form is used to document preservation, represervation, and depreservation on aircraft or equipment. Entries are also required on uninstalled equipment if preservation MRCs or *Preservation of Naval Aircraft*, NAVAIR 15-01-500, specifies a preservation requirement. Aircraft preservation requirements, including type and length, can be found in applicable MRCs. Figure 6-10 shows a Preservation/Depreservation Record.

The Preservation/Depreservation Record is self-explanatory. Information required to make entries on this record is obtained from the MAF.

INSTALLED EXPLOSIVE DEVICE RECORD (OPNAV 4790/26A)

The Installed Explosive Device Record form contains a record of all explosive devices currently installed in the aircraft. These include, but are not limited to, lap belt cartridges, initiators, canopy release, and seat ejection cartridges or devices. This form is shown in figure 6-11.

Figure 6-11 shows an Installed Explosive Device Record for an activity that uses the Survival Equipment Asset Tracking System/Increased Capabilities System (SEATS/ICAPS). SEATS/ICAPS is an automated system designed to standardize the management and reporting of Survival Equipment and Cartridge-Actuated Devices (CADs). SEATS is a database management system that provides users with an accurate means to process, store, and retrieve information on Aviation Life Support System (ALSS) items, such as parachutes. The SEATS program will be discussed later in this chapter. ICAPS is a database management system that provides users with a quick and accurate means to process, store, and retrieve information on cartridges, CADs, and aircrew escape propulsion systems (AEPS).

The ICAPS subsystem give users an automated method to perform the followings:

- Manage CADs and AEPS assets
- Generate reports and schedule workloads
- Maintain CADs and AEPS maintenance histories
- Print computer-generated Installed Explosive Device Record (OPNAV Form 4790/26A) forms

The program also lists all CADs used Navy-wide, and includes a part number and Department of Defense Identification Code (DODIC) index for each. In addition, the system automatically computes CAD service life expiration dates when the lot number and container open date data blocks have been completed.

All entries on the Installed Explosive Device Record are self-explanatory except the expiration date. The procedures used to compute expiration dates are outlined in *General Use Cartridges and Cartridges Actuated Devices (CADs) For Aircraft and Unique Aircraft Systems*, NAVAIR 11-100.1.1, *Aircrew Escape Propulsion System (AEPs) Device*, NAVAIR 11-85-1, and *Cartridges and Cartridge Actuated Devices for Bomb/Racks/Launchers, Bomb Dummy Units and Airborne Missile Systems (CADs)*, NAVAIR 11-100.1.3.

When installed explosive devices have extensions granted, you should update the ICAPS module database and print a new Installed Explosive Device Record. The authority that granted the extension (such as the message date-time group [DTG] and originator and/or

INSTALLED EXPLOSIVE DEVICE RECORD		A1. TYPE AIRCRAFT F-14A	A2. BU/SER 158612	A3. ASSEMBLY PART NUMBER	A4. ASSEMBLY S/N	A5. ORG CODE KB1				
SERVICE LIFE ITEMS										
B1. DODIC	B2. NOMENCLATURE/LOCATION	B3. PART NUMBER	B4. LOT NUMBER	B5. SERIAL	B6. ORG	B7. MFG DATE	B8. C/O DATE	B9. INST DATE	B10. EXPIRE DATE	
M258	CART ACT INIT /280	841AS100	SOS88C004002	0687	KB2	880331	920131	920229	000331	
M258	CART ACT INIT /280	841AS100	SOS88C004001	0009	WN1	880331	941031	941031	000331	
M259	CART ACT INIT /372-395	841AS125	SOS88E004002	0085	WN1	880531	941031	941031	000531	
M259	CART ACT INIT /372-395	841AS125	SOS88E004002	0086	WN1	880531	941031	941031	000531	
M726	CART ACT INIT /213	841AS225	SOS89A005001	0145	KB2	890131	920831	920831	970131	
M726	CART ACT INIT /292	841AS225	SOS89A005001	0146	KB2	890131	920831	920831	970131	
M727	CART ACT INIT /213	841AS250	SOS89A004001	0218	KB1	890131	960430	960430	970131	
M727	CART ACT INIT /213	841AS250	SOS89A004001	0219	KB1	890131	960430	960430	970131	
M728	CART ACT INIT /280	841AS275	UPC93C002003	0085	KB1	930331	960430	960430	010331	
M728	CART ACT INIT /345-395	841AS275	UPC93C002003	0086	KB1	930331	960430	960430	010331	
M728	CART ACT INIT /350	841AS275	UPC93C002003	0087	KB1	930331	960430	960430	010331	
M741	GAS PRESS GEN /350	841AS325	UPC89J003010	3764	KB2	890930	920131	920229	990131	
M742	GAS PRESS GEN /280	841AS475	SOS88B004001	0202	KB2	880229	920131	920229	990131	
M742	GAS PRESS GEN /280	841AS475	SOS88B004001	0203	KB2	880229	920131	920229	990131	
M742	GAS PRESS GEN /350	841AS475	SOS88B004001	0204	KB2	880229	920131	920229	990131	
M742	GAS PRESS GEN /350	841AS475	SOS88B004001	0205	KB2	880229	920131	920229	990131	
M613	FCDC /350	841AS350	ETI90H003018	1094341	WN1	900831	950131	950131	000131	
M613	FCDC /350	841AS350	ETI90H003018	10943041	WN1	900831	950131	950131	000131	
MD63	FCDC /350	841AS500	ETI86B002015	0282131	WN1	860228	900331	950131	970331	
MD63	FCDC /350	841AS500	ETI86B002015	0282132	WN1	860228	900331	950131	970331	
MD74	FIRE EXT CART /580 LG BOTTLE	841AS5252	NCI88D004005	261	KB2	880430	910630	910630	990131	
LOCAL USE										

Figure 6-11.—Installed Explosive Device Record (ICAPS).

the interim rapid action change [IRAC] number and manual affected) should be logged in the Remarks or Local Use column.

A single-line entry is required for each installed explosive device. All data columns must be completed. For nonserialized devices and devices that do not require a container open date, you should enter NA in the appropriate columns.

When explosive devices are installed in major assemblies or equipment (such as ejection seats and in-flight refueling stores), entries are made in the Installed Explosive Device Record of the appropriate AESR. When explosive devices are installed in personnel parachutes, entries are made on the Parachute Record. Explosive devices installed in other safety and survival equipment are recorded on the Seat Survival Kit (SSK) Record or Aircrew Systems Record. The installation of all other explosive devices is recorded on the Installed Explosive Devices Record of the aircraft logbook.

The possibility of transferring certain equipments from one aircraft to another during inspections, rework, periods of periodic maintenance, etc., emphasizes the need for careful and periodic checking of the Installed Explosive Device Record regarding the status of the explosive devices currently installed in the aircraft.

The Installed Explosive Device Record is maintained in a current status by all activities that have custody of and perform rework on aircraft in which explosive devices are installed. During SDLM, the rework activity transcribes all current information to a new form and discards the old form.

Q21. When the Installed Explosive Device Record is documented, what specific entry should be entered in the Serial Number block for nonserialized devices?

INVENTORY RECORD (OPNAV 4790/27A)

The Inventory Record form, shown in figure 6-12, is used to maintain a current inventory of all components or assemblies that require ASRs, EHR cards, SRC cards, and MSRs. Mission configuration items, such as bomb racks or searchlights, are not required to be entered on this record.

It is impractical to include a specific list of such components since requirements vary according to the aircraft model. However, all airframe components/assemblies that require an ASR, an EHR, an SRC card, or items that require an MSR should be recorded on this

record. Sound maintenance practices and flight safety considerations dictate the items, other than mandatory, that should be recorded on this form.

Aircraft engines, propellers, auxiliary power units, ejection seats, and other major assemblies that require an AESR are NOT listed on this or any other form in the aircraft logbook. Remember, components, assemblies, or modules associated with equipment that require an AESR are to be recorded in the applicable section of AESRs and not with airframe components in the aircraft logbook.

NOTE: AESR, SRC card, EHR, ASR, MSR, Parachute Record, Seat Survival Kit Record, Aircrew Systems Records, and Aircrew Personal Equipment Record items are inventoried during each phase inspection for the applicable equipment that is being inspected. A locally prepared form that lists items that require an ASR, MSR, EHR card, or SRC card should be used. This form should consist of a preprinted item list with a column to record item serial numbers. The items in the list should match the record of installed items in the aircraft.

ASSEMBLY SERVICE RECORD (ASR) (OPNAV 4790/106A)

The Assembly Service Record (ASR) (figs. 6-13 and 6-14) provides data tracking on assemblies and subassemblies that have rework or overhaul life limits and are designated to be removed at organizational-, intermediate-, or depot-level maintenance activities and discarded.

The loss of an ASR can cause the loss of the assembly to the supply system; therefore, you must be able to reconstruct the assembly's history to determine a course of action if the ASR is not available. The Aeronautical Time Cycle Management Control Repository at COMNAVAIRSYSCOM determines what action is needed if an ASR is lost. To enable the repository to accomplish this task, the repository must receive misplaced and canceled ASRs, copies of all updated records after rework, and copies of all new ASRs generated for new ASR items. A description of the ASR follows.

The top section of the ASR is used to identify the assembly by nomenclature and to record the assembly's replacement due, replacement interval, and time remaining information.

Replacement due indicates the number of hours or counts on the equipment or aircraft at which time the

assembly must be removed. Hours or counts come from operating records that indicate elapsed time operated or counts (cycles run) on the equipment or aircraft. From these hours or counts, replacement due should be computed in accordance with procedures in the latest edition of OPNAVINST 4790.2. When computing replacement due, you should screen all portions of the ASR to determine what component has the least operating time remaining.

Figures 6-13 and 6-14 show an ASR for a servo cylinder installed on BUNO 149725 with two components, the trunnion assembly and the housing assembly installed on the servo cylinder. The trunnion assembly is authorized 4,200 operating hours between overhauls and has accumulated no operating hours since overhaul, so the assembly can be operated for 4,200 hours. The housing assembly is authorized a total service life of 5,700 hours before it must be retired (discarded). The housing assembly has accumulated 4,000 hours and can now be operated for 1,700 hours. The servo cylinder is authorized 1,800 operating hours between overhauls and has accumulated zero operating hours. In this example, the housing assembly (1,700 hours) becomes the determining factor when the replacement due is computed. The 1,700 hours is added to the aircraft time-since new at the time of installation as follows:

Aircraft Time Since New	8,975
Housing Assembly Operating Hours	+ 1,700
Replacement Due	10,675

In this example, the servo cylinder must be removed from the aircraft when the aircraft reaches 10,675 operating hours. In other words, the aircraft can operate for 1,700 hours after installation of the servo cylinder before the servo cylinder must be removed from the aircraft. Replacement intervals are outlined in applicable PMICs.

Section I of the ASR is the Identification Data section. All blocks must be completed.

Section II lists all life limited and forced removal subassemblies. The maximum flight hours or counts expended on any subassembly determine when a particular assembly must be removed.

Section III is used to record installation of an assembly. When assemblies are installed, verify all existing entries for aircraft and equipment hours or counts and assembly hours or counts.

Section IV records instances of removal. Ensure a reason for removal and a job control number (JCN) is

entered in Block “D” of this section. This assists maintenance personnel in future repair or rework actions of the assembly.

Section V is used to document TD installation and removal. Notice that the TD Identification section contains the same information as the “F” record of the MAF.

Section VI contains Repair/Rework/Overhaul/Exceedances data. Record all repair, rework, or overhaul actions in this section. Record any instances of exceedances during operation and the level of exceedance. Refer to the latest edition of the OPNAVINST 4790.2 for specific details and procedures for recording data in this section.

Q22. An ASR is lost. What activity should you contact for information required to reconstruct a replacement ASR?

EQUIPMENT HISTORY RECORD (EHR) CARD (OPNAV 4790/113)

The Equipment History Record (EHR) Card (figs. 6-15 and 6-16) provides a method of monitoring specific maintenance data on maintenance engineering cognizant field activity (MECFA) designated components. The EHR card also tracks maintenance data for equipment that does not qualify as an SRC card item. Quick engine change kits (QECKs) and armament equipments are examples of EHR card equipment. An individual card for each EHR component is maintained as part of the aircraft logbook as long as the component is installed. When a component is removed from the aircraft, the EHR card should be closed-out, and the card should accompany the component.

NOTE: Do not track SRCs with EHR cards. Loss of an EHR card does not prevent use of the component.

Each MECFA is responsible for maintaining the history of EHR components. To accomplish this function, the user must forward canceled cards, copies of updated cards, and copies of new cards generated for EHR items to the appropriate MECFA. The respective MECFAs maintain this information and respond to requests for EHR data.

SCHEDULED REMOVAL COMPONENT (SRC) CARD (OPNAV 4790/28A)

The complete maintenance history, installation, and usage data for all items designated as scheduled removal components are recorded on the SRC card

EQUIPMENT HISTORY RECORD (EHR) CARD

SECTION I - IDENTIFICATION DATA

A. NOMENCLATURE UPPER LINK NLG DRAG BRACE	B. WORK UNIT CODE 13A2650	C. FSCM 36659	D. REPLACEMENT INTERVAL SDLM INSPECTION	E. MAINTENANCE DUE NEXT SDLM
F. PART NUMBER 1284761-107	G. SERIAL NUMBER 0037	H. CFA NADEPALAMEDA	I. REFERENCE AYC - 935B	

SECTION II - INSTALLATION DATA

A. DATE	B. BUONO / SERNO INSTALLED ON	C. TOTAL AIRCRAFT / EQUIPMENT HOURS OR COUNTS		D. TOTAL HOURS OR COUNTS ON ITEM	
		TSN		TSN	TSI
96062	159390	U0250		U-UNK	U-00

SECTION III - REMOVAL DATA

A. DATE	B. TOTAL AIRCRAFT / EQUIPMENT HOURS OR COUNTS	C. TOTAL HOURS OR COUNTS ON ITEM		D. REASONS FOR REMOVAL AND JOB CONTROL NUMBER

SECTION IV - MAINTENANCE RECORD

A. DATE	B. ACTIVITY	C. REMARKS AND MAJOR PARTS REPLACED		D. SIGNATURE

Figure 6-15.—Equipment History Record (EHR) Card (front).

(figs. 6-17 and 6-18). SRC cards are maintained as part of the aircraft logbook, AESR, or MSR as long as the component is installed in the aircraft or equipment. When the component is removed from the aircraft or equipment, the SRC card should be closed out, and the card accompanies the component. The card is also used to record the maintenance history on any item that requires monitoring, tracking, and trending of failure data by the CFA via the PMIC.

The ATCM at COMNAVAIRSYSCOM maintains the central repository for aviation SRC cards. Copies of SRC cards updated after SDLM or rework and all new cards generated for new SRC card items are sent to this repository. You should forward misplaced and canceled SRC cards to this repository. This central repository responds to all requests for information regarding SRC cards. You should request this data by telephone, message, or letter consistent with the priority requirements for the information.

When components are shipped between activities, the following procedures should be followed to reduce the possibility of loss or damage to the SRC card:

- The SRC card is inserted and sealed in a plastic, return material document envelope, and is not to be removed by anyone except the user or recipient. No other documents are to be placed in the same envelope with the SRC card.
- If the component is placed in a box or container for shipment, the SRC card (in the envelope) is attached to the component before the component is put in the box or container. **Do not attach the SRC card to the outside of the shipping container.**
- If the component is shipped in an open crate or without a container, make sure the envelope that contains the SRC card is securely attached to the component.

Directions for maintaining SRC cards are in the NAVAIR 01-XXXX-6 series of PMICs when the PMICs are under the NAVAIR Publication Numbering System. When PMICs are under the Technical Manual Identification Numbering System, you should follow directions provided for publications in the A1-XXXX-MRC-000 series of PMICs.

NOTE: The Xs in the above publication numbers stand for aircraft or manufacturer designators and vary

from aircraft to aircraft and manufacturer to manufacturer.

Original SRC cards are initiated as follows:

- SRC cards for components installed on, or delivered with, major aeronautical equipments (such as aircraft and engines) are the responsibility of the activity that accepts such major equipment for the Navy. The delivery point ensures the SRC cards are copied, and that a copy is forwarded to the ATCM Central Repository at COMNAVAIRSYSCOM.
- SRC cards for new components received into the Navy supply system are the responsibility of the original activity that accepts such components for the Navy. The original activity forwards a copy of all SRC cards to the ATCM Central Repository at COMNAVAIRSYSCOM.

An SRC card is kept current during rework. Upon completion of rework, the SRC card that reflects the current status of the component is copied, and a copy is forwarded by the NADEP to the central repository. This procedure applies to components reworked individually and concurrently as part of an aircraft rework process. The SRC card should be attached to components returned to the supply system as spares or inserted in the aircraft logbook, as appropriate.

When SRC cards become damaged or mutilated, the activity that has current custody initiates a new card, and transcribes all information to the new card. When notified that SRC cards are no longer required via a change to the applicable NAVAIR 01-XXXX-6 manuals, reporting custodians should annotate the affected SRC cards to show the deletion authorization. Reporting custodians should then forward the cards to the central repository for purging from the master file.

Card maintenance is important, and all of the required data should be entered. When a card contains no space for additional entries, a new card should be prepared. First, verify that the Identification Data section, including the Replacement Interval and Replacement Due blocks, is complete and accurate. Replacement intervals are outlined in applicable PMICs. Replacement due is computed at the time of the installation of the component and equals total hours or counts on the aircraft or equipment plus the replacement interval minus the hours or counts on the

component being installed. For example, a component that has a 500-hour replacement interval with 100 hours accumulated since overhaul that is installed on an aircraft with 1,050 hours will have a replacement due of 1,450 hours.

Then, recalculate existing entries in the installation and removal data section to ensure correctness. If the new card is being initiated in conjunction with the installation of a component, record the last installation action performed on the new card. If a component is NOT being installed, record the last installation and corresponding removal action on the new card. Finally, forward a copy of the new card and the original SRC card to the central repository. Entries must be typed or plainly printed in black ink.

You should refer to the latest edition of OPNAVINST 4790.2 for detailed initiation, maintenance, and disposition procedures for the SRC card. The ATCM Central Repository at COMNAVAIRSYSCOM should be contacted if questions arise about a required course of action concerning SRCs.

Q23. What is the disposition of an SRC card for a component when the component is removed from the aircraft or equipment?

Q24. You place an SRC card in a plastic, return material document envelope for a component transfer. Before you seal the envelope, what other document, if any, should you place inside the envelope with the SRC card?

AVIATION LIFE SUPPORT SYSTEM (ALSS) HISTORY RECORDS

This section of the aircraft logbook contains a file of all aircraft-installed ALSS history records, excluding aircraft equipped with ejection seats. When an aircraft has ejection seats, the records will be inserted into the appropriate ejection seat AESR. These records are normally documented by aircrew survival equipment personnel (PRs). However, as a logs and records clerk, you may be required to extract information from or enter information into these records.

Most operating activities use the Survival Equipment Asset Tracking System (SEATS) program

to manage, report, identify, and generate “hard copies” of ALSS records. The SEATS subsystems provide users the following capabilities:

- ALSS asset inventory management
- Workload scheduling
- Forecasts of expiring parts
- ALSS history record maintenance
- Scheduling and tracking of TD compliance
- Scheduling of inspections
- Computer-generated ALSS history forms (Parachute Records, Aircrew System Records, etc.)

You should refer to OPNAVINST 4790.2 and the *Survival Equipment Asset Tracking System/Increased Capabilities (SEATS/ICAPS) User's Manual* that accompanies the system for SEATS/ICAP operation and documentation procedures.

Parachute Record (OPNAV 4790/101)

The Parachute Record, figure 6-19, keeps track of the current configuration and inspection record of a parachute assembly and its components throughout the service life of the equipment. The SEATS computer-generated Parachute Record should be filed in the aircraft logbook or ejection AESR where the parachute is installed.

The activity that places the parachute assembly into service initiates the Parachute Record. The aircraft BUNO should be entered in pencil. Upon receipt of a parachute assembly, the receiving activity should verify the completeness and accuracy and resolve any discrepancies with the issuing activity before acceptance of the assembly. Upon installation of the parachute assembly, the record should be forwarded to maintenance control for insertion into the aircraft logbook or ejection seat AESR.

Seat Survival Kit Record (OPNAV 4790/137)

The Seat Survival Kit (SSK) Record keeps track of configuration and inspection information for an SSK and its components throughout the service life of the

PARACHUTE RECORD

BASIC ASSEMBLY INFO	A1. TYPE ASSEMBLY A/P28S-32(V)4	A2. SERIAL NUMBER MB0600	A3. PART NUMBER MBEU147713	A9. LATEST RFI 920608	A12. SCHD RMVL DATE 980309
	A4. CONFIGURED FOR (TECS) AFWE	A5. CUSTODIAN ORG CODE GB8	A6. BU/SER NUMBER 159633	A8. RFI SHF CYC 90	A11. INSP CYCL 2190
SIGNATURES	A13. PACKED (NAME) PR2 R. JOHNSON	A14. INSPECTED (NAME & QA STAMP #) PR1 D. HEARN M13	A15 ORG CODE W5F	A7. RFI DATE 920310	A10. DATE ISSUED 920310

SERVICE LIFE ITEMS

B1. NOMENCLATURE	B2. PART #	B3. CONT #/LOT #	B4. SER #	B5. MFG DATE	B6. INSTL DATE	B7. EXP DATE
CANOPY PARA ASSY	MBEU147610	N0019-85-C-0143	UNK	910731	920301	040331
RISERS ASSY	MBEU147689	N0019-85-C-0143	UNK	910531	920301	040331
WITHDRAWAL LINE	MBEU147607	N0019-85-C-0143	UNK	911101	920301	040331
SLEEVE DEPL ASSY	MBEU147716	N0019-85-C-0143	UNK	910831	920301	040331
STRAP CROSS CNTR	MBEU141488	N0019-85-C-0143	UNK	910731	920301	040331
ELECT PACK ASSY	852AS101	CAX91L004-052	29665	911130	940216	991130
ELECT PACK ASSY	852AS101	CAX91L004-052	29666	911130	940216	991130
BATTERY	852AS102	CAX94A002-041	0126	940131	940216	980131
BATTERY	852AS102	CAX94A002-041	0127	940131	940216	980131

CARTRIDGES AND CARTRIDGE ACTUATED

DEVICES

C1. NOMENCLATURE	C2. PART #	C3. CONT #/LOT #	C4. DODIC	C5. SER #	C6. MFG DATE	C7. C.O. DATE	C8. EXP DATE
IMPULSE CARY	851AS275	HCX93L003006	MW19	6979	931130	940216	990228
IMPULSE CARY	851AS275	HCX93L003006	MW19	6978	931130	940216	920228

TECHNICAL DIRECTIVES

1.	D2.	D3.	D4.	D5.	D6.	D7.	D8.	D1.	D2.	D3.	D4.	D5.	D6.	D7.	D8.	D1.	D2.	D3.	D4.	D5.	D6.	D7.	D8.
YP	NO.	REV	AM	QA	ORG	DATE	STAT	TYP	NO.	REV	AM	QA	ORG	DATE	STAT	TYP	NO.	REV	AM	QA	ORG	DATE	STAT

OCAL USE

Figure 6-19.—Parachute Record (SEATS).

equipment (fig. 6-20). The SEATS computer generated Seat Survival Kit record is a single-sided record designed to be filed in the aircraft logbook or the ejection seat AESR in which the SSK is installed.

The activity that places the SSK into service should initiate the SSK record. When the SSK is issued to a custodian, the receiving activity should verify the completeness and accuracy of the record, and resolve any discrepancies with the issuing activity prior to acceptance of the SSK. Once an SSK is installed, the SSK record should be forwarded to maintenance control for insertion into the aircraft logbook or ejection seat AESR. When an SSK is transferred, its SSK record should be attached to the equipment and should accompany the SSK to its new destination.

Aircrew Systems Record (OPNAV 4790/138)

The Aircrew Systems Record, figure 6-21, provides a continuous configuration and inspection history of ALSS components, kits, and assemblies. The SEATS computer-generated Aircrew Systems Record should be filed in the logbook of the aircraft in which the component, kit, or assembly is installed.

The Aircrew Systems Record should be initiated by the activity placing the component, kit, or assembly into service. When a new record is initiated, applicable data is transcribed to a new record and verified and the old record is either retained or destroyed in accordance with command directives. Accepting activities should review and verify aircrew systems records for completeness and accuracy. Any discrepancies found by the accepting activity should be resolved with the issuing activity prior to acceptance. When the component, kit, or assembly is installed, the record should be forwarded to maintenance control for insertion into the aircraft logbook. The Aircrew System Record should accompany the component, kit, or assembly whenever these components are sent to an I-level activity for inspection or maintenance and when the component, kit, or assembly is transferred to a new custodian.

Aircrew Personal Equipment Record (OPNAV 4790/159)

This record, shown in figure 6-22, provides a record of the current configuration of all personal equipment issued to aircrewmembers. Only items of ALSS that require inspection at the O-level of maintenance should be documented on this record. All items of ALSS

requiring I-level maintenance should have a separate Aircrew Systems Record.

The Aircrew Personal Equipment Record should be initiated by an O-level activity upon initial issue of personal equipment to the aviator or aircrewman. Each aviator or aircrewman should have a separate file containing the Aircrew Personal Equipment Record and separate Air Systems Records as necessary. Maintenance actions performed on an aircrewman's equipment should be documented on the MAF. The Aircrew Personal Equipment Record must be retained for a minimum of 6 months or one complete inspection cycle, whichever is greater.

Q25. Upon installation of a parachute assembly, what is the disposition of the parachute record?

AIRCRAFT INVENTORY RECORD

LEARNING OBJECTIVES: Define the purpose of the aircraft inventory record. Identify procedures to record equipment shortages when aircraft are transferred or accepted.

The aircraft inventory records are part of the complete packet of the logs and records maintained on each aircraft. To record aircraft inventory data accurately and properly, you, the AZ, should have a knowledge of their general content and use. Normally, material control work center personnel supervise and coordinate (in conjunction with production division personnel) the inventory of aircraft upon acceptance and transfer.

The aircraft inventory record establishes a formal, continuous chain of accountability for specific equipment and material installed on or designated for use on any aircraft of a specified type, model, and series (T/M/S). A Master Aircraft Inventory Record (MAIR) that identifies those items of installed and loose equipment for which a periodic inventory must be accomplished is maintained by NAVAIR. A MAIR is maintained as the standard for each T/M/S aircraft.

Aircraft are transferred and accepted only after an equipment and item inventory and notation on the forms of the aircraft inventory record are completed. This inventory record is NOT to be considered a packing list, bill of materials, or configuration list. Selection of items to be included in the inventory record is governed by the following list, without regard to whether the items are government- or contractor-furnished equipment:

SEAT SURVIVAL KIT RECORD

BASIC ASSEMBLY INFO	A1. TYPE ASSEMBLY	A2. SERIAL NUMBER	A3. PART NUMBER	A4. FSCM	A10. LATEST RFI	A13. SCHD RMVL DATE
	SKU-2	1370	221J100-1	30941	970304	980227
SIGNA-TURES	A5. CONFIGURED FOR (TECS)	A6. CUSTODIAN ORG CODE	A7. BU/SER NUMBER	A9. RFI SHF CYC	A12. INSP CYCL	
	AAED	GB8	156479	90	448	
SIGNA-TURES	A14. PACKED (NAME)	A15. INSPECTED (NAME & QA STAMP #)	A16. ORG CODE	A8. RFI DATE	A11. DATE ISSUED	
	PR3 J. JONES	PR1 R. JOHNSON 478	W5F	991204	961206	

SERVICE LIFE ITEMS

B1. NOMENCLATURE	B2. PART #	B3. CONT #/LOT #	B4. SER #	B5. QTY	B6. MFG DATE	B7. INSRV DATE	B8. EXP DATE
BEACON URT-33A	7037618-10	N00383-95-C-5513	001001	1	960601	961203	
BATTERY	7747390-10	F41608-92-D-3079	001211	1	961001	961201	991031
ASPIRIN	51079 005 22	7L398	NA	10	941101	961203	991130
EYE OINTMENT	0168-0079-038	6041	NA	1	941001	961203	991031
IMODIUM	50458-400-01	95B100	NA	10	950201	961203	000228
SIGNAL SMOKE	712793	ATV94L005008	NA	2	941130	961204	InDefinite
BAGGED WATER	MIL-W-44126	088-2	NA	3	931201	961203	981231

02. SYS TEST:	C1. COMPLETED (NAME)	C2. INSPECTED (NAME & QA STAMP #)	
	PR3 B. BROWN	PR1 R. SMITH 81B	KIT TECHNICAL DIRECTIVES

LIFE RAFT HISTORY	E1. TYPE ASSY	E2. PART #	E3. CONTRACT #	E4. FSCM	E5. SER #	D1. TYP	D2. NO.	D3. REV	D4. AM	D5. QA	D6. ORG	D7. DATE	D8. STAT
	LR-1	MIL-L-81542A9AS0	N00383-92-C-4639	30003	876								

RAFT TEST RECORD	E6. TEST CYCLE: 1	E7. COMPLETED (NAME)	E8. INSPECTED (NAME & QA STAMP #)	66	0468			81B	W5F	920801	INC
		PR3 J. JONES	PR1 R. JOHNSON 47B	67	0556	C	1	81B	W5F	920801	INC

RAFT TECHNICAL DIRECTIVES

F1. TYP	F2. NO.	F3. REV	F4. AM	F5. QA	F6. ORG	F7. DATE	F8. STAT	F1. TYP	F2. NO.	F3. REV	F4. AM	F5. QA	F6. ORG	F7. DATE	F8. STAT

LOCAL USE

OPNAV 4790/137

Figure 6-20.—Seat Survival Kit Record (SEATS).

AIRCREW SYSTEMS RECORD

A1. TYPE ASSEMBLY
SKU-2

A2. SERIAL NUMBER
156

A3. PART NUMBER
63A80H1-601

A4. FSCM
30003

A5. CONT #
N00383-94-C-045P

SERVICE LIFE ITEMS

B1. NOMENCLATURE	B2. PART #	B3. CONT #/LOT #	B4. DODIC	B5. SER #	B6. QTY	B7. MFG DATE	B8. INSTL	B9. EXP DATE
RADIO SET PRT-5	10800000	N00383-91-C-9259		02005	1	910331	961216	
BATTERY PACK	10800100	451-95-M-M534		0114	1	951231	961216	980430
RADIO PRC-90-2	A3-01-0307	FA1608-88-C-3889		25771	1	920228	961216	
BATTERY BA1568U	BA-1568U	DAAB07-95-D-1023		114	1	950430	961216	980430
BAGGED WATER	MIL-W-44126	L523		NA	17	940531	961216	990531
BAGGED WATER	GC536W1	01		NA	15	930630	961216	980630
FOOD PACKETS	MIL-F-15381	UNK		NA	20	930228	961216	
EYE OINTMENT	0168-0079-38	CON 87-002		NA	2	950131	961216	980131
SIGNAL KIT	2112952	SGK92L002003	L258	NA	2	921130	961216	InDefinite
MAR SMOKE ILL	3139734	MEI93B001018	L283	NA	6	930228	961216	InDefinite
POVIDONE IODINE	NDC0034-2100-02	2K53		NA	2	940430	961216	970930
STROBE LT SDU-5E	MIL-L-38217	UNK		12200	1	900731	961216	
BATTERY	BA1574U	DAAB07-95-F-0027		UNK	1	950731	961216	980731
MAR SMOKE ILL	3139734	MEI94L002021	L283	NA	4	941130	961216	InDefinite

TECHNICAL DIRECTIVES

C1. TYP	C2. NO.	C3. REV	C4. AM	C5. QA	C6. ORG	C7. DATE	C8. STAT	C1. TYP	C2. NO.	C3. REV	C4. AM	C5. QA	C6. ORG	C7. DATE	C8. STAT	C1. TYP	C2. NO.	C3. REV	C4. AM	C5. QA	C6. ORG	C7. DATE	D8. STAT
67	0684	A		45B	W5F	960512	INC																
67	0808			45B	W5F	960512	INC																
67	0805			45B	W5F	960512	INC																
67	0657	A		45B	W5F	960512	INC																

LOCAL USE

CURRENT INSPECTION DATA AND SIGNATURES

D1. PACKED (NAME) PR3 B. BROWN	D2. INSPECTED (NAME & QA STAMP #) SGT R. YANEZ	D3. TEST CYCLE 1	D4. ORG CODE W5F
D5. RFI DATE 961217	D6. RFI SHF CYC 90	D7. LATEST RFI 970317	D8. CUSTODIAN ORG CODE GB8
D9. DATE ISSUED 961218	D10. INSP CYCL 224	D11. SCHD RMVL DATE 970730	

OPNAV 4790/138

Figure 6-21.—Aircrew Systems Record (SEATS).

AIRCREW PERSONAL EQUIPMENT RECORD	A1. NAME R. BOYLES	A2. RANK/RATE LTCOL	A3. FLT BILLET PILOT	A4. ORG GB8	A5. BU/SER RB1486	RFI DATE 961220	INSP CYC 30	DUE DATE 970119
-----------------------------------	-----------------------	------------------------	-------------------------	----------------	----------------------	--------------------	----------------	--------------------

AIRCREW EQUIPMENT LOG

B1. NOMENCLATURE	B2. EQUIP. TYPE	B3. CONT #/LOT #	B4. DODIC	B5. SER #	B6. QTY	B7. CYC	B8. MFG	B9. INSTL	B10. EXP DATE
COVERALLS FLYER R	8415010438387	DLA100-92-C-0443		RB1486	3	360	920331	940115	
FLYER JACKET IN	MIL-J-7823	DLA100-91-F-EC86		RB1486	1	360	910131	920512	
FLYER GLOVES	MIL-G-81188	DLA100-90-D-4010		NA	1	360	950228	961127	
HELMET HGU-85P	89D7981-7	N00383-92-G-K500		07511	1	90	940531	961127	
MASK MBU-16V1P	G012-1050-01	UNK		188	1	30	890331	961127	
ANTI-G CSU-13P	MIL-A-83406B	F41608-89-D-2035		007320	1	180	890430	921015	
HARN ASSY PCU33P	829AS100-7	N00383-83-C-1611		0045	1	90	840331	930105	990331
SURV VEST SV-2B	67A100D2-401	DLA100-90-C-0551		00147	1	90	950331	950823	
SURVIVAL KNIFE	MIL-K-8662	N00077-92-D-4410		RB1486	1	90	920430	920512	
STROBE LT SD-5E	MIL-L-38217	DLA400-87-F-2352		122259	1	90	890630	950823	
BATTERY	BA1574U	DAAB02-95-F-0027		0129	1	90	950731	950823	950731
FLASHLIGHT	MX-991U	UNK		RB1486	1	90		950823	
SNAP HOOK KNIFE	MIL-K-25594	N00383-90-C-8967		NA	1	90	910531	950823	
WRIST COMPASS	WCC100	N00383-85-C-4188		NA	1	90	940228	950823	
SIGNAL MIRROR	MIL-M-18371-E	DLA400-86-C-5285		NA	1	90	860331	950823	
MAR SMOKE & ILL	3139734	MEI93B001018	L283	UNK	1	90	930228	950823	InDefinite
SIGNAL KIT	2150423	SGK88H001011	L118	UNK	1	90	880831	950823	InDefinite
FLIGHT BOOTS	MIL-B-24911	DLA100-90-C-4307		NA	1	360	910630	961006	
BATTERY	BA1574U	DAAB02-95-F-0027		0129	1	90	950731	950823	980731

TECHNICAL DIRECTIVES

C1. EQUIPMENT TYPE	C2. SER #	C3. TYP	C4. NO.	C5. REV	C6. AM	C7. QA	C8. ORG	C9. DATE	C10. STAT	C1. EQUIPMENT TYPE	C2. SER #	C3. TYP	C4. NO.	C5. REV	C6. AM	C7. QA	C8. ORG	C9. DATE	
MBU-16V1P MASK	188	66	560			47	GB8	950808	INC	MAR SMOKE & ILL	UNK	67	684	A		47	GB8	950808	INC
SIGNAL KIT	UNK	67	657	A		47	GB8	950808	INC	HGU-85 HELMET	07511	66	499			47	GB8	950808	INC
SV-2B SURV VEST	00147	66	589		1	47	GB8	950808	INC	SV-2B SURV VEST	00147	67	820			24	GB8	950821	INC
SV-2B SURV VEST	00147	66	599	A		24	GB8	950821	INC	SV-2B SURV VEST	00147	66	436	A		47	GB8	950808	INC

OPNAV 4790/159

Figure 6-22.—Aircrew Personal Equipment Record (SEATS).

- Special equipment items essential to the health, safety, and morale of the crew; for example, bedding, life rafts, first aid kits, crash axes, and portable fire extinguishers
- Equipment and material required for the protection of the aircraft during flight and overnight storage; for example, covers for control locks, plugs, and external openings
- Items of equipment subject to pilferage or that are readily convertible to personal use; for example, clocks, tool kits, compasses, mirrors
- All classified items that are installed or for which installation provisions have been incorporated on the aircraft, except when items are accounted for by an authorized classified material accounting system during aircraft transferring actions
- All items of loose equipment applicable to an aircraft that are designated for transfer by the aircraft controlling custodian (ACC), type commander (TYCOM), or Naval Air Systems Command (NAVAIR) whenever the aircraft is transferred
- All mission-essential equipment that cannot be installed in an aircraft that has been configured for other missions

The following is a list of items that are EXCLUDED from the aircraft inventory record:

- Items of equipment that are rigidly fixed and are considered to be an integral part of the aircraft; for example, engines, propellers, wheels, tires, brakes, instruments, ejection seats
- Items that are considered personal issue and are furnished or authorized by a squadron allowance
- Equipment and material that is authorized by the Individual Material Readiness List (IMRL)
- Equipment and material that is provided on less than a one-per-aircraft basis and is accounted for by another material accounting system

- ACC/TYCOM-controlled material

NAVAIR is the sole authority for change and revision of aircraft inventory record. If the inventory recordAIR becomes lost or destroyed, the reporting custodian reconstructs the record by using a copy of the MAIR provided by NAVAIR and by conducting a physical inventory of the applicable aircraft.

When an aircraft is transferred on site, designated inventory teams from the transferring and accepting activities jointly inventory the aircraft. The teams record, in the appropriate column of the aircraft inventory record equipment list, the quantity of each item on board the aircraft at the time of transfer. When a ferry pilot is required to effect an aircraft transfer, two inventories are made—one before the ferry flight by the transferring activity and one upon completion of transfer by the accepting activity. The aircraft ferry pilot accepts custody of pilfer-able and classified equipment from the transferring activity and transfers custody of this equipment to the accepting activity but does not otherwise participate in these inventories.

When shortages of inventory items are revealed while an aircraft is being prepared for transfer, every effort should be made to locate the items before transfer. However, transfer of the aircraft should not be delayed pending replacement of the item. The transferring organization makes entries on the equipment list form and the shortages form, furnishing justification and information that the accepting activity can use to obtain replacement.

When shortages are discovered upon receipt of an aircraft and are not properly recorded in the aircraft inventory record, the receiving organization itemizes the shortages and submits a list of such shortages to the organization from which the aircraft was received within 10 working days. In all cases, the authority to transfer aircraft with shortages must be obtained from the ACC/TYCOM before transfer. A certification and record of transfer should be completed at the time of transfer or receipt of the aircraft, as applicable.

Q26. What document is used to establish a formal, continuous chain of accountability for specific equipment and material installed on or designated for use on an aircraft?

Q27. Receiving activities should submit a list of items missing from an aircraft to the transferring activity within what prescribed number of days?

AIRCRAFT WEIGHT AND BALANCE RECORD SYSTEM

LEARNING OBJECTIVE: Define the purpose of aircraft weight and balance program.

The requirements, procedures, and responsibilities for weight and balance control of Navy aircraft are listed in *USN Aircraft Weight and Balance Control*, NAVAIR 01-1B-50. *The Weight and Balance Data*, NAVAIR 01-1B-40, is a technical manual that provides activities with a standard system of weight and balance control. A weight and balance handbook is maintained for each assigned aircraft. The handbook charts, forms, and records should be maintained in accordance with the instructions given in NAVAIR 01-1B-40 and NAVAIR 01-B-50. The weight and balance system requires the use of the following charts and forms:

- Record of Weight and Balance, DD Form 365
- Chart A, Basic Weight Checklist, DD Form 365-1
- Form B, Airplane Weight Record, DD Form 365-2
- Chart C, Basic Weight and Balance Record, DD Form 365-3
- Chart E, load data, charts, graphs, and weighing procedures for an aircraft
- Form F, Weight and Balance Clearance, DD Form 365-4

All aircraft must be weighed upon completion of SDLM. Aircraft must also be weighed under each of the following conditions:

- When changes, modifications, or repairs are accomplished and calculated or actual weight and moment data for these changes are not available.
- When recorded weight and balance data are suspected of being in error.
- When unsatisfactory flight characteristics are reported by the pilot, and these characteristics cannot be traced to flight control system malfunction, improper aircraft loading, or errors in weight and balance data and computations.

- When weight and balance handbooks have been lost or damaged. (A new record must be promptly prepared.)
- When an aircraft has been painted.
- When an aircraft has not been weighed in five years.

Q28. What is the purpose of the aircraft weight and balance system?

SUMMARY

The aircraft logbook provides a complete history of aircraft inspection, flight hours flown, modification, and major aircraft repairs. The current aircraft custodian may correct obvious errors in aircraft logbook record keeping without reference to the previous custodian. The original accepting activity initiates the aircraft logbook when it accepts an aircraft into the Navy inventory. In an organizational-level maintenance activity, the maintenance material control officer oversees the upkeep of the aircraft logbook and associated records.

The logs and records for a destroyed aircraft are disposed of locally. The logs and records for an aircraft that is sold or transferred accompany the aircraft. When an aircraft is transferred, the ferry pilot provides flight time to the accepting activity. The logs and records for a special category aircraft that is removed from the Navy inventory are retained for 1 year and then forwarded to the Washington National Records Center. The Aeronautical Time Cycle Management Repository at Commander Naval Air Systems Command can provide information for the reconstruction of Assembly Service Records, Modular Service Records, and Scheduled Removal Component (SRC) cards.

The maintenance officer of the station or unit to which an aircraft is assigned oversees aircraft logbook entries. Only specific personnel have the authority to sign aircraft logs and records. When there is no designated place for additional data in an aircraft logbook, the data is inserted in an envelope that is pasted inside the back of the logbook binder.

Monthly flight operational data is recorded on the monthly Flight Summary record. Phase inspections are logged in the periodic inspection record. When a phase inspection is recorded on the inspection record, flight time and the type of phase inspection should be entered in the Type or Description of Inspection block.

Conditional inspections are required for hot start, hard landing and overtemp. Conditional inspection record data should be retained in the aircraft logbook for 2 years.

The Technical Directive Status Accounting (TDSA) List No. 02 contains a listing of technical directives that apply to a specific bureau number (aircraft) and are reported as not incorporated. The TDSA List No. 04 contains a listing of technical directives that apply to a specific bureau number and are reported as incorporated. When a technical directive is removed from an aircraft, status code "Q" and the initials of a person authorized to sign logbooks should be entered in the Status Code block of the Technical Directives form.

"NA" should be entered in the Serial Number block for a nonserialized device in the installed Explosive Device Record.

When a component is removed from an aircraft or equipment, the SRC card accompanies the component. You should place the SRC card in a plastic, return material document envelope for a component transfer. No other document should be placed in this return material document envelope.

After a parachute assembly has been installed, the Parachute Record should be forwarded to maintenance control where it should be inserted in the aircraft logbook or ejection seat Aeronautical Equipment Service Record.

When items are missing from an aircraft that has been transferred, the accepting activity should submit a list of items that are missing from the aircraft to the transferring activity within 10 days of receipt of the aircraft.

The weight and balance system provides aviation activities with a standard system of weight and balance control of aircraft. The Aircraft Inventory Record establishes a formal, continuous chain of accountability for specific equipment of material installed on (or designated for use on) an aircraft.

As you can see, aircraft logbooks contain the complete operating and maintenance history of naval aircraft. Proper logbook maintenance is critical to not only aircraft safety, but to pilot and aircrew safety as well. Accuracy cannot be overemphasized. Remember, when completing aircraft logbook records and forms, refer to the appropriate reference manual to ensure all entries are completed in accordance with established procedures.

ANSWERS TO REVIEW QUESTIONS

- A1. *Aircraft logbook.*
- A2. *Current aircraft logbook custodian.*
- A3. *Original accepting activity.*
- A4. *Maintenance material control Officer (MMCO).*
- A5. *Transferred with the aircraft.*
- A6. *Ferry pilot.*
- A7. *Sent to the Washington National Records Center.*
- A8. *Aeronautical Time Cycle Management Central Repository, COMNAVAIRSYSCOM.*
- A9. *Maintenance officer (MO).*
- A10. *Personnel designated in writing by an authorized authority.*
- A11. *In a manila envelope attached to the back inside cover of the logbook.*
- A12. *Monthly Flight Summary record.*
- A13. *Periodic.*
- A14. *Type of phase inspection being performed.*
- A15. *Conditional.*
- A16. *2 years.*
- A17. *Technical Directive Status Accounting (TDSA) List No. 02.*
- A18. *Technical Directive Status Accounting (TDSA) List No. 04.*
- A19. *Status Code "Q" and the initials of anyone authorized to sign logbooks.*
- A20. *Monthly Flight Summary page and Equipment Operating Record.*
- A21. *NA.*
- A22. *Aeronautical Time Cycle Management (ATCM)/Central Repository at the Commander Naval Air Systems Command (COMNAVAIRSYSCOM).*
- A23. *The card accompanies the component.*
- A24. *None.*
- A25. *Forwarded to maintenance control and inserted into the aircraft logbook or ejection seat AESR.*
- A26. *Aircraft Inventory Record.*
- A27. *10 days.*
- A28. *To provide aviation activities with a standard system of weight and balance control for aircraft.*

CHAPTER 7

AIRCRAFT INVENTORY REPORTING SYSTEM (AIRS)

The Navy Aircraft Inventory Reporting System (AIRS) provides the Chief of Naval Operations (CNO), the Naval Air Systems Command (NAVAIR-SYSCOM), and type commands with the information needed to manage naval aviation. All information collected by the inventory system is used for specific purposes. No information is collected out of curiosity or out of incidental interest.

The capability to fight, or the actual use of armed aircraft on a combat mission, is the prime reason for naval aviation; aircraft are the prime element of naval aviation. Management of this element involves the following:

- Deciding what is to be accomplished
- Acquiring and distributing the resources to do what is to be accomplished
- Regulating the use of these resources
- Reviewing the overall program for possible improvement; to see why things failed to go as planned, what was overlooked, and what was unnecessary; to learn and benefit from experience

These management functions depend upon accurate feedback of service experience information of the use and current status of aircraft.

INTRODUCTION TO THE AIRCRAFT INVENTORY REPORTING SYSTEM (AIRS)

LEARNING OBJECTIVE: Identify the instruction that describes reporting procedures used in the Aircraft Inventory Reporting System (AIRS).

Current AIRS procedures are established by the latest edition of *Aircraft Inventory Reporting System*, OPNAVINST 5442.2. This document provides

instructions for recording and reporting information about the inventory, logistics, readiness, and use of Navy aircraft. OPNAVINST 5442.2 also specifies policies and procedures that concern the custody and the accountability of Navy aircraft.

Every aircraft, at any given instant from acceptance by the Navy until final disposition, is in the custody of one (and only one) reporting custodian and one (and only one) controlling custodian. Controlling custodians are commonly referred to as “operating commands,” and reporting custodians are commonly referred to as “operating units.” Whenever an aircraft changes custody, the aircraft is transferred by one activity and received by another. In these cases, receipt and transfer are considered to be simultaneous transactions. An aircraft remains in the reporting custody of the transferring unit until accepted by the receiving unit.

Reporting custodians are the lower echelon (squadrons and units assigned) and usually have physical custody of the aircraft. Reporting custodians are the initial source of all data used in the system.

Controlling custodians are the higher echelon—the commands that exercise administrative control of assignment, use, and logistic support of certain aircraft as specified by the CNO. Examples of controlling custodians are the Commander, Naval Air Force, Atlantic Fleet (COMNAVAIRLANT); Commander, Naval Air Force, Pacific Fleet (COMNAVAIRPAC); and the Chief of Naval Air Training (CNATRA).

In most cases, an activity reports on a onetime basis each incident of aircraft custody. change, status change, flight operation, reduced material condition, or changes in material condition reporting status (MCRS). Some of this information is processed at the local level by the data services facility (DSF) and forwarded to the appropriate controlling custodian. Other information is sent directly to the controlling custodian by the reporting custodian via OPNAV XRAY reports.

Reporting documents used in AIRS include the OPNAV XRAY message (used to report custody and status change), the Maintenance Action Form (MAF) (reports aircraft with reduced mission capability and

inventory changes), Naval Flight Record Subsystem (NAVFLIRS) form (records flight data management information), and the Aircraft Record "A" Card (provides valuable, readily available operational data for each assigned aircraft). The OPNAV XRAY report and the Aircraft Record "A" Card are discussed in the following text.

NOTE: For activities that operate under the Naval Aviation Logistics Command Management Information System (NALCOMIS), refer to *NALCOMIS User's Manual* for detailed instructions in completing OPNAV XRAY reports, Aircraft Accounting Audit Reports, and initiating and maintaining the Aircraft Record "A" Card.

Q1. To what publication should you refer for detailed instructions on the Aircraft Inventory Reporting System?

OPNAV XRAY REPORT

LEARNING OBJECTIVE: Define the purpose of OPNAV XRAY reports.

For the CNO, NAVAIRSYSCOM, and controlling custodians to manage naval aviation, they need current information about the many aircraft in the Navy inventory. Much of the data required for the management of naval aviation is submitted on OPNAV XRAY reports. These message reports are prepared by reporting custodians and are forwarded to their controlling custodian or directly to the CNO, as required.

The OPNAV XRAY report is used to record the continuous inventory of aircraft custody change, latest status, and other items of information pertinent to aircraft management. In addition, OPNAV XRAY data records logistics activity and indicates the actual time involved in the various logistics processes.

All changes of aircraft reporting and controlling custody, status, model designation, or other reportable actions are reported daily by OPNAV XRAY message. Normally, if no changes occur, no OPNAV XRAY message is submitted. The OPNAV XRAY Message Report, OPNAV Report 5442-1, is submitted by message not later than 1200 the day after a reportable action that involves the unit's aircraft. OPNAV XRAY reports must include all reportable actions that occur between 0001 and 2400 of the action date. The exception to this deadline is in the case of category I strike OPNAV XRAY reports. A category I strike OPNAV XRAY report is submitted by 2400 of the date

of action. One OPNAV XRAY report may be used to report actions on one or more aircraft.

For reports control purposes, reporting custodians number each OPNAV XRAY message by calendar year. The numbering begins with 001 and goes through 999 and then begins with 001 again.

Q2. What report is used to record instances of aircraft custody changes, status changes, inventory changes, and service life factors?

XRAY Data Element Fields

LEARNING OBJECTIVE: Identify required data elements and codes used on OPNAV XRAY reports.

The basic addressee on all OPNAV XRAY reports is the controlling custodian or the CNO, as appropriate. The cognizant wing is also a basic addressee. Certain situations may require additional information addresses.

NOTE: COMNAVAIRSYSCOM is a mandatory information addressee on all OPNAV XRAY reports.

The OPNAV XRAY message format (fig. 7-1) is as follows:

Items A through F, V, and Remarks are required on all OPNAV XRAY reports except Part I, change of location reports. Entries for other data items are entered as the situation requires. If certain items are not required, they are not listed. Table 7-1 is a matrix of required data items by action code.

A brief explanation of each OPNAV XRAY message item is contained in the following paragraphs. For a more detailed description of each item, refer to the latest edition of OPNAVINST 5442.2. As you read this section, refer to the format.

The FROM, TO, INFO, and SUBJ lines make up the heading of the report. The name of the activity that originates the message is entered on the FROM line. The name of the primary addressee or the activity to which the report is sent is entered on the TO line. The primary addressee is normally the controlling custodian. The names of information addressees are entered on the INFO line. These include those activities with a need to know of the reportable action, but in all cases, COMNAVAIRSYSCOM will be an info addressee. The SUBJ line contains five items of information, listed in a particular sequence.

NOTE: Items in the subject line that are enclosed in parentheses will vary with different activities;

ROUTINE

FROM: Reporting activity

TO: Primary addressees

INFO: Information addressees

UNCLAS//N05442//

SUBJ: (CONTR. CUST.) "XRAY" (REPORTING CUST.) (RPT SERIAL NO.)
"OPNAV 5442-1"

- A. BUREAU NUMBER
- B. PERMANENT UNIT CODE
- C. DATE OF ACTION (MONTH, DAY, YEAR)
- D. ACTION CODE
- E. STATUS CODE
- F. MODEL DESIGNATION
- G. PERIOD NUMBER
- H. PERIOD END DATE (PED)
- I. EXTENSION NUMBER
- J. STRIKE/DAMAGE CODE
- K. ACCEPTANCE DATE
- L. AIRCRAFT SERVICE PERIOD ADJUSTMENT (ASPA) INSPECTION REPORT CODES
- M. OPERATING SERVICE MONTHS (OPSERVMOS) ACCUMULATED AT PED
- N. ESTIMATED REWORK COMPLETION DATE
- O. PERMANENT UNIT CODE (PUC) OF UNIT OR REWORK ACTIVITY
- P. UNIT RECEIVED FROM/COMMAND CODE
- Q. UNASSIGNED
- R. ORGANIZATION CODE
- S. OPERATIONAL CATEGORY CODE
- T. FLEET ASSIGNED CODE
- U. MID-TERM
- V. AIRCRAFT LOCATION
- W, X, Y. UNASSIGNED
- Z. DELETE/CORRECT

Figure 7-1.—OPNAV XRAY message format.

Table 7-1.—Required OPNAV XRAY Items

XRAY DATA ITEMS	XRAY ACTION CODES											
	Change in Reporting						No Change in Reporting Custodian					
	A	F	G	R	Y	E	H	M	S	X	Part I *	L Part II **
A. BUNO	R	R	R	R	R	R	R	R	R	R		R
B. PUC	R	R	R	R	R	R	R	R	R	R	R	R
C. Date of Action	R	R	R	R	R	R	R	R	R	R	R	R
D. Action Code	R	R	R	R	R	R	R	R	R	R		R
E. Status Code	R	R	R	R	R	R	R	R	R	R		R
F. Model Designation	R	R	R	R	R	R	R	R	R	R		R
G. Period Number	R	R	R	R	R	R	R	1	R	1		R
H. PED	R	R	R	R	R	R	R	1	R	1		R
I. Extension Number				2	2			1		1		2
J. Strike/Damage Code		1		1	3	1		1	R	1		
K. Acceptance Date	R		2	2	R							
L. ASPA/PACE			4	R	R	2	4	1		1		R
M. Operating Service Months (OSM)	R	R	R	R	R	R	R	1	R	1		R
N. Estimated Rework Completion Date		1		1	3	1		1		1		
O. PUC of the Inservice Activity			1	1	3	1	1	1		1		
P. Unit Received From/Command Code		R	R	R	R							
R. AV-3M Organization Code											R	
S. Operational Status Category Code											1	
T. Fleet Assigned Code											1	
U. Mid-Term				1	3							
V. Aircraft Location	R	R	R	R	R	R	R	R	R	R		R
Z. Delete/Correct	2	2	2	2	2	2	2	2	2	2	2	2
Remarks	R	R	R	R	R	R	R	R	R	R	R	
<p>Legend:</p> <p>R-Required.</p> <p>1 - Report only when item content is different than information previously reported.</p> <p>2 - Required if applicable.</p> <p>3 - Reported only on reinstatement to restore appropriate information that existed prior to strike action.</p> <p>4 - PACE aircraft only.</p> <p>Blank - Not reported.</p> <p>* Part I is used for unit establishment or disestablishment, location change, operational status category change, or fleet assignment change.</p> <p>** Both Parts I and II are used for location change.</p>												

however, the items enclosed in quotation marks remain the same on every report.

First, the abbreviated name of the controlling custodian of the aircraft that is being reported is entered. The next item is the word "XRAY." The third part of this line is the abbreviated name of the reporting custodian and detachment number, if applicable, of the aircraft that is being reported. Next, the serial number of the OPNAV XRAY message is entered. The report symbol follows the serial number. A typical subject line would read as shown below.

SUBJ: LANT XRAY VP-5 099 5442-1

Item A—Bureau Number (BUNO). The BUNO of the aircraft that is being reported is entered here. This is important because the BUNO is the only single identification that is different for every aircraft in the Navy, regardless of type or model. The CNO maintains and controls the master BUNO register.

Item B—Permanent Unit Code (PUC). The six-digit PUC that identifies the reporting custodian of the aircraft that is being reported is entered here. Each reporting custodian of aircraft has been assigned a PUC by the CNO, or, in the case of detachments, by the controlling custodian.

Item C—Date of Action. The day, month, and year the action occurred is reported here. The day, month, and year is expressed as a six-digit number. For example, 21 March 1998 would be reported as 032198.

Item D—Action Code. The Action code is a one-digit code that describes the particular action being reported. Action codes used for reporting a change in either reporting or controlling custody are A, F, G, R, and Y. Action codes used for reporting a change in status are E, H, L, M, S, and X. Permissible Action codes are shown in table 7-2. Permissible Action code/Status code combinations can be found in OPNAVINST 5442.2.

Item E—Status Code. Reported under item E is the new Status code of the aircraft. If the action being reported does not involve a change in status, the current applicable Status code is entered. A Status code describes the condition of the aircraft. A complete list of authorized Status codes is shown in Table 7-3.

Item F—Model Designation. The complete model designation of the aircraft being reported is entered here; for example, A-4E, F-14C and F/A-18D.

Item G—Period Number. The period number represents the period in which the aircraft is serving (or

last served, if not currently operating). The period number changes only when an aircraft begins a new operating period after standard rework or new production.

Item H—Period End Date (PED). This element of information is related to item G above in that PED represents the date at which the period indicated in that item is scheduled to be (or was) completed. The period commences when the aircraft is first reported in status **Axx** following acceptance or rework. The month in which an aircraft is received from Naval Air Systems Command Fleet Support (NAVAIRSYSCOM FS) custody is counted as NO month in regard to operating period. The month in which an aircraft is predicted to return to NAVAIRSYSCOM FS custody is counted as 1 month. For example, an aircraft with an operating period of 24 months is received into an operating command from NAVAIRSYSCOM FS custody in June 1997. The predicted PED for this aircraft is June 1999. If extensions are granted on the service or period of an aircraft, the PED is not changed. A PED computation chart is shown in table 7-4.

NOTE: The **xx** in above Status code stands for two digits that can further define the code.

Item I—Extension Number. The number in this item pertains to extensions of the current tour or period only. Extensions granted on second or subsequent periods are renumbered. Extensions granted on second or subsequent periods have extension numbers that start with the number 01 in each period. Action code X is used to describe the initiation of extensions.

Item J—Strike/Damage Code. If the action that is being reported involves the strike or damage of aircraft, the four-character Strike/Damage Code that describes the circumstance is entered in item J.

NOTE: Strike is the official action that removes an aircraft from the list of Navy aircraft. See table 7-5 for Strike and Damage Codes.

Categories 1 through 4 are used to describe the main reasons for which an aircraft can be stricken. Category 5 is used for substantially damaged aircraft that are repairable. Each category requires separate administrative procedures. These categories are discussed in the following paragraphs.

Category 1—Damage. An aircraft is stricken in category 1 if the aircraft is lost or if the aircraft is damaged to such an extent that its restoration to serviceability would be uneconomical or militarily impractical. This category is the one most often used by operating activities.

Table 7-2.—Action Codes

CHANGES IN CUSTODY	
A	Acceptance. Use only to report the acceptance into the inventory of new production aircraft. Normally used only by NAVAIR Fleet Support (FS) activities.
F	Receipt at the End of Operating Service Period. Used only by NAVAIR FS activities to report receipt of aircraft returned for standard rework (SDLM), storage, or retirement at the end of an operating service period.
G	Receipt at the Start of an Operating Service Period. Used by reporting custodians to report receipt of an aircraft that is beginning (not resuming) an operating service period; for example, an aircraft returning from standard rework.
R	Receipt of an aircraft that is neither beginning nor ending a service period. Use to report an aircraft that has accumulated time in a current service period.
Y	Reinstatement. Used to report the reinstatement of a previously stricken aircraft or the addition of a used aircraft to the naval inventory.
CHANGES IN STATUS	
E	End of an Operating Period. Used by reporting custodians of all controlling custodians to report termination of an aircraft's operating service period. Reports that the aircraft is en route to or in physical custody of a rework facility. No change in custody is involved.
H	Start of a Operating Service Period. Used by reporting custodian to report an aircraft that has completed SDLM and is beginning an operating service period. No change of custody is involved.
L	Change of Location
M	Model Designation Change. Used to report model designation changes or conversions by a depot-level maintenance activity.
S	Strike. Used to report the strike of an aircraft (Status code 1S0, 2S0, 3S0, or 4S0).
X	Other change. Use action "X" when no other Action code would be appropriate.

Table 7-3.—Aircraft Status Codes

STATUS CODES FOR USE WITH OPERATING AIRCRAFT	
<u>ASSIGNED PRIMARY USE</u>	<u>IN OPERATING STATUS 1/</u>
Combat	A1_ <u>2/</u>
Combat Support	A2_
Undergraduate Training	A3_
Reserve Training	A4_
FRS Aircrew Training	A6_
Operational Test and Evaluation	A7_
Developmental Test and Evaluation	AJ_
TPS, Adversary, FTRG	A9_
Test Support Aircraft, Navy Operated	AK_
Search and Rescue	AL_
Executive Transport	AM_
 Note 1/ NASC FS reporting custodians will never report aircraft in Status code <u>A</u> .	
 Note 2/ Third position of operating status will be reported as follows:	
 O-Operating	
 1—Aircraft in process of ASPA from preparation and inspection through assembly.	
 2—Aircraft in process of depot repair on-site of reporting custodian.	
 Only <u>A</u> Status codes are "IN" material condition reporting status (MCRS).	

Category 2—Depreciation. An aircraft is stricken in category 2 if the aircraft has depreciated by time and usage to such an extent that its restoration to serviceability would be uneconomical or militarily impractical. Only NAVAIRSYSCOM, with approval of the CNO, may declare an aircraft eligible for category 2 strike.

Category 3—Administrative. An aircraft is stricken in category 3 when it is stricken by the CNO

for special administrative reasons. This category includes strikes because of model obsolescence, excess to Navy requirements, diversion to ground training or technical use, transfer to non-Navy recipients, intentional destruction in test or training, jettisoned, abandoned, cannibalized, or the planned expenditures of drones.

Category 4—Completed Service Life. An aircraft is stricken in category 4 if its eligibility for strike is due

Table 7-3.—Aircraft Status Codes—Continued

STATUS CODES FOR DEPOT LEVEL MAINTENANCE (PIPELINE)					
<u>Rework Process</u>	<u>En route to Rework</u>		<u>Awaiting Rework</u>		<u>In Process</u>
	<u>By Airlift</u>	<u>Flight By Surface</u>	<u>Flyable</u>	<u>Not Flyable</u>	
Standard Depot Maintenance (Standard Rework) 3/					
SDLM	F10	FA0	E1_	EA_	D10
SDLM/MOD	F20	FB0	E2_	EB_	D20
SDLM/CILOP	F30	FC0	E3_	EC_	D30
SDLM	F40	FD0	E4_	ED_	D40
AWI	F50	FE0	E5_	EE_	D50
SPECIAL DEPOT LEVEL MAINTENANCE (SPECIAL REWORK) 3/					
Conversion	I10	IA0	H10	HA0	G1_
Repair	I30	IC0	H30	HC0	G30
Modernization/ Modification	I40	ID0	H40	HD0	G4_
ASPA Inspection					G50
<u>Rework Process Complete in NASC FS</u>			<u>En route to Operating</u>		
<u>Physical Custody Awaiting Return to</u>			<u>From Rework</u>		
<u>Operating</u>					
<u>Aircraft RFI:</u>			<u>By Flight/</u>		<u>BY</u>
Awaiting Movement	BY1		<u>Airlift</u>		<u>Surface</u>
Unassigned	BY2		C10		CA0
<u>Not RFI:</u>	BY3				
<u>Note 3/:</u>	The third position of Status codes E__, G1_, or G4_ will be reported as:				
	0—Aircraft is located at NADEP or commercial rework activity site for rework.				
	1—Aircraft is located at other than NADEP or commercial rework activity site for special rework to be performed by depot field team or awaiting transit to SDLM after ASPA non-deferral.				
	Note: E-1 Status code may only be used when immediate period termination is recommended on ASPA non-deferred aircraft or ASPA non-deferred aircraft is over 90 days beyond PED. ACC approval is required to place aircraft in “E” code status.				

Table 7-3.—Aircraft Status Codes-Continued

STATUS CODES FOR USE WITH NEW PRODUCTION AIRCRAFT IN PROCESS OF FIRST DELIVERY			
<u>REGULAR ACCEPTANCE RFI:</u>		<u>PROVISIONAL ACCEPTANCE NOT RFI:</u>	
Awaiting Movement	BXO	VF0	
Not RFI	BA0		

MISCELLANEOUS STATUS CODES			
<u>CONTRACTOR HELD (BAILMENT)</u>		<u>ON LOAN FROM THE NAVY:</u>	
1.	For RDT&E Custody	FS Custody	
	Test Aircraft	TJ0	All Categories U00
	Test Support	TKO	
	Contract Pending	TR0	
	Other	TT0	<u>UNDER LEASE FROM THE NAVY</u>
			Other U10
2.	FS Custody	<u>ON LOAN TO THE NAVY RDT&E CUSTODY</u>	
	Other Contractor	TV0	Other U50
			Test Aircraft U60
			Test Support U70
			Drones 000

STATUS CODES FOR RESERVE/RETENTION AIRCRAFT (AIRCRAFT STORED IN NASC FS CUSTODY)				
Condition of Aircraft	En route To Storage	Flyable	In Storage	
			Not Flyable	Mobilization Reserve
<u>Standard Rework Not Required</u>				
Undamaged aircraft	J10	M10	M50	N10
Damaged aircraft	J10	M20	M60	N20
Reconstitution Reserve		MRO		
Foreign Military Sale	J11	M12	M51	N11
<u>Standard Rework Required</u>				
Undamaged aircraft	J10	M30	M70	N30
Damaged aircraft	J10	M40	M80	N40

Table 7-3.—Aircraft Status Codes—Continued

STATUS CODES FOR USE WITH RETIREMENT AND STRIKE AIRCRAFT				
<u>CATEGORY</u>	<u>AWAITING DECISION TO STRIKE</u>	<u>AWAITING STRIKE NOT MAP/FMS</u>	<u>FOR MAP/FMS</u>	<u>STRICKEN</u>
Category 1 Damage	Y 00	—	—	1 S 0
Category 2 Depreciation	PB0	S20	R00	2S0
Category 3 Administrative	PC0	S30	R00	3S0
Category 4 Service Life Complete	PD0	S40	R00	4S0

to completion of its service life. Completion of service life is determined by the NAVAIRSYSCOM and is based on analysis of the material condition of the aircraft and current OPNAV directives.

An aircraft is always stricken in the lowest numbered category when more than one category is applicable. For example, an aircraft eligible for strike by reason of completed service life should be stricken in category 4 unless strike damage is also involved. When damage is also involved the aircraft should be stricken in category 1.

Category 5—Aircraft Damage-Repairable. Strike and Damage code 5 (1 through 4 apply to strikes only) pertains to aircraft that have been damaged, and repair was deemed to be economically feasible.

The first character of a Strike/Damage Code is the number that denotes damage or one of the four categories of strike. The second character indicates the employment or use of the aircraft; the third character denotes cause or condition; and the fourth character indicates the disposition of the aircraft. The Strike code 1AA2 indicates an aircraft stricken in category 1 due to damage sustained in flight during unit training and that the wreckage of the aircraft was inaccessible.

Item K—Acceptance Date. This item is used to report the acceptance date of new aircraft, reinstated aircraft, or receipt of an aircraft from another aircraft controlling custodian. For new aircraft, the date the Navy accepted custody from the contractor is entered. In the case of reinstatement of a previously stricken Navy aircraft, the original acceptance date (when the aircraft was new) is reported.

Item L—Aircraft Service Period Adjustment (ASP)/Paint and Corrosion Evaluation (PACE). ASPA evaluates the material condition of an aircraft that is at or near its PED for authorization to operate beyond the operating service period outlined in *Policies and Peacetime Planning Factors Governing The Use of Naval Aircraft*, OPNAVINST 3110.11. Upon completion of an ASPA inspection, adjustment of the PED and operating service months (OPSERMOS) may be required.

Item M—Operating Service Months Accumulated at PED. For aircraft that are undergoing a standard service life, this number will represent the total accumulation of OPSERMOS as of the end month and year reported in item H (PED). If item H represents a future date, as in the case of an aircraft that

Table 7-4.—Period End Date (PED) Computation Chart

OSM	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
0	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
1	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB
2	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR
3	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR
4	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY
5	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN
6	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL
7	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG
8	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
9	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
10	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
11	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
12	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
13	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB
14	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR
15	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR
16	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY
17	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN
18	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL
19	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG
20	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
21	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
22	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
23	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
24	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
25	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB
26	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR
27	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR
28	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY
29	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN
30	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL
31	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG
32	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
33	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
34	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
35	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
37	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB
38	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR
39	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR
40	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY
41	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN
42	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL
43	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG
44	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
45	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
46	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
47	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
48	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+
49	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB
50	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR
51	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR
52	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY
53	JUL	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN
54	AUG	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL
55	SEP	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG
56	OCT	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
57	NOV	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
58	DEC	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
59	JAN+	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
60	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN+

KEY “+” Begins new calendar year (add “1” to year of period start)

Table 7-5.—Aircraft Strike and Damage Codes

CATEGORY (FIRST POSITION)

1 CATEGORY 1 STRIKE DUE DAMAGE	2 CATEGORY 2 STRIKE DUE DEPRECIATION	3 CATEGORY 3 STRIKE FOR ADMIN REASONS	4 CATEGORY 4 STRIKE DUE COMP OF SERVICE LIFE	5 CATEGORY 5 DAMAGE AIRCRAFT REPAIRABLE
---	---	---	---	---

EMPLOYMENT (SECOND POSITION)

<u>FLIGHT:</u>	<u>NOT IN FLIGHT:</u>
A—UNIT TRAINING	1—PARKED ASHORE
J—FERRY	4—IN TOW/NONFLIGHT TAXI
K—EXPERIMENT DEVELOPMENT, EVALUATION	5—ABOARD SHIP
L—FLIGHT TEST	7—LOADING OR UNLOADING
M—UTILITY	8—UNDERGOING REWORK
P—SEARCH AND RESCUE	9—IN STORAGE
R—TRANSPORT	
S—ATTACK	
U—ANTI-AIR WARFARE	
V—RECONNAISSANCE	
W—AIR DEFENSE	

CAUSE (THIRD POSITION)

NOT ENEMY ACTION	ENEMY ACTION
<u>INCIDENT TO FLIGHT</u> A—AIRCRAFT ACCIDENT OR INCIDENT EXCEPT WHENEVER D, E, F BELOW NOT APPLICABLE D—GUN, ROCKET, OR MISSILE FIRE FROM DRONE EXPENDITURE (SEE F BELOW) E—MISSING; CAUSE UNKNOWN F—TARGET DRONE EXPENDITURE <u>NOT INCIDENT TO FLIGHT:</u> H—STORM (INCLUDING RESULTANT FIRES, COLLAPSE, OR DAMAGE OF FACILITIES ETC.) I—ACCIDENTAL DAMAGE BY OWN FORCES ORDNANCE (INCLUDING RESULTANT FIRES, ETC.) J—FIRE OR EXPLOSION (OTHER THAN "H" OR "I" ABOVE) K—DAMAGE FROM OTHER THAN INCIDENT (E.G., TOWING OR NONFLIGHT TAXI ACCIDENT) L—AIRCRAFT ON LOAN TO NAVY RETURNED O—STANDARD SERVICE LIFE COMPLETE P—EXCESS TO INVENTORY REQUIREMENTS Q—OBSOLETE R—ADMINISTRATIVE ACTION, NOT ELSEWHERE CLASSIFIED	<u>INCIDENT TO FLIGHT</u> S—ENEMY ORDNANCE V—MISSING; CAUSE UNKNOWN Y—LANDING OR TAKEOFF MISHAP DUE TO ENEMY INFLICTED DAMAGE TO BASE FACILITY Z—SABOTAGE, CAUSING LOSS <u>NOT INCIDENT TO FLIGHT:</u> 1—ATTACK BY ENEMY AIRCRAFT 2—ORDNANCE FROM ENEMY SURFACE WEAPONS 5—SABOTAGE, CAUSING LOSS 6—SEIZURE OF BASE BY ENEMY 7—IMMINENT OR PROBABLE CAPTURE BY ENEMY

Table 7-5.—Aircraft Strike and Damage Codes—Continued

**DISPOSITION (FOURTH POSITION)
APPLICABLE TO STRICKEN AIRCRAFT**

1—ROUTINE SALVAGE OR SARDIP FOR PARTS AND SCRAP	5—CANNIBALIZED, WHILE OTHERWISE IN OPERATIONAL OR REPAIRABLE CONDITION, AS AN OPERATIONAL REQUIREMENT TO OBTAIN PARTS FOR OTHER AIRCRAFT
2—MISSING OR COMPLETELY DESTROYED, OR ECONOMICALLY INACCESSIBLE	6—INTERNEED BY FOREIGN POWER
3—JETTISONED OR ABANDONED IN OPERATIONAL OR REPAIRABLE CONDITION, AS MILITARILY ADVANTAGEOUS TO DO SO	7—CAPTURED BY ENEMY
4—INTENTIONALLY DESTROYED TO NULLIFY CAPTURE OR INTERNMENT	8—TRANSFERRED TO NON-NAVY RECIPIENT
	9—DIVERTED TO GROUND TRAINING OR TECHNICAL USES WITHIN THE NAVY
	0—DISPOSITION INSTRUCTIONS UNKNOWN

APPLICABLE TO DAMAGED AIRCRAFT

A—TO BE RESTORED BY ORGANIZATIONAL-LEVEL MAINTENANCE ACTIVITY
B—TO BE RESTORED BY INTERMEDIATE-LEVEL MAINTENANCE ACTIVITY
C—TO BE RESTORED BY DEPOT-LEVEL MAINTENANCE ACTIVITY

is currently serving in an operating period, the OPSERV MOS reported in item M represents the expected accumulation when PED is reached.

Item N—Estimated Rework Completion Date. This item is included on only those OPNAV XRAY reports that show that an aircraft is undergoing a standard or special rework process (Status codes **Ax2**, **Dxx**, or **Gxx**). Item N is omitted from all other OPNAV XRAY reports. The date reported indicates the estimated completion date of the rework and includes time for the associated check flight. If the most recently reported rework completion date changes by 2 or more days, you must submit another OPNAV XRAY report that shows the new revised estimated completion date.

NOTE: The **x** and **xx** in the above Status code stand for one or two digits that can further define the codes.

Item O—Permanent Unit Code (PUC). This item is required on in-service OPNAV XRAY reports only. The item identifies, at the CNO level, the unit that has physical custody of the aircraft.

Item P—Unit -Received From/Command Code. This item is applicable only on OPNAV XRAY reports

that report the receipt (Action codes F, G, R, and Y) of aircraft. Report the name of the reporting custodian from whom the aircraft was received and the appropriate two-digit command code of the transferring activity; for example, VP-5/20. Command codes are as follows:

LANT Navy 10	CNARF Navy 30
LANT Marine 11	NARF Marine 31
PAC Navy 20	CNATRA 40
PAC Marine 21	NASC T&E 50
NASC STF 60	NASC FS 70
Miscellaneous 90	

Item Q—Unassigned.

Item R—3-M Organization Code. This item is applicable to change of location OPNAV XRAY reports only. This is the three-character organization code assigned to an activity that identifies that activity for 3-M purposes.

Item S—Operational Status Category Code. This single character code is reported whenever a change occurs. Refer to OPNAVINST 5442.2 for

detailed explanations of permissible operational Status category codes.

Item T—Fleet Assigned Code. A single-character code used to show that a unit is being or has been physically relocated in conjunction with an operational category change. This code should reflect the ultimate destination of the ship or unit. Refer to OPNAVINST 5442.2 for a list of fleet assigned codes.

Item U—Mid-Term. This item is used by naval air rework facilities and commercial rework facilities only to report an aircraft that is entering mid-term special rework. Item U is reported as M1. M1 indicates first mid-term rework and appears only in the initial in-service OPNAV XRAY report that is submitted by the rework facility. Subsequent mid-terms are reported as M2, M3, and so forth, as required.

Item V—Aircraft Location. Entries are required in item V on each OPNAV XRAY report except part I, location change. Enter name of the ship, station, or facility where the aircraft is physically located. Do not include activity designation or ship type and hull number (for example, CV-67, USS, NAS, NAF, or MCAS). Report as KENNEDY, NIMITZ, OCEANA, or WHIDBEY).

Item W, X, Y—Unassigned.

Item Z—Delete/Correct. Item Z is used for correction of erroneous OPNAV XRAY reports.

Remarks: Entries are required in the Remarks section of all OPNAV XRAY report transactions. Refer to the latest edition of OPNAVINST 5442.2 for Action codes that require specific remarks.

Multiple Action OPNAV XRAY Reports

Multiple OPNAV XRAY report actions may be reported with one message as long as the message involves one controlling and one reporting custodian. The heading of a message that reports multiple actions is the same as the headings for a message that reports single actions. Items for the first action are arranged in a vertical column on the left side of the page. The second action, also arranged vertically, falls to the right of the first as a second column. Additional actions are arranged likewise. Multiple transactions are made only when more than one aircraft is involved, and may not be submitted on the same aircraft. Figure 7-2 illustrates a multiple action OPNAV XRAY message as the message would be prepared by an AZ for transmission.

The first action reports that BUNO 114929 is undergoing special rework for modification. The

second action reports that BUNO 113841 is also undergoing special rework. The revised estimated completion date is also reported.

Whenever a reporting custodian moves from one location to another, whether the move is aboard ship or to another station, that fact must be reported by OPNAV XRAY message to the controlling custodian with an information copy to the CNO and COMNAVAIRSYSCOM. The heading and subject line are the same as for a routine OPNAV XRAY message. Refer to OPNAVINST 5442.2 for specific remarks required for change of location OPNAV XRAY reports.

- Q3. Items A through F, and V are required on all OPNAV XRAY reports except part I, change of location reports. What other element is required on all OPNAV XRAY reports?*
- Q4. What "INFO" addressee must appear on all OPNAV XRAY reports?*
- Q5. What items of information make up the "SUBJ" line of an OPNAV XRAY report?*
- Q6. The office of what official assigns and maintains the master bureau number listing?*
- Q7. How should the date 07 Dec 96 appear in item C of the OPNAV XRAY report?*
- Q8. What OPNAV XRAY Action codes are used to report changes in aircraft custody?*
- Q9. What OPNAV XRAY Action code is used to report a change in aircraft model designation?*
- Q10. What OPNAV XRAY Status code should be used to describe an aircraft in the process of an Aircraft Service Period Adjustment (ASPA) inspection?*
- Q11. How many different categories of Strike and Damage codes are used in aircraft inventory reporting?*
- Q12. What category of aircraft Strike and Damage code is used to report substantially damaged but repairable aircraft?*
- Q13. Item N on the OPNAV XRAY report is used to report the estimated completion date of any special or standard rework that is being performed. Another OPNAV XRAY report must be submitted that updates the previous estimated completion date when the estimated completion date changes by what minimum number of days?*

```

R 221111Z APR 99 ZYB PSN 340362Q18
FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N421/N22CS/N422C56/N422C57//
COMSTRKFIGHTWINGPAC LEMOORE CA//N45//
INFO COMNAVAIRSYS COM PATUXENT RIVER MD//3.1.8.1/3.6.2.3//
NAVAIRSYS COM IND CAP PATUXENT RIVER MD//AIR-6.0//
NAVSEALOGCEN MECHANICSBURG PA//611/612//
COMCARAIRWINGNINE
COMNAVAIRPAC DATA SAN DIEGO CA/JJJ//
BT
UNCLAS //N05442//
SUBJ: PAC XRAY VFA-000 013 OPNAV 5442-1//
A. 164970 164900
B. 009047 009047
C. 042199 042299
D. X X
E. A10 G41
F. FA-18C FA-18C
N. 050199
V. LEMOORE LEMOORE
REMARKS: BUNO 164970 COMPLETED SPEC RWK FOR INC OF AFC-001.
BUNO 164900 INDUCTED INTO SPEC RWK FOR INC OF AFC-001.
LAST XRAY 012 DTG 211311Z APR 99.

```

Figure 7-2.—Multiple action OPNAV XRAY message.

Q14. You are stationed at NAS Miramar. When initiating an OPNAV XRAY report, what entry should you make for item "V" location?

OPNAV XRAY Correction Procedures

LEARNING OBJECTIVE: Describe OPNAV XRAY report correction procedures.

An OPNAV XRAY message cannot be canceled. If an OPNAV XRAY report transaction has been submitted that contains incorrect data, the transaction must be corrected not later than 1200 the day after the error is discovered. Correct the transaction by taking the following steps:

1. If the OPNAV XRAY report has an incorrect primary or secondary address, resubmit the transaction directed to all required addressees.

2. If the Subject line or Remarks section has errors, submit a message that references the OPNAV XRAY report serial number and message date-time group (DTG) and explains the necessary action.

3. If the transaction to be corrected involves an error in one or more data items, a correction OPNAV XRAY report must be submitted. The corrected OPNAV XRAY report uses the same OPNAV XRAY report serial number as the erroneous report. The corrected OPNAV XRAY report consists of two transactions. The first transaction is reported exactly as the previously submitted incorrect OPNAV XRAY report with the exception of the word "DELETE" in item Z. In the second transaction, the correct information is reported and includes the word "CORRECT" in item Z. All corrective OPNAV XRAY messages must info the CNO and the Naval Sea Logistics Center (NAVSEALOGCEN) as additional

info addressees. Figure 7-3 is an example of a corrected OPNAV XRAY report.

Q15. What is the deadline for submission of corrected OPNAV XRAY reports?

Q16. When corrected OPNAV XRAY reports are submitted, what notation indicates that an item should be corrected or deleted?

AIRCRAFT RECORD "A" CARD

LEARNING OBJECTIVES: Define the purpose of the Aircraft Record "A" card. Define the retention requirements of the Aircraft Record "A" card. Describe the entries documented on the Aircraft Record "A" card.

An Aircraft Record "A" card, OPNAV Form 5442/9, is maintained by reporting custodians for each aircraft in their reporting custody. The Aircraft Record "A" card provides custodians of naval aircraft with a local history of assigned aircraft and a ready reference

for preparation of the Aircraft Accounting Audit Report. The card (figs. 7-4 and 7-5) is initiated upon receipt of the aircraft. The card is retained by the unit for a period of 12 months following the date of strike or transfer from the unit's reporting custody. A copy of the current card should be placed in the manila envelope in the back of the logbook whenever the aircraft is transferred to another unit or physically departs the unit for standard depot level maintenance (SDLM) or special rework.

NOTE: The Aircraft Record "A" card is also maintained in electronic form in NALCOMIS.

As you read this section, refer to figures 7-4 and 7-5. The upper portion of the front of the card contains spaces for statistical data (which may be typed in) that concerns the aircraft. Below this, on the left side of the card, space is provided to record OPNAV XRAY report data. The lower right section and the reverse side of the card is used to record month-by-month flight and landing data. Below is a brief description of each section of the Aircraft Record "A" card.

```
FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N421/N422C5/N422C56/N422C57//
COMSTRKFIGHTWINGPAC LEMOORE CA//N45//
INFO CNO WASHINGTON DC
COMNAVAIRSYSCOM PATUXENT RIVER MD//3.1.8.1/3.6.2.3//
NAVAIRSYSCOMINDCAP PATUXENT RIVER MD//AIR-6.0//
NAVSEALOGCEN MECHANICSBURG PA.//611/612//
COMCARAIRWINGNINE
COMNAVAIRPAC DATA SAN DIEGO CA//JJJ//
BT
UNCLASS //N05442//
MSGID/GENADMIN/VFA-000//
SUBJ: PAC XRAY CORRECTION VFA-000 013 OPNAV 5442-1//
A.    164970          164970
B.    009047          009047
C.    042199          042299
D.    X              X
E.    A10            A10
F.    FA-18C         FA-18C
V.    LEMOORE        LEMOORE
Z.    DELETE         CORRECT
REMARKS: CHANGE DATE OF ACTION TO 042299 VICE 042199. LAST XRAY
012 DTG 211311Z APR 99
```

Figure 7-3.—OPNAV XRAY Correction Report.

Aircraft Model. The model designation is entered in the first space at the top left of the card; for example, A-7E, F-14B, or F/A-18A.

Bureau number (BUNO). Enter the six-digit BUNO assigned to that particular aircraft. Each aircraft is assigned a BUNO for identification and record purposes. This number remains with the same aircraft from acceptance by the Navy until the aircraft is retired or stricken from the Navy inventory. The number is not reused or reissued to another aircraft.

Received From and Transferred To. These two blocks are self-explanatory. As long as the aircraft is in the custody of the reporting custodian that maintains the "A" card, only the "Received From" line is filled in. When the aircraft is transferred, the "Transferred To" line is completed, and the card is moved to the inactive "A" card file for 12 months.

Permanent Unit Code (PUC). The second line at the right side shows the present reporting custodian and Permanent Unit Code.

The next group of blocks provides data about the current aircraft operating service life.

NOTE: When a new aircraft is accepted, it is known that the aircraft will go eventually to a depot maintenance activity for rework. This occurs after the aircraft has accumulated a predetermined number of operating service months (as opposed to calendar months) or flight hours (in some cases). This operating interval is known as the operating period.

The **period number** is entered in the Period block. When the aircraft returns to an operating status after standard rework, it acquires a new period number. The new period number may be transcribed from the Monthly Flight Summary (MFS) form of the aircraft logbook.

The **PED** is inserted in the space labeled PED. The PED can also be obtained from the MFS form, or computed by using procedures outlined in OPNAVINST 5442.2.

The **OPSERMOS** accumulated as of the PED is entered in the space next to the PED. OPSERMOS should be computed by using procedures outlined in OPNAVINST 5442.2.

A corresponding section (Planning Factors for Model for Period) is set aside to record operating service period planning factors as they relate to the period.

The **operating service period (OSP)** is the specified length of a period either defined as months or

flight hours. OSP, operating service life (OSL), and utilization rates (if applicable) for specific aircraft can be found in OPNAVINST 3110.11.

The **OSL** is the specified length, in months, that an aircraft is programmed for total service with the Navy.

NOTE: The interval between PEDs is regulated by the CNO and varies with different models of aircraft. Period lengths may also be changed as data on service experience accumulate. The data may indicate that a given aircraft model is so well constructed that it can operate for longer periods of time between SDLMs. The opposite is also true, and period lengths may be shortened as well. Aircraft are not operated after the last day of the month of their PED unless specific permission for an extension has been granted by higher authority. Refer to the latest edition of OPNAVINST 3110.11 for more information on OSL, OPSERMOS, and OSP for specific type/model/series aircraft.

The lower left portion of the front side of the "A" card is used to record OPNAV XRAY reportable actions submitted on an aircraft. OPNAV XRAY reports that report change of location, fleet assignment, or operational status of an aircraft are NEVER recorded on the Aircraft Record "A" card. Reportable actions should be posted to the card as they occur. The following is a description of each block:

The **OPNAV XRAY serial number** is entered in the first block. The OPNAV XRAY serial number is the same serial number as the serial number of the corresponding OPNAV XRAY report.

The **Date of Action** is next. The date must appear exactly as it does in item "C" of the OPNAV XRAY report, that is as a six-digit month, day, and year date.

The **ACT** block is a coded letter used to identify the type of action reported. Remember, Action codes fall into two separate categories—Action codes that report changes in custody and Action codes that report an action other than change in custody. At any rate, the Action code recorded here should match the same Action code reported in the applicable OPNAV XRAY report.

The **Status Code** block contains the current aircraft status and indicates the classification of the use or condition of an aircraft.

The **PED** block reflects the current projected PED of the aircraft.

The **EXT** block is used for recording an extension to the present aircraft service period. Extensions are

granted in increments of 3 months each and do not change the PED previously established for that aircraft. Upon expiration of an extension, reporting custodians must either induct the aircraft into SDLM or request another extension.

NOTE: Aircraft that are eligible for the ASPA program, which screens aircraft for SDLM induction based on material condition, must be inspected by a depot team within 6 months before or 3 months after the PED. The results will be either a recommendation that the aircraft be inducted into SDLM prior to PED plus 90 days or that the aircraft's **PED be adjusted 12 months** (or equivalent flight hours) beyond the current PED. Aircraft that fail ASPA and are not inducted into SDLM prior to PED are received at a naval aviation depot (NADEP) and grounded.

The **reason or authority** for submission of the OPNAV XRAY report is entered in the REASON/AUTHORITY space. This is usually the DTG of a message or the number of an aircraft transfer order (ATO) that directed the reportable action.

Upon receipt of an aircraft, **Flying Hours In Period and Flying Hours In Life** should be filled in. New flight data is added to the hours listed in the previous IN PERIOD and IN LIFE spaces to provide a

cumulative total of aircraft flight data. The MO (month) and YR (year) spaces are completed to show when the indicated hours were flown.

The reverse side of the "A" card is used to record monthly flight activity data and is maintained like the monthly flight summary section of the aircraft logbook.

Q17. All information required for submission of the Aircraft Accounting Audit Report should be obtained from what source?

Q18. What is the retention requirement for Aircraft Record "A" Cards of transferred or stricken aircraft?

Q19. In what location should a copy of the current Aircraft Record "A" Card be placed upon transfer of the aircraft?

Q20. The reverse side of the Aircraft Record "A" Card contains space to document what type of data?

AIRCRAFT ACCOUNTING AUDIT REPORT

LEARNING OBJECTIVES: Define the purpose of the Aircraft Accounting Audit Report. Identify required data elements of the Aircraft Accounting Audit Report. Identify

```

FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N421/N422C5/N422C56/N422C57//
COMSTRKFIGHTWINGPAC LEMOORE CA//N45//
INFO COMNAVAIRSYSCOM PATUXENT RIVER MD//3.1.8.1/3.6.2.3//
NAVAIRSYSCOMINDCAP PATUXENT RIVER MD//AIR-6.0//
COMCARAIRWING NINE
COMCARAIRWING FIVE
STRKFITRON ONE NINE FIVE
COMNAVAIRPAC DATA SAN DIEGO CA//JJJ//
BT
UNCLAS //N05442//
SUBJ: AIRCRAFT ACCOUNTING AUDIT REPORT OPNAV 5442-6//
1. VFA-000 053198, 009047
A. 164900 164904 164906 164908 164980 164974
C. 042898 050598 050198 052798 042098 032398
E. A10 A10 A10 A10 A10 A10
F. FA-18C FA-18C FA-18C FA-18C FA-18C FA-18C
G. 000 000 000 000 000 000
H. 0000 0000 0000 0000 0000 0000
L. 910599 910699 910799 910799 000999 000799
M. 000 000 000 000 000 000
W. 000000 000000 000000 000000 000000 000000
X. 00 1726 001892 001778 001595 001292
A. 164960 164964 164968 164970 164972 164977
C. 051198 040998 052798 042198 052898 110897
E. A10 A10 A10 A10 G41 A10
F. FA-18C FA-18C FA-18C FA-18C FA-18C FA-18C
G. 000 000 000 000 000 000
H. 0000 0000 0000 0000 0000 0000
L. 000199 000299 000399 000499 000699 000899
M. 000 000 000 000 000 000
W. 000000 000000 000000 000000 000000 000000
X. 001398 001506 001469 001386 001221 001690//

```

Figure 7-6.—Aircraft Accounting Audit Report.

submission deadlines for Aircraft Accounting Audit Reports.

Each reporting custodian (including detachments of operating commands) prepares the aircraft accounting audit report (fig. 7-6) four times each year. The report provides for automatic audit and correction of the controlling custodian and the CNO data banks. The report should be prepared by each reporting custodian in message format.

Required Content of Report

The Aircraft Record "A" Card provides all of the detailed information required by the audit report. Each aircraft in the reporting custody of the unit at 2400 on the reporting date (31 August, 30 November, 28 or 29 February, or 31 May) must be included in the report. Aircraft received after or transferred before the reporting date are excluded. Refer to figures 7-4 and 7-5 while reading aircraft accounting audit report

preparation procedures. Instructions for the message outline are shown in figure 7-7.

The completed report will be submitted by message not later than 1600 on the third working day following the date of the report.

Aircraft Accounting Audit Report Correction Procedures

To correct a previously submitted audit report by using the message format, report the complete incorrect line entry (previously submitted). Follow the report of the incorrect line entry by the correct line entry as indicated in OPNAV 5442.2.

Method of Transmission

Submit the completed report by naval message. Do not combine Aircraft Accounting Audit Reports and End of Quarter Engine Reports.

FROM: Name of report originator
TO: Appropriate Aircraft Controlling Custodian (ACC) (for example, COMNAVAIRLANT, COMNAVAIRPAC)
INFO: When Deployed Under Commander in Chief, Atlantic Fleet, (CINCLANTFLT) Operational Control, COMNAVAIRPAC and Commander, Naval Air Reserve Force (COMNAVAIRESFOR) Reporting Custodians Will Info COMNAVAIRLANT. Conversely, COMNAVAIRLANT or COMNAVAIRESFOR Reporting Custodians Under Commander in Chief, Pacific Fleet (CINCPACFLT) Operational Control Will Info COMNAVAIRPAC. In Addition, COMNAVAIRSYSCOM, Cognizant Wing or Commanding General, Fleet Marine Force (CGFMF) and Marine Aircraft Group (MAG) if a Marine Corps Unit Will Also Be Info Addresses.
UNCLAS //N05442//
SUBJ: AIRCRAFT ACCOUNTING AUDIT REPORT (OPNAV 5442-6)
1. Unit Name, Report Date "MMDDYY", PUC 000001
A. Bureau Number.
C. Date of Action.
E. Status Code.
F. Model Designation.
G. Period Number.
H. Period End Date.
L. Aircraft Service Period Adjustment/Paint and Corrosion Evaluation (ASPA/PACE).
M. Operating Service Months.
W. Flying Hours In Period.
X. Flying Hours In Life.
Z. Delete/Correct (if necessary).

Figure 7-7.—Aircraft Accounting Audit Report message outline.

- Q21. *What report provides for automatic audit and update of the Chief of Naval Operations (CNOs) data bank for aircraft management?*
- Q22. *An Aircraft Accounting Audit Report is being drafted. What course of action should you take if you discover that the latest status of an aircraft has not been reported by OPNAV XRAY report?*
- Q23. *What is the submission deadline for Aircraft Accounting Audit Reports?*

SUMMARY

The *Aircraft Inventory Reporting System (AIR)*, OPNAVINST 5442.3, is the governing directive on the Aircraft Inventory Reporting system. The OPNAV XRAY report is used to report custody changes, status changes, inventory changes, and service life factors of aircraft. Certain items are required on all OPNAV XRAY reports. Items A through F, V, and Remarks are required on all OPNAV XRAY reports except Part I, change of location reports. The SUBJ line of an OPNAV XRAY report should specify the report symbol OPNAV 5442-1. The Chief of Naval Operations (CNO) assigns and maintains the master bureau number listing. The date on the OPNAV XRAY should appear in the month-day-year (mmddyy) format. Action codes A, F, G, R, and Y are required when change in aircraft custody is reported. OPNAV XRAY Action Code M is used to report a change in aircraft model designation. OPNAV XRAY Status Code G10 is used to describe an aircraft in the process of an Aircraft Service Period Adjustment (ASPA) inspection. There are five Strike and Damage codes that are used in aircraft inventory reporting. A category 5 Strike and Damage code is used to report substantially

damaged but repairable aircraft. When the estimated completion date for special or standard rework changes by at least 2 days, the change must be reported in item N on the OPNAV XRAY report. Item V in the OPNAV XRAY report identifies the location of the reporting custodian. A corrected OPNAV XRAY report must be submitted not later than 1200 hours the day the error is discovered. The word CORRECT or DELETE is used in item Z of the OPNAV XRAY report to indicate that an item should be corrected or deleted.

The Aircraft Accounting Audit Report provides for automatic audit and update of the CNO data bank for aircraft management. The information required for submission of the Aircraft Accounting Audit Report should be obtained from the- Aircraft Record "A" Card. An Aircraft Record "A" Card for a transferred or stricken aircraft should be retained for 12 months after the strike or transfer of the aircraft. When an aircraft is transferred, the current Aircraft Record "A" Card should be placed in the folder in the back inside cover of the aircraft logbook. The reverse side of the Aircraft "A" Card is used to document flight and landing data for the aircraft. If the latest status of an aircraft has not been reported by an OPNAV XRAY report when an Aircraft Accounting Audit Report is being prepared, an OPNAV XRAY report should be submitted with the update of the status. The submission deadline for the Aircraft Accounting Audit Report is 1600 hours on the third work day of the report date.

This chapter covered aircraft inventory reporting. Remember, today's naval aircraft cost millions of dollars each. Accurate aircraft locations and the latest aircraft status are critical to asset management as well as in support of naval activities' primary concern: mission readiness.

ANSWERS TO REVIEW QUESTIONS

- A1. *Aircraft Inventory Reporting System (AIRS), OPNAVINST 5442.2.*
- A2. *OPNAV XRAY Report.*
- A3. *Remarks.*
- A4. *COMNAVAIRSYSCOM.*
- A5. *Controlling custodian, the word XRAY, reporting custodian, serial number, and report symbol (OPNAV 5442-1).*
- A6. *The CNO.*
- A7. *120796.*
- A8. *A, F, G, R, Y.*
- A9. *M.*
- A10. *G50.*
- A11. *Five.*
- A12. *Five.*
- A13. *2 days.*
- A14. *MIRAMAR.*
- A15. *Not later than 1200 hours the day after the error is discovered.*
- A16. *The word CORRECT or DELETE in item Z.*
- A17. *Aircraft Record "A" Card.*
- A18. *12 months after strike or transfer of the aircraft.*
- A19. *In the manila folder in the back inside cover of the aircraft logbook.*
- A20. *Flight and landing data.*
- A21. *Aircraft Accounting Audit Report.*
- A22. *Submit an OPNAV XRAY report with the latest status.*
- A23. *1600 hours on the third working day of the report date.*

CHAPTER 8

AERONAUTICAL EQUIPMENT SERVICE RECORD (AESR)

Aircraft maintenance activities are also tasked with the responsibility of maintaining aeronautical equipment service record (AESR). Currently, organizational and intermediate level maintenance activities maintain AESRs in paper format as well as electronic format found in the Naval Aviation Logistics Command Management Information System (NALCOMIS).

AERONAUTICAL EQUIPMENT SERVICE RECORD (AESR) DESCRIPTION

LEARNING OBJECTIVE: Define the purpose of the Aeronautical Equipment Service Record (AESR).

The Aeronautical Equipment Service Record (AESR) is the log used to maintain records on aeronautical equipment that are an integral part of the aircraft. The AESR is a loose-leaf log that is contained within a separate cover. The log can be inserted in the aircraft logbook binder, or the log may stand alone.

The AESR is maintained in much the same manner as the aircraft logbook. Many of the records used in the aircraft logbook are also used in the AESR. In this chapter, we will discuss records common to the aircraft logbook and AESR, but we will focus more on records unique to the AESR.

ORIGIN

LEARNING OBJECTIVE: Identify the activity that originates AESRs.

The AESR is initiated by the activity that originally accepted the equipment for the Navy, and the AESR is subsequently maintained by the activity that has custody of the equipment. When equipment is installed as part of the aircraft, the AESR is maintained concurrently with the aircraft logbook, and the record becomes a part of the logbook.

Q1. What log is used to maintain records on the aeronautical equipment that is an integral part of an aircraft?

Q2. What activity initiates the AESR?

APPLICATION

LEARNING OBJECTIVE: Identify equipment that requires an AESR.

An AESR is required for each of the specific equipments listed below:

- Aircraft power plants (engines)
- Auxiliary power unit (APU)
- Airborne gun pods
- Low-level escape system
- Propeller assembly
- In-flight refueling store/package
- AN/ALQ-99 pod
- Aeronautical Expeditionary Airfield M-11, M-22, M-23, V-1, V-7, and L series lighting systems
- Gas Turbine Power Plant (7LM 1500 PB-104)
- Engine test cell/stand
- MK-105 magnetic minesweeping gear
- Support equipment gas turbine engines (GTEs)

NOTE: Each aircraft has specific AESR equipment requirements. The periodic maintenance information card (PMIC) deck for the specific type, model, and series of equipment contains AESR equipment requirements. In case of loss, damage, or destruction of an AESR, follow the same reconstruction procedures as those used for an aircraft logbook.

MAINTAINING THE AESR

LEARNING OBJECTIVE: Describe the disposition procedures for AESR data that has no designated place in the AESR.

The AESR is maintained similarly to the aircraft logbook. Since the AESR is in loose-leaf form, the full

identification data and serial number for each piece of equipment is inserted on each page. This ensures that each page can be identified if the page is removed for entries or other reasons.

Signatures required in the AESR are the same as those for the aircraft logbook. Signatures must be handwritten in black ink. Rubber stamps are not authorized. Signatures are not required when new records are initiated or when old records are consolidated.

Pages or forms, other than those described in the following paragraphs, are not inserted, stapled, or attached to the AESR. Additional data, for which there is no designated place in the logbook, and a copy of the most recent engine setup or test record are placed in the manila envelope in the back of the AESR. Superseded forms are closed out with the statement "No further entries this page," and a new form is initiated. The superseded form remains in the AESR.

Q3. What information should be entered on each page of every form in the AESR?

Q4. Data for which there is no designated place in the AESR should be placed in what location?

FORMS

LEARNING OBJECTIVE: Describe the forms used in the Aeronautical Equipment Service Record.

A brief description of each record or form used in the AESR is contained in the following paragraphs. The discussion concentrates on forms peculiar to the AESR. For additional information and documentation procedures, refer to the *Naval Aviation Maintenance Program*, OPNAVINST 4790.2.

Aeronautical Equipment Service Record (Cover) (OPNAV 4790/29)

The cover page of the AESR is shown in figure 8-1. The information on the front cover is entered, as shown

AERONAUTICAL EQUIPMENT SERVICE RECORD

NOMENCLATURE OF EQUIPMENT		REPLACEMENT	
		Interval	Due
TYPE	MODEL	SER NO. (Hub if prop.)	
INSTALLED ON—			
MODEL	BUNO/SERIAL NO.	DATE	BY (Activity)
CURRENT ENGINE OR PROPELLER POSITION NO.			

DEPARTMENT OF THE NAVY, CHIEF OF NAVAL OPERATIONS
OPNAV 4790/29 (Rev. 1-84) S/N 0107-LP-047-9145

NOTE: DO NOT ROLL OR BEND. When removed from the log book for separate shipment, this record must be secured with a suitable fastener (e.g., a metal file fastener) at the points indicated. **DO NOT USE STAPLES.**
AZf0801

Figure 8-1.—Aeronautical Equipment Service Record (AESR) front cover.

in the figure, by the activity that initiates the record. Subsequent entries are made by activities that maintain custody of the equipment.

The *operating interval* is the authorized time between overhauls for the particular equipment. The data required for the replacement interval is obtained by review of the Replacement Interval Data block on each Assembly Service Record (ASR), Module Service Record (MSR), and Scheduled Removal Component (SRC) card. The lowest time recorded is written as the replacement interval on the AESR. The replacement due is computed by adding the lowest interval time to the engine time. Entries are made in pencil to allow for component changes at repair or rework activities.

The block titled “Current Engine or Propeller Position No.” is used to indicate the engine or propeller position number (1, 2, 3, or 4) as installed on the aircraft. This position indicator aids in the placement of associated accessory and other supplemental records in the correct equipment record.

Equipment Operating Record (OPNAV 4790/31A)

The Equipment Operating Record (fig. 8-2) is intended for use with all aeronautical equipment that requires the monthly compilation of significant operating data and is unique to the AESR. Reporting custodians ensure that operating or monitoring system data is entered on this form at a monthly interval and upon transfer of the equipment.

The Equipment Operating Record provides columns for the logging of operating hours or monitoring system data, as applicable. Operating hours are obtained from record type (RECTYP) 7B of the Naval Aircraft Flight Record. Uncaptioned columns are provided for monitoring system data and are labeled as required; for example, starts, rounds fired, low cycle fatigue (LCF), and meter reading. If equipment is monitored by time since new (TSN) or time since overhaul (TSO), the first column under monitoring system data is labeled TSN or TSO, as appropriate. The cumulative column under operating hours will then show TSN or TSO hours. The Remarks column is for the logging of additional information, as appropriate.

Q5. What type of data is recorded on the Equipment Operating Record?

Q6. Entries should be made on the Equipment Operating Record at least monthly. On what other occasion should an entry be made on this record?

Inspection Record (OPNAV 4790/22A)

The Inspection Record, shown in figure 8-3, is one of the forms that is common to both the aircraft logbook and AESR. The maintenance of the form is the same for the aircraft logbook and AESR. The heading blocks on each form are filled in to identify the type of inspection and the equipment name, model, and serial number.

A major engine inspection, phase inspection, special inspection, and conditional inspection (except fluid sampling, engine wash, or servicing) all require an AESR entry by the activity that performs the inspection.

Phase and major engine inspections are logged on the same Inspection Record page.

Special and conditional inspections are logged on separate Inspection Record pages as follows:

- Equipment that has an AESR and requires a nondestructive inspection (NDI) or disassembly and reassembly is logged on an Inspection Record page titled “SPECIAL.”
- A conditional inspection is an unscheduled inspection required as a result of an overlimit condition or as a result of a circumstance or event that creates an administrative requirement for an inspection, such as a hot start or overtemp. A conditional inspection is logged on an Inspection Record page titled “CONDITIONAL.”

Acceptance and transfer inspections on uninstalled equipment are NOT logged on Inspection Records.

During first-degree repair, the intermediate maintenance activity (IMA) screens the Inspection Record and, during rework, the depot-level maintenance activity screens the Inspection Record. The old Inspection Record pages for scheduled maintenance are removed, and a new record that contains the data necessary for determining when the next scheduled inspection is due is initiated. Conditional Inspection pages are screened for items of historical or maintenance value and transcribed to a new page. A minimum of 2 years of data is maintained at all times on the Conditional Inspection page.

Q7. Overtemp, hot start, acceptance, and transfer inspections are all examples of (a) what type inspections and, (b) should be logged on what page of the AESR?

Q8. Acceptance and transfer inspections are not required to be recorded in the AESR for equipment in what status?

Q9. What minimum number of years of data should be maintained on the Conditional Inspection page?

Repair/Rework Record (OPNAV 4790/23A)

The Repair/Rework Record (fig. 8-4) is also common to the aircraft logbook and AESR. This record is a permanent part of the AESR. The Repair/Rework Record contains a complete record of all repair, reconditioning, SDLM, conversion, modification, and modernization that an intermediate- or depot-level maintenance activity performs on the equipment. In cases where an item requires an AESR, the AESR must accompany the equipment through the maintenance action required and must be updated by the activity that accomplishes the action.

Q10. An auxiliary power unit (APU) is removed from an aircraft and sent to an AIMD for repair. What should be the disposition of the AESR?

Technical Directives Form (OPNAV 4790/24A)

The Technical Directives form (fig. 8-5) is used to record technical directives in the AESR. This form is the same one that is used in the aircraft logbook. Separate pages are used for each type of directive, and all applicable directives are recorded. Lists 02 and 04 for engines may be available for your use; however, these lists are NOT an authorized part of the engine AESR.

Changes and bulletins that concern equipment, other than engines, present no special record-keeping problems because the numerical quantity of these directives is relatively small. Power plant changes and power plant bulletins, however, are issued in greater numbers. Therefore, power plant changes and power plant bulletins require careful screening to ensure that the AESR reflects the actual configuration of the equipment.

Definite rules and procedures are required to ensure that the AESR contains a record of applicable directives and, at the same time, to eliminate unnecessary record keeping. For uniformity through-

out the system, apply the following procedures for all equipment:

- Record all changes and bulletins, including revisions, that direct a material change or modification of the particular equipment in this section of the AESR.

- Log all technical directives in numerical sequence, except on pages titled "Revisions." Revisions are logged in the order that they are received. All activities must account for applicable bulletins or production equivalents by number.

- Use only applicable Status codes.

- Ensure that technical directives that affect a component that has an SRC card, Equipment History Record (EHR) card, ASR, or MSR are documented in the applicable section of that card or record as well as the AESR. In this instance, enter the TD identification on the technical directive (TD) page, and enter a notation to refer to the applicable SRC, EHR, ASR, or MSR in the Title/Remarks column.

Record other entries in the same manner as those in the TD section of the aircraft logbook.

Q11. Technical directives that affect an EHR, ASR, IMSR, or SRC card item should be recorded on the applicable EHR, ASR, MSR, or SRC card. On what other record should an entry be made?

Miscellaneous/History (OPNAV 4790/25A)

When used in the AESR, the Miscellaneous/History record (fig. 8-6) is where pertinent information is recorded for which no other place in the record has been provided. For example, special test data, abnormal characteristics of equipment, serious damage, significant repair, authorization for extension of operating intervals, and Naval Oil Analysis Program entries are made on this form. When equipment is exposed to large quantities of salt water, fire-extinguishing agents, or other corrosive material, an entry is made on the Miscellaneous/History record to include a description of the decontamination and approximate time between exposure and completion of decontamination. All entries on this record require an authorized signature, date, and name of the activity.

Intermediate- and depot-level maintenance activities screen the Miscellaneous/History record before discarding it and initiating a new record. When the specific information is of permanent value, the information is transcribed onto the new form and retained in the AESR. A minimum of 2 years of data is

maintained at all times on the Miscellaneous/History record.

To aid the IMA and depot activities in determining repair or rework requirements of equipment following rejection, the activity that rejects the equipment MUST completely document the reason for and nature of the rejection on the Miscellaneous/History record. For example, an entry such as “overtemp” is not enough. Information must be given as to the degree of overtemp, the length of overtemp, and the circumstances under which the overtemp occurred, such as at start, in flight, during shutdown, or during ground runup. Corrective measures that were taken must also be listed.

Some incidents recorded on the Miscellaneous/History record require specific statements to accurately describe the circumstances that surround the incident. These specific statements include, but are not limited to, the following:

Change in authorized inspection interval. If there is a change in the authorized inspection interval, the following entry is required: “Effective (date) was placed on (specified interval) in accordance with (authority); next inspection due (date or hours).”

- A change in the inspection induction date or hourly sequence requires that the following entry be made: “Effective (date) inspection induction date (or hours) was rescheduled from (old date or hours) to (new date or hours) as authorized by (reference).”

- Equipment Receipt. Activities that receive equipment with the Equipment Operating Record will make the following entry: “This date, The Equipment Operating Record accumulated operating hours were verified to be correct.”

- Activities that transfer equipment must annotate the record with the date, reason for transfer, activity transferred to, job control number (JCN), shipping document number, and if applicable, Status and STAR (strikes, transfers, acquisitions, or removals) codes.

You should refer to the latest edition of OPNAVINST 4790.2 for other specific documentation requirements when making entries on this record.

Q12. In what record should Naval Oil Analysis Program (NOAP) entries be logged in the AESR?

Preservation/Depreservation Record (OPNAV 4790/136A)

The Preservation/Depreservation Record (fig. 8-7) in the AESR contains a record of preservation, reprereservation, and depreservation. When used in the AESR, the Preservation/Depreservation Record is maintained like the Preservation/Depreservation Record in the aircraft logbook. If the equipment (engine propellers, ejection seats, or APUs) is installed in the aircraft and the aircraft is preserved but the preservation requirement is not applied to the specific equipment, then no preservation entry is made to the equipment AESR.

Q13 Your activity initiates a preservation action on an aircraft. An entry should be made in the aircraft logbook's Preservation/Depreservation Record. No preservation was performed on installed engines. What entry, if any, should be made on the Preservation/Depreservation Record in the AESR?

Installed Explosive Device Record (OPNAV 4790/26A)

The Installed Explosive Device Record contains a record of all explosive devices installed. This record is generated through the Survival Equipment Asset Tracking System/Increased Capabilities (SEATS/ICAP) program. SEATS/ICAPS is a management information system for use at O-level, I-level, and D-level aviation maintenance activities and provides a standardized system for management of Survival Equipment and cartridge-actuated devices (CADs)/aircrew escape propulsion systems (AEPS).

Figure 8-8 is an example of an AESR Installed Explosive Device Record for an ejection seat. The Installed Explosive Device Record in the AESR is maintained similarly to the Installed Explosive Device Record in the aircraft logbook.

Inventory Record (OPNAV 4790/27A)

The Inventory Record, (fig. 8-9) is common to both the aircraft logbook and the AESR. The Inventory Record is used to maintain a current inventory of all equipment or components that require an SRC, EHR, ASR, or MSR. Sound maintenance practices and flight safety considerations dictate those items, other than mandatory, that should be recorded on this form.

NOTE: Make sure that components, assemblies, or modules properly associated with equipment that requires an AESR are recorded in this section and NOT with airframe components in the aircraft logbook.

At the time of repair by the IMA or rework by the depot activity, all old Inventory Records are removed and new forms inserted in the AESR. All pertinent data for those items that have been installed by the equipment custodian during the previous service period and that are not scheduled for removal during repair or rework are transcribed to the new form(s) to maintain proper maintenance continuity. SRCs, EHRs, ASRs, or MSRs installed during repair or rework are also listed on this new form.

Assembly Service Record (ASR) (OPNAV 4790/106A)

The latest edition of *Aeronautical Time Cycle Management Program*, NAVAIRINST 4790.3, establishes the policy and responsibilities for the planned removal/replacement of selective assemblies

LOGBOOK Page: 01		Printed on: 27 August 1997			OPNAVINST 4790.2E				
INSTALLED EXPLOSIVE DEVICE RECORD		A1. TYPE AIRCRAFT	A2. BU/SER	A3. ASSEMBLY PART NUMBER	A4. ASSEMBLY S/N		A5. ORG CODE		
SERVICE LIFE ITEMS									
B1. DODIC	B2. NOMENCLATURE/LOCATION	B3. PART NUMBER	B4. LOT NUMBER	B5. SERIAL	B6. ORG	B7. MFG DATE	B8. C/O DATE	B9. INSTL DATE	B10. EXPIRE DATE
MJ98	CARTRIDGE ACTUATOR INIT	841AS375	10ABC0589	515	WC5	05/89	06/90	06/91	06/97
MC53	IMPULSE CARTRIDGE	726AS250	10ABC0690	2011	WC5	06/94	12/94	12/94	06/97

OPNAV 4790/26A

S/N 0107-LF-047-9134

OPNAVINST 4790.2E

AZ327112

Figure 8-8.—Installed Explosive Device Record.

FAN ROTOR		ASSEMBLY SERVICE RECORD				REPLACEMENT INTERVAL				REPLACEMENT DUE				
REFER TO PARTS LIFE TRACKING SYSTEM														
SECTION I - IDENTIFICATION DATA														
A. PART NUMBER 6026T96G10		B. SERIAL NUMBER PWA19563		C. WORK UNIT CODE 2741200		D. CFA NADEP JACKSONVILLE		E. FSCM 99207						
SECTION II - COMPONENTS														
A. NOMENCLATURE	B. P/N	C. S/N	D. COMPONENT TIME OR COUNTS (USN, ISR, METER, LCP)				E. MISCELLANEOUS DATA							
			DATE INST	TYPE LIFE	LIMIT	USED	REMAIN	DATE RMVD						
STAGE 1 DISK	5087T95P01	GATCND20	961019	ELCF	9690	0008	9682							
STATE 1 BLADES	5088T29P01	GATCND20	961019	ELCF	12500	0008	12492							
STAGE 2 DISK	5088T01G01	GATCAF63	961019	ELCF	10780	0009	10771							
STAGE 2 BLADES	6093T08P01	GATCRV63	961019	ELCF	10780	0009	10771							
STAGE 3 DISK	5088T02G01	GATCRV47	961019	ELCF	11880	0010	11870							
STAGE 3 BLADES	6093T07P01	GATCRV47	961019	ELCF	11880	0010	11870							
REAR SHAFT	5088T28G01	GEE09790	961019	ELCF	16670	0010	16660							
SECTION III - INSTALLATION DATA														
A. DATE	B. BUONO/SERNO. INSTALLED ON	C. BY (Activity)	D. TOTAL AIRCRAFT/EQUIPMENT HOURS/COUNTS				E. ASSEMBLY OR COUNTS							
			EFH	EOT	N2F	N2P	EFH	EOT	N2F	N2P				
970129	755003	WC3	E0394	E0520	E0225	E1600	C2071	C2587	C1634	C11968				

OPNAV 4790/106A (REV. 10-92) S/N 0107-LF-014-9800 PERMANENT RECORD AZJA0014

Figure 8-10.—Assembly Service Record (ASR) (front).

designated to use the ASR. The ASR (fig. 8-10) is used in the AESR to provide data tracking on assemblies and subassemblies that have rework or overhaul life limits and are designated to be removed at organizational-, intermediate-, or depot-level maintenance activities and discarded. The same procedures used to maintain or adjust the ASR in the aircraft logbook should be used to maintain or adjust the ASR in the AESR.

Equipment History Record (EHR) Card (OPNAV 4790/113)

The EHR card (fig. 8-11) provides a method for monitoring specific maintenance data on designated aeronautical components and equipment that do not qualify as SRC. An individual card for each EHR-serialized item is maintained as part of the AESR while the component is installed. When the component is removed from the equipment, the EHR card is attached to and accompanies the component to its final disposition. The EHR card is maintained in the AESR in the same way as the card is maintained in the aircraft logbook.

Scheduled Removal Component (SRC) Card (OPNAV 4790/28A)

Maintenance history, installation, and usage data is recorded on the SRC card, (fig. 8-12). The SRC card is maintained as part of the AESR as long as the component is installed. When the component is removed from the equipment, the card accompanies the component. It is very important that maintenance history continuity be maintained. The same procedures used to maintain or adjust the SRC card in the aircraft logbook should be used to maintain or adjust the SRC card in the AESR.

Module Service Record (MSR) (OPNAV 4790/135)

Modular engine design allows I-level maintenance activities to remove and replace interchangeable modules with ready-for-issue (RFI) spares. The removed modules are either repaired at an IMA or forwarded to depot maintenance for overhaul. This capability requires a record system to keep track of modules, the life limits of the assemblies and components within modules, and other maintenance data associated with modules. The MSR (fig. 8-13) provides this capability for all modular engines; for example, T56, T400, T700, and F404.

The activity that accepts a module forwards a copy of the MSR to the Navy Aviation Maintenance Office (NAMO) central repository. MSR initiation for modules installed on aeronautical engines as part of a DOD contract is the responsibility of the activity that accepts the engines for the Navy. When these modules are delivered to the Navy at the contractor's plant, the cognizant Navy representative is considered to be the original accepting activity.

The MSR accompanies the module at all times. When the module is installed as a part of a propulsion system, the MSR is maintained concurrently with, and becomes a part of, the propulsion system AESR. When equipment that has a MSR is not installed, a two-prong fastener should be used to bind the MSR together. Staples should NOT be used.

Upon completion of repair or rework, a copy of the MSR that reflects the current status of the module is forwarded to the central repository. The MSR must be inserted in the appropriate propulsion system AESR or be securely attached to the module when the module is returned to the supply system.

When an MSR becomes damaged or mutilated, the activity that has current custody initiates a new record. All information is transcribed to the new record except for entries in the replacement blocks, which are made in pencil. Entries in the record are typed or plainly printed in black ink. When a record contains no space for additional entries, a new record is prepared, and both records accompany the module until the records are consolidated at repair or rework. Only I- or D-level maintenance activities are authorized to consolidate MSRs.

In the top left corner of the first page of each MSR, the type of MSR is indicated; for example, fan, turbine, or afterburner.

In the Replacement block (top right corner of the first page of the MSR), the noun name of the component or assembly within the module that has a life cycle limit is entered. Since the component or assembly within the module has a life cycle limit, the entire module must be removed from the propulsion system when the limit is reached. The Due block is computed by adding the component or assembly interval time to the module time and subtracting any hours or counts on the component or assembly at installation. These entries are made in pencil since these hours or counts are subject to change.

For detailed descriptions and instructions for each section of the MSR, you should refer to OPNAVINST 4790.2.

Q14. When a Module Service Record (MSR) component is installed as part of a propulsion system, the MSR becomes part of what record?

Q15. Pencil entries are required in what section of the MSR?

Q16. When an MSR card contains no space for additional entries, a new card is initiated. What should be the disposition of each MSR card?

ENGINE COMPOSITION TRACKING (ECOMTRAK)

LEARNING OBJECTIVE: Describe the Engine Composition Tracking (ECOMTRAK) system.

This system tracks the operating time cycle or counts of selected engine components. A similar system is used to track selected aircraft components, which is called “Aircraft Composition Tracking” (ACOMTRAK). These two systems can be easily confused by the AZ; therefore, you must remember that ECOMTRAK deals primarily with life-limited **engine** components.

The ECOMTRAK system supplies reports that specify the time or cycle counts that remain on each tracked component before the component must be inspected or removed and replaced. By using usage rates derived from experiments and tests, workloads for maintenance and rework facilities can be forecast. In addition, long-range requirements for new and reworked components can be developed. The cognizant field activity (CFA) or, in some cases, the assistant program manager for logistics (APML) for each engine in the system maintains the ECOMTRAK data base. Each CFA can presently provide management information on TF30, J60, J85, T700, TF34, J52, TF41, F402, F404, T64, T76, T58, T56, T400 and F110 engines. Designated fleet units and others may also obtain such data directly. For further information on this direct data access capability, contact NAMO.

The AZ who works on an Enhanced Comprehensive Asset Management System (ECAMS) performs the following tasks:

- Verifies and corrects ECAMS, ECOMTRAK system, and Parts Life Tracking System (PLTS) reports daily

- Validates configuration reports between ECAMS database, AESR, MSR, and ECOMTRAK, or PLTS prior to deployment, after deployment, and quarterly
- Screens all maintenance action forms (MAFs) and naval flight records (NAVFLIRs) daily to ensure engine transactions and component removal and installation have been updated in the ECAMS database
- Ensures TDs that require part number changes are entered into ECAMS

Refer to Commander, Naval Air Systems Command (COMNAVAIRSYSCOM), aircraft controlling custodian/type commander (ACC/TYCOM), and wing directives for additional responsibilities.

Q17. What system tracks operating time, cycles, or counts of selected engine components?

SUMMARY

The Aeronautical Equipment Service Record (AESR) is the log that keeps track of aeronautical equipment that is an integral part of the aircraft. The AESR contains many of the same forms and records that are used in the aircraft logbook. The activity that originally accepts the equipment is the activity that initiates the AESR. You should enter full identification data and the equipment serial number on each page of every form in the AESR. When there is no designated place in the AESR for data, you should place the data in a manila folder that is attached to the back inside cover of the AESR for this purpose.

You should record the monthly compilation of significant operating data in the Equipment Operating Record. You should also make an entry in Equipment Operating Record upon transfer of the equipment. Overtemp, hot start, acceptance, and transfer inspections are examples of conditional inspections that you should log on the Conditional Inspection page of an AESR. You should maintain 2 years of data on the Conditional Inspection page. You shouldn't record acceptance and transfer inspections of uninstalled equipment in the AESR for equipment.

When you send equipment to be repaired that is separated from a major component, such as an engine, a propeller, or an auxiliary power unit to an AIMD, the AESR should accompany the component. You should record technical directives that affect an EHR, ASR,

MSR, or SRC card item on the applicable EHR, ASR, MSR, or SRC card and make an entry on the TD page in the applicable AESR.

You should use the Miscellaneous/History record in the AESR to log entries concerning the Naval Oil Analysis Program (NOAP).

When your activity initiates a preservation action on an aircraft, you should make an entry in the Preservation/Depreservation Record of the Aircraft logbook. When no preservation was performed on installed engines, no entry is made for the engines on the Preservation/Depreservation Record in the AESR.

When a Module Service Record (MSR) component is installed as part of a propulsion system, the MSR becomes part of the propulsion system AESR. You are required to make entries in pencil in the Replacement Due section of the MSR. When an MSR card contains no space for additional entries, you should start a new card. Both the old MSR card and the new card should accompany the equipment until the cards are consolidated at repair or rework.

The Engine Composition Tracking (EMCOM-TRAK) system tracks life-limited engine components by keeping a record of operating time, cycles, or counts for selected engine components.

ANSWERS TO REVIEW QUESTIONS

- A1. *Aeronautical Equipment Service Record (AESR).*
- A2. *The activity that originally accepts the equipment.*
- A3. *Full identification data and the equipment serial number.*
- A4. *In a manila folder attached to the back inside cover of the AESR.*
- A5. *Monthly compilation of significant operating data.*
- A6. *Upon transfer of the equipment.*
- A7. *(a) Conditional inspections; (b) Conditional Inspection page.*
- A8. *Uninstalled equipment.*
- A9. *2 years of data.*
- A10. *The AESR should accompany the APU to AIMD.*
- A11. *On the TD page in the applicable AESR.*
- A12. *Miscellaneous/History record.*
- A13. *No entry should be made for the engines.*
- A14. *The propulsion system AESR.*
- A15. *In the Replacement Due section.*
- A16. *Both cards should accompany the equipment until the cards are consolidated at repair or rework.*
- A17. *Engine Composition Tracking (ECOMTRAK) system.*

CHAPTER 9

AIRCRAFT ENGINE MANAGEMENT SYSTEM (AEMS)

Aircraft engines must be accounted for and reported on in much the same fashion as aircraft. If the same engine were to remain installed in the same aircraft throughout the aircraft's service life, there would be little need to account for engines separately from aircraft. However, engines are constantly being removed and replaced due to maintenance actions. Engines rarely remain installed in the same airframe throughout the life of the aircraft.

INTRODUCTION TO THE AIRCRAFT ENGINE MANAGEMENT SYSTEM (AEMS)

LEARNING OBJECTIVES: Define the purpose of the Aircraft Engine Management System (AEMS). Identify the document that contains detailed instructions that govern the AEMS.

The Aircraft Engine Management System (AEMS) is an automated data engine management system that provides on-line inventory management and reporting of aircraft engines, propulsion systems, and modules.

Engines are the most expensive item of equipment in the Naval Air Logistics System in terms of unit cost and total dollar expenditure. The sizeable investment in aircraft engines requires close management control to shorten out-of-service time and reduce the quantity of spare engines needed.

Various Navy-wide aircraft engine management reports are developed by the Naval Air Systems Command (NAVAIRSYSCOM) on automatic data processing equipment from a master aircraft engine record file. This master file contains the status, custody, and performance history of each serially numbered aircraft engine in the active Navy engine inventory. This data is updated by Engine Transaction Reports and End-of-Quarter reports (ETRs and EOQs) from reporting custodians of naval aircraft engines. The data is transmitted by the custodians of engines to upper echelon commands. Upper echelon commands prepare failure rate reports and develop overhaul schedules.

Aircraft Engine Management System, NAVAIRINST 13700.15, and Aircraft Controlling Custodian (ACC) instructions prescribe reporting procedures for aircraft engine management and should be consulted when engine management reports are prepared. This chapter was written to familiarize you, the AZ, with engine management reporting procedures and applications at the operating squadron level.

NOTE: ETRs, EOQ reports, and Engine Record Cards (E cards) can be maintained and generated through the Navy Aviation Logistic Command Management Information System (NALCOMIS). This system allows users to generate, update or delete ETRs, EOQs, and engine record cards. Refer to *NALCOMMIS OMA End User's Manual* (EM) for detailed procedures in generating and maintaining these reports and records.

- Q1. What system provides data on the inventory management and reporting of engines, propulsion systems, and modules?*
- Q2. What instruction prescribes reporting procedures for the AEMS?*

ENGINE MANAGEMENT CODES

LEARNING OBJECTIVE: Identify codes used in the AEMS.

The AEMS encompasses all facets of aircraft engine accounting. Information generated by AEMS must be put into a usable format before it is of any use to maintenance managers. AEMS does this through engine management codes that simplify and standardize engine management reporting procedures. A standard abbreviated reporting system describes change in custody and status.

Engine management codes ease the burden of reporting custody and status changes. Information can be reported by using terminology (codes) that is understood Navy-wide. The following is a listing of some of the more commonly used codes in aircraft engine management:

Custodian codes are used to identify the controlling custodian or Naval Air Systems Command Fleet Support (FS) activity that has control of an engine.

Unit Identification Codes (UICs). Five-digit codes known as UICs identify reporting custodians. Activities that hold physical custody of engines are engine reporting custodians. UICs for reporting custodians are listed in Chapter 5, “Unit Identification Codes,” of the *Navy Comptroller’s Manual*, Volume 2, NAVSO P-1000-25, or can be obtained from the AEMS database.

Status codes are two-digit numbers that describe the condition of an engine, the purpose for which an engine is being used, or the stage of progress that an

unserviceable engine or serviceable engine has reached in the maintenance cycle.

Status codes are shown in table 9-1.

STAR codes are two-digit numeric codes that describe or give reasons for transactions, such as strikes, transfers, acquisitions, or removals of aircraft engines. Status and STAR code combinations reflect current engine status. A Status code is sometimes used without a STAR code, but a STAR code is never used without a Status code. A STAR code amplifies or qualifies the Status code.

STAR codes are divided into the following five series:

Table 9-1.—Status Code Series and Their Categories

Status Code Series	Category
11	Installed Engines/Propulsion Systems
13	Installed Module
21	Serviceable Uninstalled Ready For Issue (RFI) Spare Engines/Propulsion Systems/Modules
22	Serviceable Uninstalled RFI Engines/Propulsion Systems/Modules (Fleet Activities Only)
23	Serviceable Uninstalled RFI Engines/Propulsion Systems/Modules (Commercial, rework, Naval Aviation Depot [NADEP], Navy Supply Center [NSC]/Supply Office [SUPO], Aerospace Maintenance and Regeneration Center [AMARC])
24	Serviceable Uninstalled Non-RFI Engines/Propulsion Systems/Modules
31	Unserviceable Engines/Propulsion Systems/Modules
32	Unserviceable Engines/Propulsion Systems/Modules In Transit
33	Uninstalled Unserviceable Engines/Propulsion Systems/Modules
36	Unserviceable Engines/Propulsion Systems/Modules For Rework/Repair at a Naval Aviation Depot (NAVAVNDEPOT OR NADEP) or Commercial Repair Activity
37 and 38	Engines/Propulsion Systems/Modules, Monetary Constraints or Awaiting Engineering Resolution
40	Engines/Propulsion Systems/Modules, Test Cell Correlation
41	Engines/Propulsion Systems/Modules, Disposition and Excess
46 and 47	Engines/Propulsion Systems/Modules, Bailed or Loaned
48	Engines/Propulsion Systems/Modules, Naval Air Maintenance Training Group
49	Engines/Propulsion Systems/Modules, Strike
90	Modular Propulsion Systems

- 50 series—Acquisitions
- 60 series—Transfers and receipts
- 70 series—Removals
- 80 series—Strikes
- 90 series—Miscellaneous

A detailed explanation of Status and STAR code combinations are listed in NAVAIRINST 13700.15.

- Q3. What type of code is used to describe the condition of an engine, purpose for which the engine is used, or stage or progress the engine has reached in the maintenance cycle?*
- Q4. What series Status code is used to describe an installed operating engine?*
- Q5. What type of code describes or gives the reason for (1) strikes, (2) transfers, (3) acquisitions, or (4) removals?*
- Q6. A STAR code must always be used with what type of code?*
- Q7. What type of code amplifies an aircraft engine Status code?*

ENGINE TRANSACTION REPORT (ETR)

LEARNING OBJECTIVES: Identify the purpose of Engine Transaction Reports (ETRs). Identify the deadline for submission of ETRs. Recognize situations that require submission of ETRs.

ETRs advise the controlling custodian of actions that concern the use, status, or custody changes of assigned engines. The report covers all transactions that occurred since the previous report. A report must be submitted not later than 2400 hours of the first working day following the date the action occurred. Should it become necessary to submit a late report, use the actual Julian date of action and indicate in the Remarks section that the report is late. Some situations that require submission of ETRs are listed below:

- The receipt or transfer of an aircraft with an installed engine
- The receipt or transfer of an uninstalled engine
- The removal or installation of an engine
- The cannibalization or strike of an engine
- The delay of an engine repair due to a shortage of parts

There are many other situations that require an ETR, however, those listed above are used most often.

ETR PREPARATION

The preparation of an ETR is a relatively simple (but important) task. NAVAIRINST 13700.15 contains guidelines and examples that cover almost any engine transaction. Figure 9-1 is an example of a message-type ETR prepared for transmission that reports four transactions. Transaction 019 reports an engine removed; transaction 020 reports the engine transfer. Transactions 021 and 022 show receipt and subsequent installation of the replacement engine.

Notice that fleet activities prepare ETRs in a horizontal line format. Most shore activities, however, submit ETRs electronically through the AEMS on-line computer terminal. These terminals are connected by telephone lines to a central computer that contains a master list of engines and other propulsion systems. ETRs can be directly entered into the AEMS database. Activities with access to AEMS computer terminals should use on-line reporting. Complete procedures for on-line reporting are outlined in NAVAIRINST 13700.15.

- Q8. By what means is a controlling custodian advised of the status, use, or custody change of an assigned aircraft engine?*
- Q9. What is the deadline for submission of ETRs?*
- Q10. A total of how many transactions are required on an ETR that reports the removal and transfer of an engine and the subsequent receipt and installation of a replacement engine?*
- Q11. What is the preferred method of submitting ETRs for shore-based activities?*

ETR NUMBERING

LEARNING OBJECTIVES: Describe how ETRs are numbered. Identify data elements and fields used on ETRs. Define retention requirement for ETRs.

ETRs submitted by reporting custodians are numbered sequentially throughout the calendar year (CY) beginning with report number 1 for the first report submitted on or after 1 January of the CY. Each successive report increases by one number until 31 December, after which ETR numbering restarts with report number 1 for the CY. Example: 1-96, 2-96, 3-96, etc. On the first ETR of each year, report the last CY

```

R 091411Z JAN 98 ZYB
FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N422G/N422C5/N422C52/N421/N421G//
COMSTRKFIGHTWINGPAC LEMOORE CA//N452/N45//
INFO COMFIFTHFLT //41//
COMCARGRU SEVEN
COMFAIRWESTPAC ATSUGI JA//N421A//
USS NIMITZ
COMCARAIRWING NINE
BT
UNCLAS //N13700//
MSGID/GENADMIN/VFA-000//
SUBJ/AIRCRAFT ENGINE TRANSACTION REPORT 01-98 (NAVAIR 13700-9)//
REF/A/DOC/NAVAIRINST 13700.15B//
AMPN/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE
MANAGEMENT SYSTEM.//
RMKS/1. VFA-000 ETR 01-98. LAST ETR 31-97 VFA-000 DTG 051411ZDEC97
001/0360347/24-74/98007/F404GE/402/63925/00927/FA18C/164968/2/5C/QWO007468//
002/0360347/24-60/98008/F404GE/402/63925/03368/57025//
003/0360079/21-61/98008/404GE/402/63925/57025/01379/03368/X//
004/0360079/11-NA/98008/F404GE/402/63925/FA18C/164968/2//
2. REMARKS: 001-RMVD SERNO 0360347 2 DUE TO COMPRESSOR FOD.
FAN 0313347, HPC 0319298, COMB 0324347, HPT 0329347, LPT 0334220, AB 0339219.
002-SERNO 0360347 TX TO AIMD USS NIMITZ DOC NUMBER 8008-G474.
003-RVCD SERNO 0360079 FM AIMD USS NIMITZ DOC NUMBER 8008-G474.
FAN 0314211, HPC 0319064, COMB 0324265, HPT 0329265, LPT 0334265, AB 0339159.
004-INSTLD SERNO 0360079 BUNO 164968 POS 2.//

```

Figure 9-1.—Engine Transaction Report (ETR).

ETR. Example: (Activity) 1-97, LAST CY ETR 154-96 DTG 312200Z DEC 96. The number of ETRs that can be submitted in any given calendar year is unlimited.

Q12. A reporting custodian submits four ETRs the first week of January 1997. How should the fourth ETR be numbered?

ETR DATA ELEMENT FIELDS

In the message shown in figure 9-1, each engine transaction is detailed on a separate line or lines. This format aids the personnel who enter the data into the data processing system used by controlling custodians to transmit engine data to the Naval Air Systems Command Headquarters.

If you understand the use of Status codes, STAR codes, and data elements, you should have little difficulty preparing ETRs no matter where you are assigned.

Engine transaction reports are made up of many data fields. Some data fields are required while others are optional and should be used only when necessary.

Figure 9-2 is a Status/STAR code matrix for **installed** engines (Status Code II Series). A separate Status/STAR code matrix is provided for each status code series; for example 21, 22, 24, and so forth. Note that data items 0 through 6 and item 19 are required elements on all ETRs. Others are reported as the situation requires. Below is a brief description of each data element used on ETRs. Please refer to figure 9-2 while reading this section.

Item 0—Transaction serial number. The transaction serial number identifies each transaction submitted during a calendar year. Serial numbers begin with number 001 and run sequentially through 999. If number 999 is reached before December 31st, simply start over with number 001.

Item 1—Serial number. A unique serial number is assigned to identify each engine. This number must have seven digits. When the number has less than seven digits, add leading zeros.

Item 2—Status/STAR code. As previously discussed, Status/STAR codes describe the condition of an engine and the reason for submission of the ETR. Figure 9-3 shows the definition and application of

DATA ELEMENTS 0 TO 6 AND 19 ARE REQUIRED ON ALL ETR'S		11- 48	11- NA	11- 50	11- 60	11- 61	11- 64	11- 70	11- 90
07	CONT CUST UIC			X		X	X		
08	(BLANK)								
09	FLT HRS SINCE NEW (NOTE 1)		X	x	X	X	X	X	X
10	REPT CUST REC FM/TRF TO				X	X			
11	CONT CUST TRF TO				X				
12	ACFT MODEL	X	X	X	X	X	X	X	X
13	ACFT BUNO/PSSN	X	X	X	X	X	X	X	X
14	ENG/PSSN/MOD POS	X	X	X	X	X	X	X	X
15	RMVL/DNGRD/REPR CODE								
16	QECA CONFIG/POS NR								
17	BCM/INSP CODE								
18	JOB CONT NMBR								

0 - TRAN SERNO 3 - TRANS JULIAN DATE 6 - REPORTING CUSTODIAN
1 - ENG SERNO 4 - ENG TYPE/MODEL 19 - REMARKS
2 - ST/ST CODE 5 - ENG SERIES

Figure 9-2.—Engine/Propulsion System Required Data Fields.

Status/STAR code combinations for installed engines and propulsion systems. Refer to NAVAIRINST 13700.15 for a complete list of acceptable Status/STAR code combinations.

Item 3—Date. The five-digit Julian date indicates the date of the transaction; for example, 99020.

Item 4—Engine Type Model. This element identifies the type, model, and manufacturer of the engine; for example, T56A.

Item 5—Engines series. Identifies the engine series; for example, 14T.

Item 6—Reporting custodian. Item 6 identifies the activity, by UIC, that has reporting responsibility for the engine. More often than not, this is the same activity that has physical custody of the engine.

Item 7—Controlling custodian. The UIC identifies the major command that exercises administrative control of the engine, propulsion system, or

11-NA	Installation of an RFI engine/propulsion system on an aircraft.
11-50	Receipt of an installed engine/propulsion system that is not presently in the Aircraft Engine Management System (AEMS) database.
11-60	Transfer of an installed engine/propulsion system.
11-61	Receipt of an installed engine/propulsion system.
11-64	Reporting an RFI installed engine/propulsion system in a stored aircraft regardless of stored location.
11-70	Reporting a change in aircraft model. The engine/propulsion system remains installed in the same bureau number (BUNO).
11-90	End-of-Quarter (EOQ) report of flight/operating hours on installed engines/propulsion systems.

Figure 9-3.—Status/STAR code category for 11 series installed engines/propulsion systems.

<u>AEMS ENGINE/MODULE/REMOVAL/DOWNGRADE/REPAIR CODES</u>			
<u>BASIC ENGINE</u>		<u>OIL SYSTEM (continued)</u>	
Accident/Incident Damage	4B	Oil Consumption	3T
Associated Engine Module Failure NOTE (1)	4A	Oil Contamination	1W
Cannibalization	3W	Oil Leakage	7K
Can't Trim	3A	Oil Starvation	6E
Corrosion	2Q	Reduction Gearbox Failure	1R
Directed Removal NOTE (2)	4D	<u>COMPRESSOR</u>	
Excessive Maintenance NOTE (4)	3B	Air Leakage	7J
Fire	5B	Blade Blended Beyond Limits	6K
Firefighting Chemical Ingestion	5A	Bleed Valve Broke/Inop	8N
Flameout	1A	Compressor Case Crack	6P
HEMP/HSI	7E	Compressor Erosion/Corrosion	6R
High Time (Components/HEMP/HSI) NOTE (3)	7D	Compressor/Fan VG Disconnect/Broke	6N
High Time Component Only NOTE (3)	7C	Compressor Stator Vane/Blade Cracked/Broken	6J
Hot Start	1B	Compressor Rub	6L
Low Cycle Fatigue	6V	Compressor FOD	5C
Low Torque/Power/Thrust/Efficiency	3R	IGV Crack/Broke/Disconnect	2S
Mod/TDC Inc	6A	Inlet Case Crack	2A
Overhaul	5G	Internal Noise/Binding/Shutdown	2C
Overspeed	2F	Stall	6Q
Overtemp	6F	<u>TURBINE</u>	
Smoke/Fumes in Cockpit	1Z	Blade Erosion	7U
Temp Out of Limits	8B	Blade Broken/Cracked	7T
Vibration	3D	Blade Sulfidation	1V
<u>FUEL SYSTEM</u>		Exhaust Duct Failure	4R
Inability to Accelerate	3M	Internal Noise/Binding/Shutdown/Start	1T
Inability to Start	3P	Turbine Nozzle Failure	6T
Fuel Leakage	7L	Turbine Disk Failure	8C
Unstable/Surging	3U	Turbine FOD	5D
<u>OIL SYSTEM</u>		<u>AFTERBURNER</u>	
Accessory Gearbox Malfunction	1G	Flame Holder	8K
Bearing Failure	8P	Liner Crack/Failure	8T
High Sump Pressure	9J	Mount Crack/Broke	8Q
Excessive Oil From Breather	8A	Nozzle Cylinder Failure/Crack	8V
High Oil Pressure	5Q	Nozzle Flap/Seal/Segment Crack/Failure	8X
JOAP Lab Recommendation	8F	Synch Ring/Actuator Ring Malfunction	1M
Low Oil Pressure	5W	Variable Nozzle Failure	4S
Metal in Oil	2N		

Figure 9-4.—AEMS Engine/Module/Removal/Downgrade/Repair codes.

<u>OTHER</u>		<u>OTHER (continued)</u>	
Backfire(s) in Flight	1E*	Internal Failure Cause Unk	3Q*
Cylinder Failure	2U*	Nose Case Crack	6C*
Damaged in Transit	4L	Overboost	2G*
Diffuser Cracked	4M	Prop Shaft Loose	1S
Engine Decoupled	5U	Rear Case Cracked	7A*
Engine Seizure	4P	Sudden Stoppage	4J*
Faulty Handling/Dropped	3E	Super Charger Case Cracked	5E*
Front/Rear Case Cracked	7A		

NOTE (1): This code to be used on T-56, T400, T700, F404 and other modular engine sections (RFI sections) removed as a result of a failure in an associated module.

NOTE (2): This code is used when reporting custodians are directed by Type Commander/Functional Wing/Commanding General Marine Air Wing and Commander Carrier Air Wing to remove an RFI engine from an aircraft and transfer to another reporting custodian.

NOTE (3): Enter in remarks of ETR the nomenclature of the high time component.

NOTE (4): Enter in remarks of ETR the actual discrepancy vice the words “Excessive Maintenance.”

* Reciprocating Engines Only

Figure 9-4.—AEMS Engine/Module/Removal/Downgrade/Repair codes—Continued.

module asset (for example, COMNAVAILRANT, COMNAVIAIRPAC, CNATRA, and so forth). The reporting custodian usually reports directly to the controlling custodian.

Item 9—Flight hours since new. Self-explanatory. Drop all tenths of hours and do not round off or include test cell hours. Operating hours since new should reflect operating hours recorded in the applicable AESR. If less than five digits, add leading zeros; for example, 00104.

Item 10—Reporting custodian received from/transferred to. Enter the UIC of the activity the engine was received from or is being transferred to.

Item 11—New controlling custodian transferred to. Identifies the new controlling custodian, by UIC, who will receive the engine.

Item 12—Aircraft model. This field identifies the model aircraft in which the engine is being installed or removed; for example, P3C.

Item 13—BUNO. Reports the six-digit bureau number (BUNO) of the aircraft that the engine is being installed in or removed from.

Item 14—Engine position. Indicates the position in which the engine is/was installed. For example, on a dual (2) engine aircraft, when the starboard (right) engine is removed, the entry should be 2.

Item 15—Reason for removal/repair/downgrade. This code describes why an engine is being removed or downgraded, or why the engine needs repair. Figure 9-4 shows a list of authorized reasons for removal, downgrade, and repair codes that are used in engine transaction reporting.

Item 16—Quick Engine Change Assembly (QECA). This item is reported to identify engines that are completely assembled with a Quick Engine Change Kit (QECK) and configured for a specific position. If a QEC does not have a specific position, report X.

Item 17—BCM/Inspection code. This code (beyond the capability of maintenance) identifies an engine that has been rejected by an I-level maintenance activity. This code identifies engines that I-level activities are not authorized to repair or are not able to repair due to lack of facilities, tools, equipment, technical data, technical skill, or parts.

Item 18—Job control number. This number identifies the specific Maintenance Action Form (MAF) associated with the repair process.

Item 19—Remarks. The Remarks section is used to amplify, explain, or describe any other significant data concerning a transaction. There are only 50 spaces available, so be concise.

For a more detailed description of ETR data elements and fields, refer to NAVAIRINST 13700.15. Activities that report engine transactions should maintain copies of submitted reports on file for at least 24 months.

Q13. What data elements are mandatory on all ETRs?

Q14. What rule should be used to report "flight hours since new" on an ETR?

Q15. ETRs should be maintained on file for what minimum time?

ENGINE TRANSACTION REPORT CORRECTION PROCEDURES

LEARNING OBJECTIVE: Describe ETR correction procedures.

When an error has been made in the submission of an ETR, a correction report should be sent immediately. Correction reports are normally submitted as a two-line report for each correction that is being submitted. These reports are prepared in the same basic format as regular reports. Correction reports should refer only to data reported in the original report and should include the same action and information addressees as the original. Correction reports submitted at the direction of higher authority should include the reference that directed the resubmission.

Correction reports are not assigned a new ETR number because these reports are correcting previously submitted ETRs. The first transaction of the message repeats the information previously reported in error with the exception of adding the word DELETE at the end of the transaction line. The second transaction of the report contains the corrected information and the word CORRECT at the end of the transaction line. Figure 9-5 shows an example of an ETR correction report.

When submitting correction reports, do not combine them with transactions reporting current actions. Submit correction ETRs separately. Submit correction reports within 24 hours after notification by

```
FM STRKFITRON ZERO ZERO ZERO
TO COMNAVAIRPAC SAN DIEGO CA//N442G/N422C5/N422C52/N421/N421G//
COMSTRKFIGHTWINGPAC LEMOORE CA//N452/N45//
INFO COMFIFTHFLT//41//
COMCARGRU SEVEN
COMFAIRWESTPAC ATSUGI JA//N421A//
USS NIMITZ
COMCARAIRWG NINE
BT
UNCLASS //N13700//
MSGID/GENADMIN/VFA-000//
SUBJ/AIRCRAFT ENGINE TRANSACTION REPORT CORRECTION 01-98 (NAVAIR 13700-9)//
REF/A/MSG/STRKFITRON-000/091411Z JAN 98//
REF/EYDOC/NAVAIRINST 13700.15B//
NARR/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE
MANAGEMENT, REF B IS STRKFITRON 000 MSG ETR 01-98 SYSTEM.//
RMKS/1. IRT REF A CORRECT REF B VFA-000 ETR 01-98 IAW REF B AS FOLLOWS:
001/03.60347/24-74/98007/F404GE/402/63925/00927/FA18C/164968/2/5C/QWO007468/DELETE
001/0360347/24-74/98007/F404GE/402/63925/00927/FA18C/164966/2/5C/QW0007468/CORRECT
2. REMARKS: 001 CORRECT BUNO TO 164966 VICE 164968
```

Figure 9-5.—Aircraft Engine Transaction Report (ETR) Correction.

higher authority. Should you find you have made an error after submission of an ETR, do not wait for notification to send a correction ETR. Draft the correction ETR immediately. Complete ETR correction procedures can be found in NAVAIRINST 13700.15.

Q16. What is the deadline for submitting ETR correction reports after notification from higher authority?

AIRCRAFT ENGINE RECORD CARD

LEARNING OBJECTIVES: Define the purpose of the Aircraft Engine Record card. Recognize retention requirements for Aircraft Engine Record cards of engines transferred to another reporting custodian.

The Aircraft Engine Record card is a 5- x 8-inch record card that provides a standardized record for local management of aircraft engines. This record is used in much the same way as the Aircraft Record "A" card in aircraft inventory reporting. One Aircraft Engine Record card is maintained on file for each assigned engine, and the card should be retained by an activity for 6 months after transfer of the engine to another reporting custodian. Whenever reportable actions occur, an ETR is submitted, and information is recorded on the Aircraft Engine Record card. An Aircraft Engine Record card is shown in figure 9-6.

For the most part, the card is self-explanatory. Notice that in figure 9-6, the blocks are numbered to correspond to items of information reported on ETRs. An understanding of data elements on ETRs will clarify the entries made on the Aircraft Engine Record card.

Q17. What card provides a standardized record for local management of aircraft engines?

Q18. Aircraft Engine Record cards should be retained for what minimum period after an engine is transferred to another reporting custodian?

END-OF-QUARTER (EOQ) REPORT OF FLYING HOURS FOR INSTALLED ENGINES

LEARNING OBJECTIVE: Identify data elements used on the EOQ report.

Engine reporting custodians submit an EOQ report of all installed engines. This report includes data up to 2400 hours on the last day of the quarter. The type of

engine that is being reported determines the quarter in which EOQ reports are submitted. All type MK 529, O, R, and T (except T56) engines are reported as of 2400 hours on 31 January, 30 April, 31 July, and 31 October. All type T56 and CFM56 turboshaft engines are reported as of 28 or 29 February, 31 May, 31 August, and 30 November. All turbojet and turbofan engines, types F, J, and TF, are reported as of 31 March, 30 June, 30 September, and 31 December.

REQUIRED CONTENT OF EOQ REPORT

The EOQ report includes all engines in an installed status regardless of location. Therefore, engines in the reporting custodian's aircraft that are in SDLM or commercial facilities must be included. The reporting custodian must contact activities that have physical custody of the aircraft engines to determine the correct number of hours to be reported. An example of a EOQ naval message is shown in figure 9-7.

Notice that some of the data elements are not repeated, such as (4), (5) and (12), because the information is the same for each engine. The Status/STAR code for EOQ reports is 11-90. Other data elements used on the EOQ report are the same data elements used on ETR reports, so these data elements will not be discussed here. All engines should be listed by aircraft and in engine position number order.

EOQ REPORT CORRECTION PROCEDURES

LEARNING OBJECTIVES: Identify the two submission methods for EOQ reports. Identify the submission deadline of EOQ reports.

Correction procedures for EOQs are the same as for ETRs. Correction reports are not assigned a new ETR number. All addressees of the original message with a need to know should be included in the correction message. If you discover your own error, do not wait to be notified. You should draft a correction message. This will show your supervisors your initiative.

METHOD OF TRANSMISSION

Reporting custodians should send the EOQ report via naval message or should enter the report through an on-line AEMS terminal. Reports should be sent by 2400 hours on the 5th working day following the end of the month in which the engine is to be reported.

AIRCRAFT ENGINE RECORD				SEE NAVAIRINST 13700.15B								
NAVAIRINST 13700.15B				PREVIOUS ISSUES OF THIS FORM ARE OBSOLETE								
NAVAIR 13700/3 (REV 01-96) S/N 0102-LP-006-5100												
ENG/PSSN/MODULE SER NR (1)		ENG/PSSN/MODULE TYPE MODEL (4)		ENG/PSSN/MODULE SERIES/DASH (5)		REPORTING CUSTODIAN UIC (6)		ACFT MODEL (12)		ACFT BUNO/PSSN (13)		
0336428		TF34GE		400A		09021		S3B		158848		
TRANS SER NO (0)	STATUS/ STAR (1)	JULIAN DATE (3)	HOURS SINCE OVHL (8)	HOURS SINCE NEW (9)	REPT CUST UIC RECD/ FM TRF TO (10)	NEW CONT CUST UIC TRF TO (11)	POS NR (14)	RMVL DOWN (15)	QECA CONF (16)	BCM/ INSP CODE (17)	JCN (18)	REMARKS (21)
002	21-61	98037		01952	00602							RCVD FM VS-31
ENG/PSSN/MODULE SER NR (1)	ENG/PSSN/MODULE TYPE MODEL (4)	ENG/PSSN/MODULE SERIES/DASH (5)	REPORTING CUSTODIAN UIC (6)	ACFT MODEL (12)	ACFT BUNO/PSSN (13)							
0336428	TF34GE	400A	09021	S3B	158848							

Figure 9-6.—Aircraft Engine Record card.

R 031411Z OCT 97 ZYB
 FM STRKFITRON ZERO ZERO ZERO
 TO COMNAVAIRPAC SAN DIEGO CA//N421/N421G/N422C5/N422C51/N422C52/N422C56//
 COMSTRKFIGHTWINGPAC LEMOORE CA//N45/N452//
 INFO COMFAIRWESTPAC ATSUGI JA//N45//
 COMCARGRU SEVEN
 USS NIMITZ
 COMCARAIRWING NINE
 BT
 UNCLAS //N13700//
 MSGID/GENADMIN/VFA-000//
 SUB J/AIRCRAFT ENGINE TRANSACTION/END-OF-QUARTER REPORT (EOQ)/NAVAIR 13700-9//
 REF/A/DOC/NAVAIRINST 13700.15B/97MAR04//
 AMPN/REF A DELINEATES REPORTING PROCEDURES FOR THE AIRCRAFT ENGINE
 MANAGEMENT SYSTEM.//
 RMKS/1. EOQ REPORT STATUS-STAR CODE 11-90, EOQ DATE 97273 (PREPARED BY
 AZ2 M. CHRISTMAS, DEPLOYED), UIC 00000 ACFT MODEL: FA-18C, TOTAL:
 12. ZERO AIRCRAFT IN REPAIR/MODIFICATION, ZERO BARE FIREWALLS THIS REPORT.

A. EOQ REPORT AS FOLLOWS:

(1)	(4)	(5)	(9)	(12)	(13)	(14)
0360012	F404GE	402	01632	FA18C	164900	1
0360156			00735			2
0360039			01568		164904	1
0360270			01060			2
0360151			01222		164906	1
0360014			02093			2
0360017			02024		164908	1
0360042			00861			2
0360286			01208		164980	1
0360194			01345			2
0360198			01272		164974	1
0360065			01876			2
0360316			00920		164960	1
0360216			01259			2
0360201			01552		164964	1
0360057			01573			2
0360263			01147		164968	1
0360347			00708			2
0360207			01527		164970	1
0360290			01080			2
0360287			01101		164972	1
0360047			01538			2
0360067			01629		164977	1
0360097			01517			2.//

Figure 9-7.—End-of-Quarter (EOQ) Report.

- Q19. EOQ reports for TF34 engines should be submitted for periods that end on what dates?*
- Q20. Status/STAR code 11-90 is the code for what type of report?*
- Q21. What are the two transmission methods for EOQ reports?*
- Q22. What is the deadline for submission of EOQ reports?*

SUMMARY

The Aircraft Engine Management System (AEMS) provides data on inventory management and the reporting of engines, propulsion systems, and modules. *Aircraft Engine Management Systems*, NAVAIRINST 13700.15, is the governing directive for AEMS. A Status code is used to describe the condition of an engine, the purpose for which the engine is used, or the state or progress an engine has reached in the maintenance cycle. The 11 series Status code is used to describe an installed operating engine. A STAR code describes or gives the reason for strikes, transfers, acquisitions, or removals. A STAR code is always used with an aircraft engine Status code and amplifies the Status code.

A controlling custodian is advised of the change of the status, use, or custody of an aircraft engine by an engine transaction report (ETR). An ETR can report a single transaction or several transactions of an evolution (for example, removal and transfer of an

engine and subsequent receipt and installation of a replacement engine). AEMS on-line reporting is the preferred method of submitting ETRs for shore-based activities. ETRs are numbered sequentially throughout the calendar year. Data elements 0 through 6 and item 19 are mandatory on all ETRs. When flight hours are reported on an ETR, tenth of hours are dropped without rounding off the hours. ETRs should be retained on file for at least 24 months. After notification of an ETR error by higher authority, an ETR correction report should be submitted within 24 hours.

The Aircraft Engine Record card provides for a standardized record for local management of aircraft engines. An Aircraft Engine Record card should be retained for 6 months after an engine is transferred.

The type of engine that is being reported upon determines the quarter in which an end-of-quarter (EOQ) report is submitted. The Status/STAR code 11-90 is the code for an EOQ report. An EOQ report may be submitted by the AEMS on-line computer or by naval message. The deadline for an EOQ report is 1200 hours on the 5th working day that follows the end of the reporting period.

In this chapter, we discussed the importance of accurate aircraft engine management procedures. We found that each instance of engine status as well as change of custody must be reported daily. Like aircraft inventory reporting, engine management is essential to any naval aviation activity's primary concern—the ability to perform its mission.

ANSWERS TO REVIEW QUESTIONS

- A1. *The Aircraft Engine Management Systems (AEMS).*
- A2. *Aircraft Engine Management Systems, NAVAIRINST 13700.15.*
- A3. *A Status code.*
- A4. *The 11 series.*
- A5. *A STAR code.*
- A6. *An aircraft engine Status code.*
- A7. *A STAR code.*
- A8. *By an ETR.*
- A9. *2400 hours on the first working day following the date the action occurred.*
- A10. *Four.*
- A11. *AEMS on-line reporting.*
- A12. *4-97.*
- A13. *Items 0 through 6 and item 19.*
- A14. *Drop tenths of hours, do not round off.*
- A15. *24 months.*
- A16. *24 hours after the notification.*
- A17. *Aircraft Engine Record Card.*
- A18. *6 months.*
- A19. *31 March, 30 June, 30 September, and 31 December.*
- A20. *EOQ reports.*
- A21. *Naval message and entry in AEMS on-line computer.*
- A22. *2400 hours on the 5th working day following the end of the reporting period.*

APPENDIX I

ABBREVIATIONS, ACCRONYMS, AND GLOSSARY OF TERMS

ACC—Aircraft Controlling Custodian—A term applied to air commands and COMNAV-AIRSYSCOM for exercising administrative control of assignment, employment, and logistic support of certain aircraft and aircraft engines as specified by the CNO. The following ACCs have been designated by CNO: COMNAVAIRLANT, COMNAVAIRPAC, CNATRA, COMNAV-AIRESFOR, and COMNAVAIRSYSCOM.

ACCEPTANCE—Assumption of responsibility for, or legal title to, an aircraft from another party. Receipt of new aircraft from a manufacturer (or of any aircraft from a non-Navy custodian) by a representative authorized to do so by the Navy. Provisional acceptance is the acceptance of an aircraft for which certain obligations with respect to the aircraft have not yet been fulfilled by the contractor.

ACCEPTANCE INSPECTION—An inspection performed at the time a reporting custodian accepts a newly assigned aircraft, from any source, and on return of an aircraft from SDLM or other major D-level rework. It includes an inventory of all equipment listed in the AIR, verification of CADs and AEPSs, a configuration verification, hydraulic fluid sampling, a daily inspection, and a complete FCF. For acceptance inspection purposes, verification of CADs, AEPSs, and configuration is accomplished by visual external inspection and record examination only. Disassembly beyond the daily inspection requirements of applicable PMS publications is not required. The accuracy of flight hours on the Monthly Flight Summary (OPNAV 4790/2 IA) is verified by checking the PERIOD and SINCE NEW blocks and operating hours on the Equipment Operating Record (OPNAV 4790/3 IA) in the ACCUM block. Activities may elect to increase the depth of the inspection if equipment condition, visual external inspection, or record examination indicates such action is warranted.

ACCEPTANCE INSPECTION (SE)—An inspection performed at the time a reporting

custodian accepts a newly assigned item of SE. It includes an inventory of all records and components that make up the item of SE, a configuration verification, a preoperational inspection as required by the applicable MRCs, hydraulic fluid sampling, and a functional test. The activity receiving the item of SE may elect to increase the depth of inspection if the SE condition indicates such action is warranted.

ACCUM—Accumulated.

ACCUMULATED WORK HOURS—Hours that are expended against a job by individuals within the same work center.

ACOMTRAK—Aircraft Composition Tracking (System)—An automated system for tracking the composition, location, and operating time/cycle counts of the life limited components of aircraft. ACOMTRAK is used to develop schedules for inspections, replacement procurements, and forced removal actions for these components based on usage requirements and fixed or variable hour or cycle counts or limits. It provides important support to the RCM Program.

ACTION DATE—The Julian date on which a maintenance form is completed by a work center.

ACT ORG—Action Organization—The activity that actually performs the maintenance action. It is identified by a three-character, alphanumeric code.

ACTION TAKEN CODE—A one-character alphabetic or numeric code that describes what action has been accomplished on the item identified by a WUC.

ACTIVE AIRCRAFT—Aircraft currently engaged in supporting flying missions either through direct assignment to aircraft units or reassignment through any of the logistic processes of supply, maintenance, or modification.

AD—Aviation Machinist's Mate.

ADB—Aircraft Discrepancy Book.

ADP—Automated Data Processing.

AE—Aviation Electrician's Mate.

AEMS—Aircraft Engine Management System—An automated engine management system that provides on-line status and condition of any engine, propulsion system, or module. The system is used extensively by ACCs and other managers to effect efficient distribution of engine assets.

AEPS—Aircrew Escape Propulsion System.

AERONAUTICAL ALLOWANCE LISTS—Lists of equipment and material determined from known or estimated requirements as necessary to place and maintain aeronautical activities in a material readiness condition. In the case of aerological and photographic material, the requirement is extended to all applicable naval activities.

AERONAUTICAL EQUIPMENT—The equipment used within the maintenance complex that contributes to the completion of the maintenance mission. It includes aircraft, SE, aviators' equipment, and other similar devices.

AERONAUTICAL MATERIAL—All the material used in the operation and maintenance of aircraft.

AESR—Aeronautical Equipment Service Record—An insert to the basic aircraft logbook used as a service record for various aircraft equipment, such as power plants and propellers.

AGE—The process of accumulating operating service months.

AIMD—Aircraft Intermediate Maintenance Department—The department of an aviation ship or NAS responsible for the check, test, repair, or manufacture of aeronautical components and SE for the supported aircraft.

AIR—Aircraft Inventory Record.

AIRS—Aircraft Inventory Reporting System.

AIRCRAFT—An air vehicle, designed primarily for flight in the atmosphere, that has incorporated in its prime design the ability/requirement for human occupancy.

AIRCRAFT AIRFRAME—The structural components, including the framework and skin of such parts as the fuselage, empennage, wings, landing gear (minus tires), and engine mounts.

AIRCRAFT EQUIPMENT CONFIGURATION LIST—A listing of the avionics components

installed in aircraft, cross-referenced to applicable ARRs, that contain the support requirements for outfitting purposes.

AIRCRAFT LOGBOOK—A detailed service record maintained for each individual aircraft.

AIRFRAME ACCESSORIES—The items of equipment required for operation of the aircraft and not considered an integral part of the airframe or engine, such as wheels, brakes, hydraulic equipment, fuel systems, deicing equipment, anti-icing equipment, and other items regardless of whether attached to the engine or airframe.

AIRWORTHINESS INSPECTION—Applicable to commercial-off-the-shelf aircraft and provides for a periodic standard D-level rework normally performed per the manufacturer's FAA-approved maintenance requirements. This rework includes a comprehensive inspection together with critical defect corrosion correction and compliance with outstanding FAA airworthiness directives and approved manufacturer's service bulletins.

AIS—Automated Information System.

ALCOM—All Commands (Message).

ALMILACT—All Military Activities (Message).

ALSS—Aviation Life Support System—Items of equipment and clothing needed to allow aircrew members and aircraft passengers to function within all parameters of the flight environment., safely egress from disabled aircraft and descend to the surface, survive on land and water, and interface with rescue forces.

AM—Aviation Structural Mechanic or Amendment.

AMCM—Airborne Mine Countermeasures—Aircraft weapons systems used to detect and neutralize sea mines.

AMMRL PROGRAM—Aircraft Maintenance Material Readiness List Program—Provides data required for effective management of selected SE at all levels of aircraft maintenance. Within this program, SERMIS and IMRL are significant.

AMO—Assistant Maintenance Officer.

AMPN—Amplification (Message).

AMRR—Aircraft Material Readiness Reporting.

AMSU—Aeronautical Material Screening Unit.

AO—Aviation Ordnanceman.

APL—Allowance Parts List—A listing of repair parts prepared for individual equipment and components.

APML—Assistant Program Manager for Logistics.

APPROPRIATION—An authorization, established by an Act of the Congress of the United States, to spend funds of the U. S. Treasury or incur indebtedness for specified purposes. The O&MN, is established for each fiscal year concerned to fund the operation and maintenance requirements of the operating forces. The appropriation is only available for citation on requisitions for the fiscal year established and for the recording of related expenditures for the following two years.

APU—Auxiliary Power Unit.

ARMAMENT SE—Any equipment used in the loading of an explosive system or launch device on an aircraft.

AS—Aviation Support Equipment Technician.

ASPA—Aircraft Service Period Adjustment (Program)—A subset of RCM, provides for inspections that determine if a 12-month (or equivalent flight hour) adjustment can be added to the current PED of an individual airframe. Some series of aircraft are exempted from the ASPA Program for specific cause. For these aircraft, the existing provisions for extensions apply.

ASR—Assembly Service Record.

ASSIGNMENT—Statement of positive intention that specifically designated aircraft are or will be in the custody of specifically designated organizational units.

AT—Aviation Electronics Technician or Action Taken (Code).

ATCM—Aeronautical Time Code Management.

ATO—Aircraft Transfer Order—A letter or message type directive used to effect all transfers of aircraft.

AUDIT—As applied to QA, a periodic evaluation of detailed plans, policies, procedures, products, directives, and records.

AUGMENTED SUPPORT—An interim arrangement during initial development or production for the support of the equipment by the contractor on an as required basis, pending assumption of support responsibility by the government.

AUTOMATIC DISTRIBUTION—The action that provides initial distribution of publications to newly activated aircraft squadrons or ships and that provides definite follow-on distribution of supplementary publications (for example, changes, revisions, or supplements) to the recipients of the publications on initial distribution or to authorized requesters.

AVAILABILITY (AIRCRAFT)—Applies to aircraft in an operating or nonoperating status that may be available for flight, upkeep, or rework, as specified. When the term is used and not qualified, it refers to commission availability.

AVCAL—Aviation Consolidated Allowance List—A consolidated list of aeronautical material, tailored to each individual ship and MAG, to support assigned or embarked aircraft flight operations. It is normally prepared by NAVICP Philadelphia, PA under direction of the air TYCOM.

AVIATION ACTIVITY—A formally structured staff, command, squadron, unit, or detachment headed by a Commander, CO, or OINC responsible for management, maintenance, material, and logistic support of naval aeronautical equipment.

AVIONICS SE—Avionics SE (common and peculiar) includes all equipment of an electronic nature used for, but not limited to, the test, troubleshooting, alignment, or calibration of aircraft systems and components. Examples of such equipment are general purpose electronic test equipment, automatic test equipment, vacuum pressure testers, temperature, and fuel quantity indicator test sets.

AWM—Awaiting Maintenance.

AWM REASON CODE—Awaiting Maintenance Reason Code—A one-character numeric code that describes the reason for an AWM condition.

AWM TIME—Awaiting Maintenance Time—Time when an aircraft is NMCM or PMCM and no maintenance is being performed on the systems causing the NMCM or PMCM status. Other maintenance upkeep not causing an NMCM or PMCM condition may be performed on the aircraft.

AWP—Awaiting Parts—The condition that exists when materials required to complete a maintenance action are not available on station/ship. AWP is that time when no work can be performed on the item being repaired due to a lack of ordered parts.

Parts are not considered to be ordered until the demand has been forwarded to the Supply Response Section of the Supply Department. The time when AWP occurred and the length of time it lasted is recorded in the Maintenance/Supply Record Section of the MAF. Items which cause AWP during on-equipment work are identified in the MAF Removed/Old Item Section. Items which cause AWP during off-equipment work are identified in the MAF (H-Z) Failed/Required Material Section.

AWSE—Armament Weapons Support Equipment—Consists of all the equipment included in the terms armament SE, WSE, and logistic SE.

BAILMENT—Aircraft under the controlling custody of COMNAVAIRSYSCOM but in the physical custody of non-Navy organizations pursuant to a contract for research, development, and evaluation or production testing for the Navy.

BCM—Beyond Capability of Maintenance—A term/code used by IMAs when repair is not authorized at that level, or when an activity is not capable of accomplishing the repair because of a lack of equipment, facilities, technical skills, technical data, or parts. BCM will also be used when shop backlog precludes repair within time limits specified by existing directives.

BOARD OF INSPECTION AND SURVEY—Convenes at COMNAVAIRSYSCOM approximately 60 days subsequent to the start of the Board of Inspection and Survey preliminary evaluation and is attended by representatives of CNO, CNATRA, fleets, COMNAVAIRSYSCOM, NAVICP Philadelphia, PA, and contractors. Evaluation of the aircraft and its SE is reported and action to be taken is determined. Proposed configuration of the aircraft for fleet delivery is established. Readiness of the aircraft and its associated equipment to commence the Fleet Introduction Program is a most important decision.

BULLETIN—A document issued by COMNAVAIRSYSCOM which directs a onetime inspection of equipment, contains related instructions, and disseminates administrative or management information as related to maintenance of weapon systems.

BUNO—Bureau Number—An unhyphenated serial number, not exceeding six digits, used to identify individual airframes within the naval aircraft inventory. Each number is unique to a particular airframe. Assignment is controlled by the CNO.

CAD—Cartridge-Activated Device.

CAG—Carrier Air Group.

CAGE—Commercial and Government Entity—A five-position code assigned to manufacturers and nonmanufacturers organizational entities and contractors of items procured by agencies of the federal government.

CALENDAR AGE—The total number of calendar months since acceptance.

CALIBRATION—The process by which calibration installations compare a calibration standard or PME with a standard of higher accuracy to ensure the former is within specified limits throughout its entire range. The calibration process involves the use of approved instrument calibration procedures.

CANNIBALIZE—Removal of serviceable parts from one aircraft for installation on another.

CBT—Computer-Based Training.

CD ROM—Compact Disc-Read Only Memory.

CDI—Collateral Duty Inspector.

CDQAR—Collateral Duty Quality Assurance Representative.

CERTIFICATION—Written testimony from competent instructional authority that the certified individual is qualified to act in a specific capacity.

CETS—Contractor Engineering and Technical Services—Those services performed by commercial or industrial companies which provide advice, instruction, and training to personnel of the military departments in the installation, operation, and maintenance of DOD aeronautical systems and equipment.

CFA—Cognizant Field Activity—An activity that has been delegated the authority and assigned the responsibility to perform specified engineering functions.

CFE—Contractor Furnished Equipment—Items manufactured or purchased by the contractor for inclusion in or support of an aeronautical system.

CGFMF—Commanding General, Fleet Marine Force.

CHANGE—A document that directs and provides instruction for the accomplishment of a change, modification, repositioning, or alteration of material in in-service aircraft, weapon systems, assemblies, subassemblies, components, or SE.

CNATRA—Chief of Naval Air Training.

CNO—Chief of Naval Operations.

CO—Commanding Officer.

COG—Cognizant (command that is responsible for providing support).

COMMERCIAL DERIVATIVE NAVY AIRCRAFT—Aircraft procured by the Navy for which there is a certified commercial counterpart.

COMMON ITEM—An item of standard design, application, and specification, normally procurable from several manufacturers or suppliers, or available from only one manufacturer but with wide usage or of such design that the multiple application is apparent.

COMNAVRESFOR—Commander Naval Air Reserve Force.

COMNAVIRLANT—Commander Naval Air Force U.S. Atlantic Fleet.

COMNAVIRPAC—Commander Naval Air Force U.S. Pacific Fleet.

COMNAVIRSYSCOM—Commander Naval Air Systems Command.

CONDITIONAL INSPECTION—An inspection conducted as a result of a specific overlimit condition or as a result of circumstances or events which create an administrative requirement for an inspection. Examples of overlimit conditions include hard landing, overstress, overtemp, lightning strike, overweight takeoff or landing, and field arrestment. Examples of administrative actions or requirements include precarrier or postcarrier inspections, onetime inspections directed by higher authority (not directed by a TD), and compass calibrations (when not directed by special inspection MRCs).

CONFIGURATION—The functional and physical characteristics of material as described in technical documents and achieved in a product.

CONFIGURATION CONTROL—The systematic evaluation, coordination, approval or disapproval of proposed changes, and the implementation of all approved changes to the configuration of a configuration item, after formal establishment of its configuration identification.

CONFIGURATION IDENTIFICATION—The current approved or conditionally approved technical documentation for a configuration item as set forth

in specifications, drawings and associated lists, and documents referenced therein.

CONFIGURATION ITEM LIST—A list of those status items designated for configuration control and configuration accounting.

CONFIGURATION ITEM(S)—Items designated by DOD components for configuration management. They may differ widely in complexity, size, and kind. Examples are an aircraft, ship, mobile test unit, navigation system, embedded computer, computer program, facility, electronic system, test meter, or a round of ammunition.

CONFIGURED ITEMS—Those selected items that require continuation of configuration status accounting during the operational phase. An item that affects mission capability and can be interchanged with a similar item that will result in a different mission capability.

CONSOLIDATED SE LIST—A summary of government decisions on contractor's SE recommendations and other pertinent data relative to support of the end article. It is a list of contractor recommended SE.

CONSUMABLE ITEM—Any item or substance which, upon installation, loses its identity and is normally consumed in use or cannot be economically repaired.

CONTAMINANTS—Particles of foreign material which may or may not be visible to the unaided eye.

CONTRACT FIELD SERVICES—Those engineering and technical services provided to DOD personnel by commercial or industrial companies on-site at defense locations by trained and qualified engineers and technicians.

CONTRACTOR PLANT SERVICES—Those services provided to personnel of the military departments in the plants and facilities of the manufacturer of military equipment or components by trained and qualified engineers and technicians employed by the manufacturer.

CONTROLLING CUSTODIAN—Air commands and COMNAVIRSYSCOM fleet support units exercising administrative control of assignment, employment, and logistic support of certain aircraft and engines, as specified by the CNO.

CONTROLLING CUSTODY—Administrative control of the assignment, logistic support,

employment, and responsibility to account for and provide information about the aircraft or SE.

CONUS—Continental United States (contiguous 48 states).

CONVERSION IN LIEU OF PROCUREMENT—Any conversion, service life extension, update, expansion/change of mission capability, improvement of combat capability, or combination of the foregoing. It is performed on existing aircraft for the primary purpose of providing a reasonably acceptable, modernized aircraft, as an alternative to procuring new aircraft to meet or maintain force levels.

CORRECTIVE ACTION—Action necessary to remove or control the cause of deficiencies in products, systems, or processes. A documented design, process, procedure, or materials change implemented and validated to correct the cause of failure or design deficiency.

CORRECTIVE MAINTENANCE—The actions performed to restore an item to a specified condition.

CPO—Civilian Personnel Officer.

CPT—Copilot Time.

CPU—Central Processing Unit (computer).

CR IPL—Consolidated Remain-In-Place List-A listing of all authorized remain-in-place items, is published by NAVICP and approved by the TYCOMs and COMNAVAIRSYSCOM.

CRITICAL ITEM—An essential item that is in short supply or expected to be in short supply for an extended period.

CRITICAL SUPPLIES AND MATERIALS—Those supplies vital to the support of operations which, for various causes, are in short supply or are expected to be in short supply.

CROSS SERVICING—That function performed by one military service in support of another military service for which reimbursement is required from the service receiving the support.

CSE—Common Support Equipment—Comprised of only those general purpose items supplying or measuring broad parameters of physical properties that are known to be established in the using service's inventory; for example, ground electrical, pneumatic, and hydraulic power units; towing, hoisting, and fueling devices; signal generation

devices; and voltage, amperage, and phase measuring devices. The application of SE items to other end items, systems, or components does not in itself justify or classify the items as CSE. CSE is divided as AVIONICS SE (common and peculiar) and NONAVIONICS SE (common and peculiar).

CTPL—Central Technical Publication Library.

CUSTODY—Cognizance and limited responsibilities for aircraft equipment, material, and SE. Categories of custody are CONTROLLING CUSTODY, PHYSICAL CUSTODY, and REPORTING CUSTODY.

CUSTODY CODES—Custody codes are single position, alpha characters which provide supplemental accountability detail about an SE transaction and the effect of the transaction on supply and financial records. These codes identify a specific category of SE items placed in the primary custody of an IMA. These items are issued to other activities (usually an organizational maintenance activity) on a subcustody basis.

CUSTOMER SERVICE—D-level services, including emergency check, test, minor repair, manufacture of parts, heat-treating, plating, and machine shop service to relieve NMCS, PMCS, and work stoppage conditions.

CY—Calendar Year.

D-LEVEL (DEPOT-LEVEL) MAINTENANCE—Maintenance done on material requiring major rework or a complete rebuild of parts, assemblies, subassemblies, and end items, including the manufacture, modification, testing, and reclamation of parts as required. D-level maintenance serves to support lower levels of maintenance by providing technical assistance and performing maintenance beyond the responsibility of O-level and I-level maintenance. D-level maintenance provides stocks of serviceable equipment by using more extensive facilities for repair than are available in lower level maintenance activities.

DAAS—Defense Automatic Addressing System.

DAILY INSPECTION—An inspection conducted to inspect for defects to a greater depth than the turnaround inspection.

DAR—Daily Audit Report.

DATA—The method of communicating concepts, plans, descriptions, requirements, and instructions

related to technical projects, material, systems, and services. These may include specifications, standards, engineering drawings, associated lists, manuals, and reports, including scientific and technical reports; they may be in the form of documents, displays, sound records, and digital or analog data.

DATA COLLECTION CODES—3M codes used in the MDS.

DATA ELEMENT—Data related to an item record. Each data element is identified by a specific data element number to permit its selection for inclusion in output documents, indicating its relationship to other data, and for file maintenance purposes.

DATA STORAGE UNIT—A storage medium used by the data storage set for significant maintenance data measured in-flight and after landing.

DEFECT—Any nonconformance of the unit or product with specified requirements. Defects will normally be grouped into one or more of the following classes but may be grouped into other classes or subclasses within these classes:

- **DEFECT, CRITICAL**—A defect that constitutes a hazardous or unsafe condition, or as determined by experience and judgment could conceivably become so, thus making the aircraft unsafe for flight or endangering operating personnel.
- **DEFECT, MAJOR**—A defect, other than critical, that could result in failure or materially reduce the usability of the unit or part for its intended purpose.
- **DEFECT, MINOR**—A defect that does not materially reduce the usability of the unit or part for its intended purpose or is a departure from standards but which has no significant bearing on the effective use or operation of the unit or part.

DESIGN ACTIVITY—The activity responsible for design, preparation, and maintenance of engineering documents for a given item of military property. The activity may be a government activity, contractor, or vendor.

DETACHMENT—A temporary reporting custodian formed with aircraft assigned from a parent squadron or unit. Detachments are established when a squadron deploys one or more aircraft to a ship or base substantially removed from the location of the parent organization; the parent

squadron CO feels that it would be impractical to retain reporting custody of the aircraft so deployed. Detachments have the same responsibilities as all other reporting custodians of aircraft.

DEVIATION—To depart from established policy or procedures, such as deviation from the NAMP. A specific written authorization, granted prior to the manufacture of an item, to depart from a particular performance or design requirement of a specification, drawing, or other document for a specific number of units or a specific period of time. A deviation differs from an engineering change in that an approved engineering change requires corresponding revision of the documentation defining the affected item, whereas a deviation does not contemplate revision of the applicable specification or drawing.

DISCD—(When Discovered Code). A one-character alpha code that identifies when the need for maintenance was discovered.

DOD—Department of Defense.

DODIC—Department of Defense Identification Code.

DON—Department of the Navy—Separately organized under the SECNAV. It operates under the authority, direction, and control of the SECDEF. It is composed of the executive part of DON; including the Office of the SECNAV, the Office of the CNO, and the Headquarters, Marine Corps; the entire operating forces, including naval aviation, of the Navy and the Marine Corps, and the reserve components of those operating forces; and all shore activities, headquarters, forces, bases, installations, activities, and functions under the control or supervision of the SECNAV. It includes the Coast Guard when it is operating as a service in the Navy.

DOWNTIME—That element of time during which the item is not in condition to perform its intended function.

DPVS—Distributed Plain Language Address (PLA) Verification System.

DSF—Data Services Facility—An activity that converts document data into machine records and uses these records to produce machine reports and listings.

DSN—Defense Switched Network.

DTG—Date-Time-Group.

E CARDS—Engine Record Cards.

E-MAIL—Electronic Mail (Internet).

ECAMS—Enhanced Comprehensive Asset Management System—An automated system developed to process selected nontactical flight data in support of the RCM concept. Nontactical data is recorded on a data storage unit on board the aircraft to capture engine exceedances, engine performance data, and life limited component usage data.

ECOMTRAK (SYSTEM)—Engine Composition Tracking (System)—An automated system used for tracking the composition, location, and operating time/cycle counts or life usage indexes of aircraft engines, propulsion systems, modules, and life limited components. ECOMTRAK is used to develop long range schedules for inspections, removals, replacements, procurements, and rework schedules for these components, based on usage requirements and fixed or variable usage rates. It provides important support to the RCM Program.

ECP—Engineering Change Proposal—A term that includes both a proposed engineering change and the documentation by which the change is described and suggested.

EDDY CURRENT—A method that uses induced eddy currents in detecting flaws in metal parts, such as cracks, inclusions, voids, seams, and laps. This method can also be used for sorting according to alloy temper, conductivity, and other metallurgical factors by variations in electrical characteristics/energy losses.

EGRESS SYSTEM—An egress system is an ejection seat, interconnect and sequence system, installed parachute and seat survival kit, and the explosive devices and rocket motors used in their propulsion. It also includes hatches or canopies which are shattered or jettisoned from the aircraft by use of explosive devices.

EHR—Equipment History Record.

EIS—Equipment in Service.

ELAPSED M/T—Elapsed Maintenance Time—The number of clock hours involved in making a repair.

EM—NALCOMIS OMA End User's Manual.

EMT—Elapsed Maintenance Time—For the purposes of Maintenance Data Reporting, EMT is defined as the actual clock time, in hours and tenths, that maintenance was being performed on a job. EMT does not include the clock hours and tenths for cure time, charging time, or leak test when they are

being conducted without maintenance personnel actually monitoring the work. Although the EMT is directly related to job man-hours, it is not to be confused with total man-hours required to complete a job. For example, if five men complete a job in 2.0 hours of continuous work, the EMT=2.0 hours and the man-hours=10.0.

ENCL—Enclosure (correspondence).

END ITEM—A final combination of end articles, component parts and materials that is ready for its intended use; for example, aircraft, NC-2A, or avionics test bench.

ENGINE ACCESSORIES—Those items of equipment required for engine operation that are not an integral part of the engine. Such equipment is included in the engine IPB. In most cases, they are attached to the engine but, in special situations, could be airframe mounted, such as oil pumps, fuel controls, engine-driven fuel pumps, temperature amplifiers, afterburner controls, carburetors, magnetos, distributors, and ignition harnesses.

ENROUTE—The physical movement of aircraft incident to change in its physical or reporting custody.

EOC CODE—Equipment Operational Capability Code—EOC Codes relate a particular system/subsystem within a T/M/S of equipment to a specific mission. An EOC Code is a three-character alphanumeric code that identifies the degree of degradation to mission capability and the system responsible for the degradation. The first character (alpha) is documented on the MAF. The second and third characters (numeric) are computer generated from the first two positions of the WUC.

EOQ—End of Quarter.

EOR—Equipment Operating Record.

EOS—Equipment Out of Service—Nonoperational aircraft in relation to SCIR documentation. Those aircraft which are "OUT" of material condition reporting status and are reported in an inventory status code other than A.

EQUIPAGE—The noninstalled articles, not usually associated with a specific model of aircraft, that make up the configuration on aircraft. Examples are life rafts, parachutes, safety belts, survival equipment, portable fire extinguishers, flight clothing, and similar items.

EQUIPMENT—All articles needed to outfit an individual or organization. The term refers to clothing, tools, utensils, vehicles, weapons, and similar items.

EQUIPMENT ALLOWANCE LISTS—A generic term indicating the publications, or sections thereof, that prescribe the equipment and weapons authorized for military organizations.

EQUIPMENT APPLICABILITY INDEX—A part of the Naval Aeronautical Publications Index which gives a listing of aircraft and equipment, arranged in alphabetical order, with applicable manuals shown by their publication number.

EQUIPMENT MAINTENANCE MANAGEMENT—The process of developing workload requirements, forecasting and planning, organizing, staffing, directing, and controlling the engineering, industrial, and other resources necessary to effectively and economically support the equipment operation objectives of the Navy.

ETR—Engine Transaction Report.

EXC CODE—Exception Code—Used on the NAVFLIR for entries that require processing for other than routine flights. These codes are contained in the appendix of OPNAVINST 3710.7.

EXCEEDANCE—Surpassing or exceeding a life limit.

EXER—Exercise (message).

EXPERIMENTAL AIRCRAFT—Aircraft acquired by the Navy solely for use in research and development.

EXPLOSIVE ORDNANCE—Complete air-launched weapon system(s) and components, except torpedoes and mines. Torpedoes and mines, supported by the COMNAVSEASYS COM, are in some cases adapted to aircraft delivery. The COMNAVAIRSYS COM is responsible for the modification and equipment necessary to carry these weapons in aircraft.

EXREP—Expedition Repair—The processing for repair of NIS or NC components (repairable or consumable). These components must be in support of, or related to, an NMCS or PMCS situation. This processing is accomplished by the immediate removal of the component from the aircraft, expedited delivery and induction for repair, and the earliest return to RFI status for

supply issue under the standard material issue priority system.

FAA—Federal Aviation Administration.

FAILURE RATE—The number of failures of an item per unit measure of life (cycles, time, miles, events and so forth [as applicable] for the item).

FASOTRAGRU—Fleet Aviation Specialized Operational Training Group—Under TYCOM direction, FASOTRAGRUs train fleet personnel in operational and tactical usage of weapon systems and in aviation maintenance management and administration.

FAX—Facsimile Transmission.

FCF—Functional Check Flight—Flights performed to determine if the airframe, power plant, accessories, and items of equipment are functioning per predetermined requirements while subject to the intended operating environment. FCFs are conducted when it is not feasible or possible to determine safe/required functioning by means of ground checks.

FERRY—The process of flying an aircraft from one physical location to another. Within the aviation community this term has two meanings: any flight whose primary purpose is relocation of the airframe and portable ferry flights conducted per aircraft controlling custodian's/TYCOM's directives.

FID—Fault Isolation Detection.

FIELD SERVICE REPRESENTATIVE—An employee of a manufacturer of military equipment or components who provides liaison or advisory service between the company and the Navy for his or her company's equipment or components.

FINAL ACCEPTANCE—Examination of the finished product to ensure all required work has been accomplished and the product conforms to specified requirements.

FIRST-DEGREE REPAIR—The repair of gas turbine engines to a depth which includes and goes beyond that repair authorized for second and third degree IMAs. It includes compressor rotor replacement and disassembly to a degree that the compressor rotor is removed. Any degree of repair which requires compressor rotor removal constitutes first-degree repair. Only those activities specifically designated as first-degree repair activities and included in NAVAIR NOTE 4700

will be outfitted to accomplish repair of that magnitude.

FIX PHASE—The portion of a scheduled inspection that involves the correction of discrepancies found during the look phase.

FIXED ALLOWANCE MANAGEMENT AND MONITORING SYSTEM—A mechanized supply data base management system used by most major naval air activities to support the IMA supply operation.

FLEET CONTROLLED MATERIAL—Material under the requisitioning, rationing, and issue control of the aviation TYCOMs, COMNAVAIRLANT/COMNAVAIRPAC, or their designated controlling agencies.

FLEET INTRODUCTION PROGRAM—An accelerated flight program that lasts approximately 100 flight hours per aircraft. Normally conducted at the NAVAIRWARCENACDIV Patuxent River for the purpose of introducing a new model to fleet personnel for indoctrination in the operation and maintenance of the aircraft. A secondary purpose is to provide a further check on the readiness of the aircraft for fleet delivery.

FLYABLE—An aircraft in such material condition as to be safe and capable of normal flight operations without regard to capability to perform a specific mission, weather, personnel availability, base condition, fuel condition, armament, or flight schedule.

FMC—Full Mission Capable—Material condition of an aircraft that can perform all of its missions. FMC is subdivided into FMC Maintenance (M) and FMC Supply (S). $FMC\ Hours = MC\ Hours - (PMC\ Hours + OPC\ Hours)$.

FMCM—Full Mission Capable Maintenance—The material condition of an FMC aircraft that is not OPC because of maintenance requirements existing on inoperable subsystem(s) which degrade the end item from OPC to FMCM. FMCM time starts when the condition is discovered, except when the discovery is made in flight. In flight malfunction FMCM time starts at the termination of flight. FMCM time stops when maintenance is completed or interrupted by a supply shortage. Work stoppage resulting from parts nonavailability is reported as FMCS. FMCM time resumes when required supply item(s) are delivered to the

maintenance activity. $FMCM\ Hours = FMC\ Hours - FMCS\ Hours$.

FMCS—Full Mission Capable Supply—The material condition of an FMC aircraft not OPC because maintenance required to correct the discrepancy which degrades the end item from OPC to FMCM cannot continue because of a supply shortage. FMCS time starts when a supply demand has been made for an item required to continue maintenance. FMCS time stops at the time the material is delivered to the designated delivery point or change of EOC Code. $FMCS\ Hours = FMC\ Hours - FMCM\ Hours$.

FOD—Foreign Object Damage—Damage to aeronautical equipment (for example, aircraft, engines, missiles, drones, SE) caused by an object(s) external to the equipment. (Gas turbine engine FOD is defined as damage that exceeds serviceable limits caused by ingestion of objects not organic to the damaged engine.)

FPT—First Pilot Time.

FREDS—Flight Readiness Evaluation Data System.

FS—Fleet Support.

FUNCTIONAL TEST—The testing of installed aircraft/engines, accessories, and equipment to determine proper functioning, particularly with respect to the applicable system.

GAS TURBINE ENGINES—All turbine engines, whether used to power flight (including target drones, missiles, and missile targets), for auxiliary power, or for starting purposes. Airborne or ground units are included in the meaning of this term.

GENADMIN—General Administration (message).

GFE—Government Furnished Equipment—Equipment that has been selected and is to be furnished by the government to a contractor or government activity for installation in, use with, or in support of the aeronautical system. during production, conversion, or modification.

GTE—Gas Turbine Engine.

HMR—Hazardous Material Report.

HOT REFUELING—An operational evolution where an aircraft is refueled while the engine(s) is (are) operating.

HOT SEATING—An operational evolution where the pilot/crew of an aircraft is changed while the

engine(s) is (are) operating and the aircraft is to be immediately relaunched.

I-LEVEL MAINTENANCE—Maintenance which is the responsibility of, and is performed by, designated maintenance activities for direct support of using organizations. Its phases normally consist of calibration, repair or replacement of damaged or unserviceable parts, components, or assemblies; the emergency manufacture of nonavailable parts; and the provision of technical assistance to using organizations.

ICAPS—Increased Capabilities System—ICAPS is a database management system that provides users with a quick and accurate means to process, store, and retrieve information on cartridges for CADs.

ICP—Inventory Control Point—An organizational unit or activity within a DOD supply system. It is assigned the primary responsibility for the material management of a group of items either for a particular service or for the DOD as a whole. Material inventory management includes cataloging directions, requirements computation, procurement direction, distribution management, disposal direction, and general rebuild direction.

ID—Interface Device or Identification.

IFARS—Individual Flight Activity Reporting System.

IMA—Intermediate (I-Level) Maintenance Activity—An aviation activity (shop or station) authorized to provide I-level maintenance support. It consists of the aircraft maintenance, supply, and weapons departments/divisions.

IMI—Interactive Multimedia Instruction.

IMRL—Individual Material Readiness List—A consolidated list shows items and quantities of certain SE required for material readiness of the aircraft ground activity to which the list applies. The lists are constructed by extracting those portions of SERMIS that pertain to the maintenance and material logistics responsibilities of the activity to which the list applies.

IN MCRS—In Material Condition Reporting Status—The term (inventory code A) means that an aircraft is in the inventory system and that the aircraft requires SCIR documentation. IN MCRS is the normal status of aircraft.

INC—Incorporated.

IN-SHOP MAINTENANCE—Work that requires the use of shop facilities and cannot be normally

performed outside the shop. (Bench test and component disassembly and repair are examples of in-shop maintenance work.)

INITIAL OUTFITTING—The process of issuing, assembling, and delivering allowances of aeronautical material and equipment to vessels in any one of the following categories: (1) new construction, (2) conversion, or (3) activating from reserve fleets.

INSPECT—To compare the characteristics of an item with established standards.

INSPECTION—The examination and testing of supplies and services, including raw materials, components, and intermediate assemblies, to determine whether they conform to specified requirements.

INSPECTIONS, AIRCRAFT/ENGINE—

- ACCEPTANCE INSPECTION
- CONDITIONAL INSPECTION
- DAILY INSPECTION
- MAJOR ENGINE INSPECTION
- PHASE INSPECTION
- SPECIAL INSPECTION
- TRANSFER INSPECTION
- TURNAROUND INSPECTION
- ZONAL INSPECTION

INSPECTIONS, SE—

- ACCEPTANCE INSPECTION (SE)
- PERIODIC INSPECTION
- PREOPERATIONAL INSPECTION
- TRANSFER INSPECTION (SE)
- ZONAL INSPECTION

INSTRUCTIONS—Directives of a continuing nature that are effective until subsequently canceled. Instructions use a subject classification numbering system per the Navy directives system.

INTERCHANGEABLE ITEMS—Two or more items that have such functional and physical characteristics as to be equivalent in performance and durability and are capable of being interchanged without alteration of the items themselves or of adjoining items except for adjustment.

INTERIM CHANGE—A change having an action classification of immediate or urgent and issued by message.

INVENTORY CONTROL—The phase of military logistics that includes management, cataloging, requirements determination, procurement, distribution, overhaul, and disposal of material. Synonymous with material control, material management, inventory management, and supply management.

INVESTIGATION—Inquiry into a condition or situation systematically for the purpose of developing and providing factual information to cognizant authorities.

IPB—Illustrated Parts Breakdown—A manual containing illustrations and part numbers for all parts of the aircraft or equipment on which it is issued. The IPB contains information required for ordering parts, including part numbers, and for identifying parts and arrangements of parts in assemblies.

IRAC—Interim Rapid Action Change.

ITEM—Any level of hardware assembly; for example, segment of a system, subsystem, equipment, or component part.

ITEMS PROCESSED (ITEMS/P)—This term identifies the total number of times an AT code is applied toward a WUC.

JCN—Job Control Number—The JCN is a 9-, 10-, or 11-digit alphanumeric code that identifies each individual maintenance action.

JOAP—Joint Oil Analysis Program.

JULIAN DATE—The year and numerical day of the year identified by four numeric characters. The first character indicates the year and the remaining three characters specify the day of the year; for example, 9209 indicates the 209th day of 1999 or 28 July 1999.

LAMS—Local Asset Management System—An automated management information system, provides for standardized local management of IMRL assets through the use of bar code technology. It provides for an accurate wall-to-wall inventory, which can be accomplished by unit personnel, resulting in significant reductions of manpower expenditures and operational disruptions.

LANDING—The controlled return of an aircraft in flight to the surface. It includes touch and go

(carrier or field) providing the landing gear touches the surface. A bolter is an attempted arrested landing on a carrier in which the landing gear or hook touches the deck but the arresting gear is not engaged and the aircraft continues in flight.

LCF—Low Cycle Fatigue—A fatigue cracking failure mode that is defined by the frequency and characteristics of a loading that causes a crack. LCF is caused by stresses built up by mechanical/thermal cycles which occur only a few times per flight. The four most significant LCF events are: stop/start/stop cycles, rapid major changes in operating temperature, rapid major changes in rotational speed, and significant increases in aerodynamic loading of the blades/ disks.

LIFE CYCLES—The total life span of an aeronautical system beginning with the concept formulation phase and extending through the operational phase up to retirement from the inventory.

LIQUID PENETRANT—Methods used for the detection of surface cracks or discontinuities, where the inspection surfaces are sprayed with or immersed in liquid. The excess liquid is removed, and the defect is indicated visually by color or fluorescence.

LOAN—Aircraft loaned to non-Navy organizations for non-Navy purposes. A lease may or may not be required to cover the loan.

NOTE: Aircraft that are in the Navy inventory but not in the physical custody of the Navy are either on bailment or on loan. Bailment indicates usage by the bailee for the Navy, while loan indicates usage by the lessee for the lessee.

LOGISTICS—The science of planning and carrying out the movement and maintenance of forces. For its most comprehensive sense, those aspects of military operations that deal with design and development, acquisition, storage, movement, distribution, maintenance, evaluation, and disposition of material; movement, evaluation, and hospital inspection of personnel; acquisition or construction, maintenance, operation, and disposition of facilities; and acquisition or furnishing of services.

LOOK PHASE—The portion of an inspection that includes the basic requirements outlined by the PMICs, excluding repair of discrepancies, that cannot be completed within the time allotted on MRCs.

LRCA—Local Repair Cycle Asset—Any repairable item in an activity's OSI or fixed allowance for which local repair capability exists.

LUI—Life Usage Index—A measurement which determines the life of an engine based on thermal and dynamic loads experienced during engine operation.

MAF—Maintenance Action Form—A multi-purpose document used in the MDS and the VIDS.

MAG—Marine Aircraft Group.

MAGNETIC PARTICLE—A method that uses magnetic fields for the purpose of detecting fine discontinuities at or near the surface of the part. This method is limited to ferromagnetic materials.

MAINTAINABILITY—The ability to maintain an item in, or restore to, a specific operational condition by expending resources, including man-hours, at an acceptable rate when using prescribed procedures and resources.

MAINTENANCE—The function of retaining material in, or restoring it to, a serviceable condition. Its phases include servicing, repair, modification, modernization, overhaul, rebuild, test, reclamation, inspection, condition determination, and the initial provisioning of support items. The term has a very general meaning, ranging from a matter of minutes of squadron servicing, to a matter of months of industrial activity rework; the provision of maintenance material itself is within the meaning. Maintenance should be qualified to convey a specific meaning.

MAINTENANCE (MATERIAL)—All actions taken to retain material in a serviceable condition or to restore it to serviceability. It includes inspection, testing, servicing, classification as to serviceability, repair, rebuilding, and reclamation.

MAINTENANCE ACTION—Any one of a number of types of specific maintenance operations necessary to retain an item in or restore it to a specified condition.

MAINTENANCE ACTIVITY—Any organization (activity or unit) of the naval establishment assigned the mission, task, or functional responsibility of performing aircraft upkeep or rework. Use of the term refers to organizations and personnel occupying aircraft maintenance facilities and using aircraft maintenance material but does

not include reference to the facilities or material themselves. Aircraft maintenance activities are classified as to levels of maintenance performed. The highest level a particular activity is responsible for performing is established as the activity's classification. This classification does not necessarily mean the activity involved is responsible for all lower levels of maintenance.

MAINTENANCE CODE—Codes assigned to support items to indicate the maintenance levels authorized to remove and replace, repair, overhaul, assemble, inspect and test, and condemn items. Also assigned to maintenance tools and end items of SE to indicate the lowest level of maintenance requiring the item.

MAINTENANCE CONCEPT—The planned or envisioned methods that will be employed to sustain the aeronautical system/equipment at a defined level of readiness or in a specified condition in support of the operational requirement. This includes significant aeronautical system/equipment characteristics; for example, built-in test, compatibility with existing or planned test and SE, and a generalization of logistics support element requirements (manpower, equipment, facilities, and workload distribution throughout the defined maintenance level). The maintenance concept is initially stated by the government for design and support planning purposes and provides the basis or point of departure for development of the plan to maintain. The maintenance concept may be influenced or modified by economic, technical, or logistics considerations as the design development of the aeronautical system/equipment proceeds.

MAINTENANCE DEPARTMENT—The part of an activity responsible for the activity's aircraft maintenance functions, also considered a maintenance activity. In the shore establishment, stations responsible for I-level maintenance will have maintenance departments.

MAINTENANCE DEPTHS—The complexity or extensiveness of aircraft maintenance functions; for example, the extent of disassembly, the complexity of a test.

MAINTENANCE DETACHMENT—The part of an aircraft maintenance activity geographically separated from but administered by the parent activity.

MAINTENANCE DIVISION/BRANCH—The part of an activity responsible for the activity's aircraft maintenance functions or the part of an aircraft maintenance department responsible for a specific part of the department's functions; for example, repair of power plants. In the shore establishment, stations responsible for only I-level and O-level maintenance will have maintenance divisions of operations or air departments.

MAINTENANCE FACILITY—Any building, property, or space designed for, available to, or used by aircraft maintenance activities. Use of the term refers to shops, hangars, or parking areas, both afloat and ashore, used primarily for aircraft upkeep or rework purposes. Use of the term does not refer to the organization's personnel, responsibilities, or material (except installed aircraft SE). Aircraft maintenance facilities are classified by the levels of maintenance they are designed for or used to support. The highest level is established as the facility's classification. This classification does not necessarily indicate the facility involved includes facilities for all the lower levels of maintenance.

NOTE: The term aircraft maintenance facility includes installed aircraft SE when applied to Navy facilities. When applied to Marine Corps facilities, it does not.

MAINTENANCE FACILITY MODULE—Standard design increments of aircraft maintenance facilities that permit the construction of a facility without additional design other than that of site adaptation and orientation. There will be two standard modules for use within the naval establishment: intermediate and organizational as required by the functional responsibility of the aircraft maintenance activity or activities that will be the tenant(s) of the facility involved.

MAINTENANCE FUNCTIONS—A detailed statement of the aircraft maintenance work of each aircraft maintenance level. Maintenance functions stem from maintenance tasks, are assigned by the COMNAVAIRSYSCOM, and are classified as to the aircraft maintenance levels to which they apply.

MAINTENANCE LEVELS—Maintenance tasks divided into the number of levels required so common standards can be applied to the many and varied aircraft maintenance activities of the military establishment. They are increments of which all maintenance activities are composed.

The three levels are: depot (D-level), intermediate (I-level), and organizational (O-level).

MAINTENANCE PLANNING—The design, method, or scheme for accomplishing an aircraft mission or reaching an aircraft maintenance objective or objectives.

MAINTENANCE PROCEDURES—Established methods for periodic checking and servicing of items to prevent failure or to effect a repair.

MAINTENANCE SCHEDULE—A plan of procedures for carrying out specific jobs or projects in a maintenance activity's maintenance program, fixing the time when operations are to begin or be completed.

MAINTENANCE STATUS—The classification or condition of equipment undergoing preventive/restorative action.

MAINTENANCE STATUS DISPLAY AND RECORDING SYSTEM—Monitors engine and airframe operational status for unit failures, cautions, and advisory conditions and sends this information to the mission computer system for processing on selected aircraft.

MAINTENANCE TASK—Incremental maintenance elements performed by maintenance personnel in completing a maintenance action.

MAINTENANCE TYPES—Rework and upkeep are the two basic types of aircraft maintenance performed within the naval establishment without distinction as to levels of maintenance. Rework is performed only in the shore establishment. It may be performed on any program aircraft (operating or nonoperating), aircraft equipment, or aircraft SE. It is performed only by industrial type activities assigned the mission, task, or functional responsibility of providing maintenance program support. Rework is performed with both military and civilian personnel and is managed by the COMNAVAIRSYSCOM. Upkeep is performed only on operating aircraft, aircraft equipment, or aircraft SE. It is performed by military type activities assigned aircraft or equipment or assigned the mission, task, or functional responsibility of providing direct support to such activities. Upkeep is normally performed with military personnel and is managed by major operating commands.

MAIR—Master Aircraft Inventory Record.

- MAJOR ENGINE INSPECTION**—A comprehensive inspection performed to determine the material condition of the engine. This inspection is performed with the engine removed from the aircraft.
- MAL CODE**—Malfunction Description Code—A three-character numeric or alphanumeric code, is used to describe the malfunction occurring on or in an item identified by a WUC.
- MAN-HOURS**—The total number of accumulated direct labor hours (in hours and tenths) expended in performing a maintenance action. Direct maintenance man-hours are man-hours expended by assigned personnel to complete the work described on the source document. This includes the functions of preparation, inspection, disassembly, adjustment, fault correction, replacement or reassembly of parts, and calibration/tests required in restoring the item to a serviceable status. It also includes such associated tasks as checking out and returning tools, looking up part numbers in the IPB, transmitting required information to material control, and completing documentation of the MAF.
- MANAGEMENT**—A general term to denote central executive direction and control of work by an individual or organization specifically assigned and funded to accomplish the function.
- MANUFACTURER**—Individual, company, firm, corporation, or government activity engaged in the fabrication of finished or semifinished products.
- MATCHED SET**—A group of two or more separate components that function together in a single system and are normally removed, repaired, checked, adjusted, calibrated, and installed together. Replacement of a single component of a matched system normally requires check/adjustment/calibration of the matched set.
- MATERIAL**—All items necessary for the equipment, maintenance, and support of military activities without distinction as to their application for administrative or combat purposes, excluding ships or naval aircraft.
- MATERIAL COGNIZANCE CODES**—A two-character, alphanumeric code which denotes responsibility for exercising supply management over items or categories of material.
- MATERIAL CONDITION**—Reporting status with respect to SCIR.
- MATERIAL REPORTING**—The procedure whereby all supply action documents in support of maintenance are key entered.
- MC**—Mission Capable—Material condition of an aircraft that can perform at least one and potentially all of its missions. MC Hours = EIS Hours - NMC Hours.
- MCN**—Maintenance Action Form (MAF) Control Number—A serial number assigned to each maintenance action. The MCN is system generated under NALCOMIS.
- MCRS**—Material Condition Reporting Status.
- MDBA/A**—Maintenance Data Base Administrator and Analyst.
- MDR**—Maintenance Data Record or Maintenance Data Report/Reporting.
- MDS**—Maintenance Data System.
- MEASURE**—Metrology Automated System for Uniform Recall and Reporting—A metrology system for the recall and reporting of test equipment by means of ADP techniques, maintains records of calibration and automatically recalls items when due for calibration.
- MECFA**—Maintenance Engineering Cognizant Field Activity.
- MEPP**—Mobile Electric Power Plant.
- MESM**—Mission Essential Subsystem Matrix—Published in OPNAVINST 5442.4, lists, for each model, the equipment systems/subsystems that must be on board and in working order before an aircraft can qualify as mission ready.
- METER CARD**—Metrology Equipment Recall Card—Source document used to update the MEASURE. All actions to PME/TAMS are reported to MEASURE via METER CARDS.
- METER READING**—Meter readings apply to only those items that have a clock/meter installed. Readings will be in time, cycles, or starts to the nearest whole number.
- METROLOGY**—The science of measurement or determination of conformance to technical requirements, including the development of standards and systems for absolute and relative measurements.
- MF**—Mobile Facility—A relocatable tactical shelter, and its related equipment. The principle applica-

tion in naval aviation of an MF is to provide relocatable housing for aviation weapon systems and SE maintenance and related functions. They may be used on board ship as well as ashore.

MFGR—Manufacturer.

MFR—Memorandum for the Record—An MFR is used as an internal document to record supporting information that is not recorded elsewhere. Although informal, the MFR should be dated, signed, and show the signer's organizational code.

MFS—Monthly Flight Summary.

MILSTRAP—Military Standard Transportation and Movement Procedures—A procedure to enlarge MILSTRIP by extending the uniform communicating procedures, codes, forms, and formats for the transmission of items and the financial inventory data.

MILSTRIP—Military Standard Requisitioning and Issue Procedure—A uniform procedure established by the DOD for its own use to govern requisition and issue of material within standard priorities.

MIM—Maintenance Instructions Manual—Contains instructions for and O-level, I-level, and D-level maintenance and servicing of a specific weapon system and related airborne equipment including SE.

MIS—Management Information System.

MISHAP, AIRCRAFT—A naval aircraft mishap is an unplanned event or series of events, directly involving naval aircraft which result in ten thousand dollars or greater cumulative damage to naval aircraft, other aircraft (DOD or non-DOD), and property (DOD or non-DOD). Property damage includes costs to repair or replace facilities, equipment, or material or an injury as defined in OPNAVINST 3750.6.

MISSION—

- The objective, the task together with the purpose, which clearly indicates the action to be taken and the reason for it;
- In common usage, especially when applied to lower military units, a duty/task assigned to an individual; and
- The dispatching of one or more aircraft to accomplish one particular task.

MISSION ESSENTIAL—Anything authorized and assigned to the approved combat and combat support forces which would be immediately employed to wage war and provide support for combat actions.

MISSION ESSENTIAL SUBSYSTEM—Subsystems of an aircraft required to perform the designated missions as determined by use of the applicable MESM.

MMCO—Maintenance Material Control Officer.

MMP—Monthly Maintenance Plan—Provides for scheduled control of the predictable maintenance workload.

MO—Maintenance Officer.

MODULAR ENGINES—Those engines consisting of several independent assemblies called modules, which by design can be removed/replaced without major disassembly of the engine or other modules; for example, compressor, combustion, turbine, afterburner, gearbox, torquemeter, or combination thereof.

MP & T—Manpower, Personnel, and Training as in manpower, personnel, and training coordinator.

MR—Material Reporting.

MRC—Maintenance Requirements Card—Sets of cards issued by COMNAVAIRSYSCOM, contain scheduled maintenance requirements applicable to I-level and O-level activities for the specific aircraft/SE for which they are issued.

MSGID—Message Identification.

MSR—Module Service Record.

MT—Maintenance Time.

MTF—Message Text Format (message).

MTIP—Maintenance Training Improvement Program.

NADEP—For the most part, civilians man naval aviation depots (NADEPs), which are Navy depot-level maintenance facilities. Military personnel at a NADEP help perform the intermediate and organizational maintenance work that is related to the depot facility.

NALCOMIS OMA—Naval Aviation Logistics Command Management Information System Organizational Level Maintenance Activity—A modern, real time, on-line responsive computer-based automated MIS, allows Navy and Marine

Corps aviation maintenance units personnel to record flight and maintenance actions. O-level maintenance managers can use this data to quickly obtain timely and accurate aircraft and equipment maintenance status, scheduled maintenance requirements, and additional information required in their day-to-day management and decision-making process.

NALDA—Naval Aviation Logistics Data Analysis—An automated database and information retrieval system for aviation logistics management and technical decision support. Analysis capability is provided through interactive query and batch processing from remote terminals. As a MIS, NALDA assists users in making improved decisions affecting fleet aircraft readiness. Users can define, identify, and isolate logistics problem areas from a centralized data bank of integrated aviation logistics information.

NALIS—Navy Logistics Information System.

NAMDRP—Naval Aviation Maintenance Discrepancy Reporting Program.

NAMP—Naval Aviation Maintenance Program.

NAMPSOP—Naval Aviation Maintenance Program Standard Operating Procedures—Standard operating procedures for maintenance programs and processes that provides standard procedures in sufficient detail to not require additional instructions written below COMNAVAIRSYS-COM level.

NAMTRAGRU—Naval Air Maintenance Training Group—An organization under the military command of CNET, responsible for providing, by means of the NAMTRAGRUDETs, technical training for officers and enlisted personnel in the operation, maintenance, and repair of air weapons systems and associated equipment.

NAMTRAGRUDET—Naval Air Maintenance Training Group Detachment—A group of instructors equipped with naval air maintenance trainer(s), training aids, lesson guides, and training literature.

NARR—Narrative (message).

NAS—Naval Air Station.

NATEC—Naval Air Technical Data and Engineering Service Command.

NATOPS MANUAL—Naval Air Training and Operating Procedures Standardization—A manual of general flight and operating instructions

applicable within the naval aviation establishment issued for individual aircraft which are intended to complement OPNAVINST 3710.7. The *Naval Air Training and Operating Procedures Standardization (NATOPS) General Flight and Operating Instructions*, OPNAVINST 3710.7, outlines procedures for documenting the NAVFLIR.

NAVAIR—Naval Air Systems Command.

NAVAIRSYSCOM—Naval Air Systems Command—NAVAIRSYSCOM issues scheduled maintenance requirements through PMS publications for every model of Navy and Marine Corps aircraft.

NAVAIRSYSCOM FS—Naval Air Systems Command Fleet Support.

NAVAIRWARCENACDIV—Naval Air Warfare Center Aircraft Division.

NAVAVNDEPOT—Naval Aviation Depot.

NAVFLIR—Naval Aircraft Flight Record—This form is prepared for each attempt at flight of naval aircraft or training evolutions for simulators.

NAVFLIRS—Naval Flight Record Subsystem—The Naval Flight Record Subsystem serves as a single, integrated source of flight data for AV-3M, FREDs, IFARS, NALIS, and up-line reporting to other systems.

NAVICP—Naval Inventory Control Point.

NAVOP—Naval Operations (message).

NAVPRO—Naval Plant Representative Office.

NAVSEALOGCEN—Naval Sea Logistics Center.

NAVSUP PUB—Navy Supply Publication.

NAVSUPSYSCOM—Naval Supply Systems Command.

NAVY DIRECTIVES SYSTEM—Consists of instructions and notices employing the standard subject identification code numbering system for identification and filing purposes. The system is used throughout the Navy for issuing directives on policy, organization, administrative methods, or procedures.

NC—Not Carried.

NDI—Nondestructive Inspection—Methods that may be applied to a structure or component to determine its integrity, composition, physical, electrical,

thermal properties, or dimensions without causing a change in any of these characteristics.

NEC—Navy Enlisted Classification.

NEW PRODUCTION AIRCRAFT—Aircraft without regard to model or configuration that are in the first year of operational use by the fleet or training commands and not deployed aboard ships or overseas.

NIIN—National Item Identification Number—A two-digit National Codification Bureau code combined with seven other digits.

NINC—Not Incorporated.

NIS—Not In Stock.

NITRAS—Navy Integrated Training Resources and Administration System—An automated system responsive to training information requirements from higher commands, provides automated capability to manage and support the training effort throughout the Navy.

NLT—Not Later Than.

NMC—Not Mission Capable—Material condition of an aircraft that is not capable of performing any of its missions. NMC is subdivided into NMCM and NMCS. $NMC \text{ Hours} = EIS \text{ Hours} - MC \text{ Hours}$.

NMCM—Not Mission Capable Maintenance—The material condition of an aircraft that is not capable of performing any of its missions because of maintenance requirements. NMCM time starts when the condition is discovered except when the discovery is made in flight in which case NMCM time starts at the termination of flight. NMCM stops when maintenance is completed or interrupted by a supply shortage. Work stoppage resulting from parts nonavailability is reported as NMCS. NMCM time resumes when required supply item(s) are delivered to the maintenance activity. NMCM is further defined as NMCM scheduled (S) and NMCM unscheduled (U). $NMCM \text{ Hours} = NMC \text{ Hours} - NMCS \text{ Hours}$.

NMCMS—Not Mission Capable Maintenance Scheduled—The sum of equipment maintenance hours documented for scheduled engine inspections, special inspections, phase inspections, and conditional inspections. An aircraft will be considered NMCMS if panels and equipment removed to conduct area inspections cannot be replaced within 2 hours or if the aircraft has been utilized to the maximum allowable operating limit

prior to the scheduled maintenance requirement; for example, +10 percent, +3 days. $NMCMS = \text{Hours NMCM Hours} - \text{NMCMU Hours}$.

NMCMU—Not Mission Capable Maintenance Un-scheduled.

NMCS—Not Mission Capable Supply—The material condition of an aircraft that is not capable of performing any of its missions because maintenance required to correct the discrepancy cannot continue due to a supply shortage. NMCS time starts when a supply demand has been made for (an) item(s) required to continue maintenance. NMCS time stops at the time the material is delivered to the designated delivery point or change of EOC Code. $NMCS \text{ Hours} = NMC \text{ Hours} - \text{NMCM Hours}$.

NOAP—Navy Oil Analysis Program.

NONOPERATING AIRCRAFT—Any aircraft, for the purpose of flight operations, not currently filling an authorized allowance in an organizational unit.

NOTICES—Directives of a onetime nature or those applicable for a brief period of time. Each notice contains provisions for its own cancellation. Notices employ a subject classification numbering system and are part of the Navy directive system.

NSN—National Stock Number.

O-LEVEL (Organizational-Level) MAINTENANCE—Maintenance which is the responsibility of, and is performed by, a using organization on its assigned equipment. Its phases normally consist of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies.

O&MN—Operations and Maintenance, Navy.

OFF-EQUIPMENT WORK—For the purpose of MDR, it includes all maintenance actions performed on removed, repairable components, usually at the IMA.

OINC—Officer In Charge.

OJT—On-The-Job Training—Training at the squadron or other local activity level in the performance of a task or duty during operational or maintenance situations.

OMA—Organizational Maintenance Activity.

OMD—Operations Maintenance Division.

- ON-CONDITION TASK**—A scheduled inspection to determine that equipment is and will remain in satisfactory condition until the next scheduled inspection.
- ON-EQUIPMENT WORK**—For the purpose of MDR, it includes those maintenance actions accomplished on complete end items; for example, aircraft, drones, SE, and removed engines.
- OPC**—Optimum Performance Capable—The material condition of an aircraft that can perform all assigned missions with all equipment operational. $OPC\text{ Hours} = MC\text{ Hours} - (FMC\text{ Hours} + PMC\text{ Hours})$.
- OPER**—Operations (message).
- OPERABLE EQUIPMENT**—Equipment which, from its most recent performance history and a cursory electrical and physical examination, displays an indication of satisfactory performance for all of its functions.
- OPERATING AIRCRAFT**—An aircraft filling an authorized operating allowance. An aircraft reported in any of the A-status codes is in an operating status. Operating status aircraft are always in the reporting and physical custody of the operating unit to which assigned. An aircraft that moves to a rework facility for purposes of rework will leave operating status although it may remain in the reporting custody of the operating unit. Operating aircraft are in material condition reporting status.
- OPERATING COMMAND**—A controlling custodian of naval aircraft, except COMNAV-AIRSYSCOM FS. Also called air or major operating command.
- OPNAV**—Office of the Chief of Naval Operations.
- OPSERMOS**—Operating Service Months.
- OPTAR**—Operating Target (funding)—Annual funds (obligational authority) issued by TYCOMs, to units of the operating forces under their command, from one of their budgets.
- ORG CODE**—Organization Code—A structured three-character alphanumeric code that identifies activities within a major command.
- ORGANIZATIONAL EQUIPMENT**—Referring to method of use, signifies that equipment, other than individual equipment, used in furtherance of the common mission of an organization or unit.
- OSI**—Operational Support Inventory.
- OSL**—Operating Service Life.
- OSM**—Operating Service Month—One monthly increment of operating service life (OPNAVINST 5442.2).
- OSP**—Operating Service Period.
- OUT MCRS**—Out Material Condition Reporting Status—The term (inventory codes 1 through 4) means that an aircraft is in the inventory reporting system but does not require SCIR documentation. An aircraft is placed OUT MCRS for depot-level maintenance.
- OVERHAUL**—The process of disassembly sufficient to inspect all the operating components and the basic end article. It includes the repair, replacement, or servicing as necessary, followed by the reassembly and bench check or flight test. Upon completion of the overhaul process, the component or end article will be capable of performing its intended service life or service tour.
- P&E**—Planner and Estimator.
- PACE**—Paint and Corrosion Evaluation—An on-condition inspection developed to address special requirements of F/A-18 series aircraft, occurs at the end of a set operational service period, within a 9-month window. Details of program administration are in OPNAVINST 3110.11. Evaluation specifics are in a Local Engineering Specification from NAVAVNDEPOT North Island. The evaluation is performed by D-level P&E personnel and is requested via normal procedures for P&E services. The results of PACE determine the requirement for induction into the Modification, Corrosion and Paint Program, which is done by D-level artisans. Documentation required of the aircraft custodian is equivalent to aircraft administered by ASPA.
- PARTS KIT**—Supporting items and material for the maintenance, repair, and rework of selected aeronautical repairable end items procured, stocked, requisitioned, accounted for, and used on a kit basis as one line item. Parts kits should not be confused with the kits issued to perform a onetime modification of an item or with interim fleet maintenance support kits.
- PARTS KIT CODES**—Codes assigned to parts kits and items therein, for the maintenance, repair, and rework of selected, repairable end items.

PED—Period End Date—The month and year in which the current operating service period expires for a given aircraft and is subject to authorized adjustments resulting from ASPA evaluations.

PERCENT DEFECTIVE—The number of defective units of production multiplied by 100, the product of which is divided by the total number of units of production.

PERIODIC INSPECTION—An inspection performed on a unit of SE, in both the static and functional state, to detect defects that may have occurred since the last inspection. The period for performance of these inspections is established in increments of weeks.

PHASE INSPECTION—A series of related inspections performed sequentially at specific intervals. These inspections are the result of dividing the maintenance requirements into small packages containing approximately the same workload.

PHYSICAL CUSTODY—Actual possession of the aircraft or SE for a definite purpose. This does not necessarily imply reporting custody.

PI—Publication Identifier.

PIPELINE—In logistics, the channel of support or a specific portion thereof by means of which material or personnel flow from sources of procurement to their point of use. It includes all program aircraft in logistic support of the operating segment of the inventory.

PJT—Practical Job Training—Structured “hands-on” training conducted by the fleet readiness squadron or supporting AIMD involving an arranged problem, task, or sequence in an educational environment.

PLA—Plain Language Address.

PLAN OF ACTION AND MILESTONES—A document that identifies actions or tasks in the specific order needed to accomplish an objective. This document assigns to each action, the office responsible, and the start and completion date for each action.

PLTS—Parts Life Tracking System—An automated system used for tracking the composition, location, and operating time/cycle counts or life usage indexes of aircraft engines, propulsion systems, modules, and life limited components. PLTS is used to develop long-range schedules for

inspections, removals, replacements, procurements, and rework schedules for these components, based on usage requirements and fixed or variable usage rates. It provides important support to the RCM Program.

PM—Preventive Maintenance—The care and servicing needed to maintain aircraft equipment, SE, and facilities in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

PMC—Partial Mission Capable—Material condition of an aircraft that can perform at least one but not all of its missions. PMC is subdivided into PMCM and PMCS. $PMC\ Hours = MC\ Hours - (OPC\ Hours + FMC\ Hours)$.

PMCM—Partial Mission Capable Maintenance—The material condition of an aircraft that can perform at least one but not all of its missions because of maintenance requirements existing on the inoperable subsystem(s). PMCM time starts when the condition is discovered, except when the discovery is made in flight in which case PMCM time starts at the termination of flight. PMCM time stops when maintenance is completed or interrupted by a supply shortage. Work stoppage resulting from parts nonavailability is reported as PMCS. PMCM time resumes when required supply item(s) are delivered to the maintenance activity. $PMCM\ Hours = PMC\ Hours - PMCS\ Hours$.

PMCS—Partial Mission Capable Supply—Material condition of an aircraft that can perform at least one but not all of its missions because maintenance required to correct the discrepancy cannot continue because of a supply shortage. PMCS time starts when a supply demand has been made for an item required to continue maintenance. PMCS time stops at the time the material is delivered to the designated delivery point or change of EOC Code. $PMCS\ Hours = PMC\ Hours - PMCM\ Hours$.

PME—Precision Measuring Equipment—Devices used to measure, gauge, test, inspect, diagnose, or examine material, supplies, and equipment to determine compliance with requirements established in technical documents; for example, research, development, test, and evaluation documents, specifications, engineering drawings, technical orders, technical manuals, maintenance instructions, and serviceability standards.

PMIC—Periodic Maintenance Information Card—The PMIC is the PMS publication that contains the component/assembly removal/replacement schedule, airframe structural life limits, and a maintenance requirements systems index. It also contains a conditional inspection listing and a phase change implementation card (included as required).

PMS—Planned Maintenance System.

POSIT—Position Sensitive Indicator—The two-digit PSI of a component that has been identified in the applicable WUC manual by a double asterisk (**). Position sensitive indicators are used to evaluate performance and/or logistics characteristics between identical components.

PPC—Power Plant Change.

PR—Aircrew Survival Equipmentman.

PREOPERATIONAL INSPECTION—A static or functional inspection, performed by the activity having physical custody, to verify that a unit of SE is properly serviced and ready for use. These inspections are performed prior to each use as specified on the MRCs.

PROCUREMENT—The process of obtaining personnel, services, supplies, and equipment.

PRODUCTION AIRCRAFT—New aircraft accepted from the contractor by the Navy. They include all Navy aircraft procured for operational or training purposes, that is, all aircraft except those procured solely for experimental purposes. Every Navy aircraft is either experimental or production.

PRODUCTION CONTROL—The functional organization within the IMA responsible for workload control.

PRODUCTION DIVISION—Any division in the IMA responsible for a specific production workload; for example, avionics, power plants.

PRODUCTION EQUIVALENT—An approved configuration change to the product baseline incorporated by the manufacturer during production. The configuration change must have been approved for retrofit on in-service equipment via a TD.

PSSN—Propulsion System Serial Number—The same as engine serial number. Modular engines will be assigned a PSSN which identifies the complete engine as an assembly.

PUC—Permanent Unit Code—The six-character number permanently assigned to each reporting custodian of aircraft. The master code list is maintained by the CNO. PUCs may be obtained by the cognizant ACC for assignment to newly formed units by correspondence, message, or DSN telephone call.

QA—Quality Assurance—A planned and systematic pattern of all the actions necessary to provide adequate confidence that the item or product conforms to established technical requirements.

QAR—Quality Assurance Representative.

QEC—Quick Engine Change such as in the following:

- QECA - Assembly
- QECK - Kit
- QECS - Stand

QDR—Quality Deficiency Report.

RADIOGRAPHIC—A method that uses X rays or similar radiation for the purpose of penetrating or being scattered by substances to reveal flaws or defects in the part or structure being examined.

RCM—Reliability Centered Maintenance—A disciplined logic or methodology used to identify preventive maintenance tasks to realize the inherent reliability of equipment at least expenditure of resources.

RECTYP—Record Type.

RECURRING REPORT—A periodic or situation report. A periodic report is one that is to be prepared regularly at prescribed time intervals such as monthly or quarterly. A situation report is one that is to be prepared whenever an event or situation of a previously specified type occurs.

REFERENCE NUMBER—A number used to identify an item of production or a range of items of production by the manufacturer controlling the design, characteristics, and production of the item by means of its engineering drawings, specifications, and inspection requirements.

REF—Reference (correspondence, message).

REFERENCE SYMBOL—An alphanumeric code used to identify piece parts as distinct from other items of the same part number in a single subassembly or circuit, such as four of the same diodes within a circuit; each has the same part number but a different reference symbol.

Reference symbols are found in the IPB for the component.

RELIABILITY—The probability that an item will perform its intended function for a specified interval under stated conditions.

REPAIR—Necessary preparation, fault correction, disassembly, inspection, replacement of parts, adjustment, reassembly, calibration, or tests accomplished in restoring items to serviceable status.

REPAIR CYCLE DATA—An uninterrupted record of a repairable item from the time of removal until repair is completed or a reclamation or salvage determination is made. Material capable of separate supply and replacement that is required for the maintenance, overhaul, or the repair of an end article; for example, airframe, accessories, instruments, engine, propeller, electrical, electronics, photographic, armament, and training equipment, including the repair parts of SE. This definition does not include the SE end items.

REPAIRABLE ITEM—A durable item which, when unserviceable, can be economically restored to a serviceable condition through regular repair procedures.

REPLACEMENT ITEM—An item that is functionally interchangeable with another item but differs physically from the original in that the installation of the replacement requires operations such as drilling, reaming, cutting, filing, or shimming, in addition to the normal application and methods of attachment.

REPORTING CUSTODIAN—An organizational unit of the lowest echelon of command accepting responsibility, involving the accountability to the CNO, for aircraft or engines, as designated either by CNO or by the aircraft controlling custodian.

NOTE: Each aircraft or engine at any given time from acceptance to strike is in the reporting custody of one, and only one, reporting custodian.

REPORTING CUSTODY—Responsibility to account for and provide information about assigned aircraft or SE. This does not necessarily imply physical custody.

REPORTING PERIOD—For the purpose of the MDS, a reporting period is 1 month.

RETIREMENT—Separation of aircraft from the program inventory. Separation may be accomplished by (1) strike, (2) transfer to status codes series P, R, 5, and Y, or (3) transfer to a contingency reserve status (code series W).

RETROFIT—Incorporation of an engineering change, at any level, in accepted or in-service items.

REWORK—The restorative or additive work performed on aircraft, aircraft equipment, and aircraft SE at NAVAVNDEPOTs, contractors' plants, and such other industrial establishments designated by TYCOMs. A rework process extends from the time some of the work is started until all of the work has been completed, including temporary interruptions in direct labor; it also includes rework evaluation and test and correction of discrepancies determined thereby. Rework is divided into two categories: standard and special.

RFI—Ready for Issue.

RFI MATERIAL—Ready-for-Issue Material—Material, equipment, aircraft, and SE which does not require rework of any type, replacement of overage parts, or other than routine preinstallation and post installation condition verification prior to use.

RMKS—Remarks (message).

SA/A—Systems Administrator/Analyst.

SAFETY/EI SER—Safety/Engineering Investigation Serial Number—A locally assigned four-digit safety EI serial number.

SALTS—Streamlined Automated Logistics Transmission System.

SCC—Sequence Control Card.

SCIR—Subsystem Capability and Impact Reporting.

SCT—Special Crew Time.

SDLM—Standard Depot-Level Maintenance.

SE—Support Equipment.

SEAOPDET—Sea Operational Detachment—A sea duty component assigned to shore IMAs that is used to augment the aircraft carrier's IMA in support of carrier air wing embarkations.

SEATS—Survival Equipment Asset Tracking System—SEATS is a database management system

that provides users with an accurate means to process, store, and retrieve information on Aviation Life Support System (ALSS) items, such as parachutes.

SECNAV—Secretary of the Navy.

SER—Serial Number—A number that identifies a specific end item or component. The number is usually assigned by the manufacturer and is used to differentiate between a particular end item or component and others of the same T/M/S, design, and so forth.

SERMIS—Support Equipment Resources Management Information System.

SERVICE LIFE—The time period during which the item can be maintained in service without replacement. Each program aircraft, from acceptance to strike, follows a life cycle consisting of alternate periods of operating and rework time as prescribed for each model by OPNAVINST 3110.11. Aircraft become eligible for strike upon completion of the life cycle specified for the model.

SERVICE PERIOD—A prescribed segment of the service life of aircraft subject to the SDLM process, such as a stated number of calendar months or accumulated flight hours that an aircraft is in the physical custody of an operating activity for use prior to SDLM or retirement. The number and length of standard service periods, together with associated planning factors and policies, are set forth in OPNAVINST 3110.11.

SERVICEABLE—The condition of an end item in which all requirements for repair, bench check, overhaul, or modification (as applicable) have been accomplished, making it capable of performing the function or requirements for which originally designed. The fact that signs of previous use are apparent does not necessarily mean it is unserviceable. When appearance is not a primary consideration, and the condition of the item meets all safety and performance requirements, it will be processed as serviceable.

SERVICING—The replenishment of consumables needed to keep an item in operating condition, but not including any other preventive maintenance.

SESS—Support Equipment Standardization System—A microcomputer-based asset control system for SE.

SET—A unit or units and the necessary assemblies, subassemblies, and parts connected or associated together to perform an operational function.

SLEP—Service Life Extension Program—As one element of Conversion in Lieu of Procurement, is the restoration/replacement of a primary aircraft structure which has reached its life limit.

SM&R CODE—Source, Maintenance, and Recoverability Code—A collective code assigned to items during the provisioning, source coding, or the selection process to convey specific information to maintenance and supply personnel. The SM&R Code consists of three parts: a source code, a maintenance code, and a recoverability code.

SMQ—Special Maintenance Qualification.

SOFTWARE—A set of programs, documents, procedures, and routines associated with the operation of a computer system.

SORTIE—An operational flight by one aircraft.

SOURCE CODE—Code assigned to support items (spares, repair parts, components, parts, kits, special tools, test equipment, and SE) to indicate the manner of acquiring items for the maintenance, repair, or overhaul of end items.

SPARES—Articles identical to, or interchangeable with, the end articles on contract that are procured over and above the quantity needed for initial installation for support of an aeronautical system.

SPARES AND REPAIR PARTS—Spares are components of assemblies used for maintenance replacement purposes in major end items of equipment. Repair parts are those piece parts, such as individual parts or nonrepairable assemblies, required for the repair of spares or major end items.

SPECIAL INSPECTION—A scheduled inspection with a prescribed interval other than daily, phase, major engine, or SDLM. The intervals are specified in the applicable PMS publication and are based on elapsed calendar time, flight hours, operating hours, or number of cycles or events; for example, 7, 14, 28 days; 50, 100, 200 hours; 10, 100 arrestments; or 5000 rounds fired.

SPECIAL REWORK—The work done to aircraft, aircraft equipment, and aircraft SE to improve or change their capability to perform specific missions or functions by replacement, removal, addition, alteration, or repair of parts on equipment of the aircraft. Special aircraft rework includes

tasks such as modernization, modification, or repair equipment.

SRA—Shop Replaceable Assembly—A generic term which includes all the packages within a WRA including chassis and wiring as a unit. (Sub-level mechanization or modular subdivisions within an SRA may occur.) Conversely, a WRA is composed entirely of SRAs.

SRC—Scheduled Removal Component.

SRS—Supply Response Section—The section of the aviation supply that receives requests for material and causes the issue and delivery of the requested material to be made.

SSCC—Standard Subject Classification Code.

SSIC—Standard Subject Identification Code.

SSK—Seat Survival Kit.

STATISTICAL ANALYSIS—The science of drawing conclusions from observed data by using statistical techniques and methods proven to be mathematically valid.

STATISTICAL DATA—An accumulation of data which may be graphically presented or tabulated for use in determining the quality level being produced by any specific manufacturing, repair overhaul, or inspection process.

STATISTICAL QUALITY CONTROL—The control of quality through the application of statistical techniques to inspection/verification methods and process analysis.

STATUS CODES (MILSTRIP)—Codes that furnish information from supply sources to requisitioners or cosigners on the status of requisitions. Supply status (except “rejection” status, code C) predicts shipment on time as specified by the priority delivery date or the required delivery date.

STRIKE—The official action that removes an aircraft from the list of Navy aircraft.

SUBASSEMBLY—Two or more parts that form a portion of an assembly or a unit, replaceable as a whole, but having a part or parts that are individually replaceable.

SUBJ—Subject (correspondence, message).

SUBSYSTEMS—A combination of two or more pieces of equipment, generally physically separated when in operation, and such other components, assemblies, subassemblies and parts

necessary to perform an operational function or functions.

SUF—Suffix—The suffix is an alphanumeric code added to the basic JCN to identify a subassembly or sub-subassembly (component within a component) repair action performed independently of a major repair action.

TAMS—Test and Monitoring System.

TARGET DRONE—A converted man-carrying aircraft used as an airborne target, capable of either manned flight, being remotely controlled, or preprogrammed for unmanned flight.

TAT—Turnaround Time—TAT is:

- The time period that commences with the time an aircraft is removed from an operating unit to undergo a rework process and terminates when the reworked aircraft is returned to an operating unit. A change of reporting and controlling custody is not necessarily involved; however, a change in physical custody is always involved. TAT is the sum of the following: time enroute from an operating unit to the naval facility, time awaiting rework, time in rework, time awaiting flight check after rework, time in a COMNAVAIRSYSCOM ready-for-issue status, and time enroute to an operating unit.
- The time needed to service, inspect, and check an item prior to recommitment.
- The interval between the time a repairable item is removed from use and the time it is available for reissue in a serviceable condition.

TD—Technical Directive—A document authorized and issued by COMNAVAIRSYSCOM to provide technical information necessary to properly and systematically inspect or alter the configuration of aircraft, engines, systems, or equipment, subsequent to establishment of each respective baseline configuration. TDs include all types of changes and bulletins and consist of information that cannot be disseminated satisfactorily by revisions to technical manuals. NATEC controls assignment of TD numbers.

TD CODE—Technical Directive Code—A two-character numeric code that identifies the type of TD.

TD IDENTIFICATION CODE—Technical Directive Identification Code—A 12- or 13-character alphanumeric code used to identify a specific TD.

- TDSA**—Technical Directive Status Accounting—An on-line configuration status accounting system for naval aircraft, engines, support equipment, maintenance trainers, and weapon system components.
- TEC**—Type Equipment Code—A four-character code used to identify the complete end item or category of equipment being worked on; for example, aircraft, engine, or SE. A complete listing of TECs may be found in the Aviation Type Equipment Code List A7210-01.
- TECHNICAL DATA**—Data required for the accomplishment of logistics and engineering processes in support of the contract end item. It includes drawings, operating and maintenance instructions, provisioning information, specifications, inspection and test procedures, instruction cards and equipment placards, engineering and support analysis data, special purpose computer programs, and other forms of audiovisual presentation required to guide personnel in the performance of operating and support tasks.
- TECHNICAL MANUAL**—A publication containing a description of equipment, weapons, or weapon system(s) with instructions for effective use. Included are one or more of the following sections: instructions covering initial preparation for use, operational instructions, modification instructions, maintenance instructions, parts lists or parts breakdown, and related technical information or procedures, exclusive of those of an administrative nature.
- TENANT**—Any activity that will be aboard a ship or station for a period of time sufficient to require specific assignment of shop, hangar, crew, and equipment or line spaces. Activities may use a facility as an assigned tenant or as a joint tenant. Specific spaces may be assigned on a rotational, seasonal, occasional, or transient basis as appropriate.
- TEST**—Subjecting an aircraft, airframe, engine, accessory, or item of equipment to prescribed conditions to determine if it will function per predetermined requirements.
- TIME/CYCLE PREFIX CODE**—A one-character alphabetic code that identifies the type of time or cycle data recorded on the item.
- T/M**—Type Maintenance Code—A one-character alpha or numeric code that describes the type of maintenance action being performed.
- TM**—Technical Manual or Type Maintenance.
- T/M/S**—Type/Model/Series.
- TMINS**—Technical Manual Identification Numbering System.
- TMR**—Total Mission Requirements.
- TOL**—Tailored Outfitting List—An allowance list, which is tailored for each aviation training activity and I-level and D-level maintenance activity.
- TPDR**—Technical Publication Deficiency Report.
- TRANSACTION CODE**—A two-character numeric code used to denote the type of data being reported and to indicate the record type to be produced.
- TRANSFER**—The act of conveying reporting/controlling custody of an aircraft/SE to another custodian.
- TRANSFER INSPECTION**—An inspection performed at the time an aircraft changes physical or reporting custody. It includes an inventory of items listed in the AIR, verification of CADs and AEPSs, configuration verification, and a daily inspection. CAD, AEPS, and configuration verifications are performed by visual external inspection and record examination only. Disassembly beyond daily inspection requirements of applicable PMS publications is not required. Flight hours should be verified as correct on the Monthly Flight Summary (OPNAV 4790/21A) by checking the Period and Since New blocks. In addition, correct operating hours should be verified on the Equipment Operating Record (OPNAV 4790/31A) by checking the ACCUM block. Activities may elect to increase inspection depth if the aircraft material condition or record examination indicates such action is warranted. Aircraft transferred from a depot or commercial repair activity require hydraulic fluid sampling prior to transfer.
- TRANSFER INSPECTION (SE)**—An inspection performed at the time a reporting custodian transfers an item of SE on a permanent basis. It includes an inventory of all records and components that make up the item of SE, a configuration verification, a preoperational inspection as required by the applicable MRCs, and a functional test. The activity transferring the SE may elect to increase the depth of inspection if the SE condition

indicates such action is warranted. SE transferred from a depot or commercial repair activity require hydraulic fluid sampling prior to transfer.

TRCODE—Transaction Code or Technical Directive Code.

TSN—Time Since New.

TSO—Time Since Overhaul.

TURNAROUND—The time between arriving at a point and departing from that point.

TURNAROUND CYCLE—Used in conjunction with vehicles, ships, and aircraft and comprising the following: loading time at home, planned maintenance time, and, where applicable, time awaiting facilities.

TURNAROUND INSPECTION—An inspection conducted between flights to ensure the integrity of the aircraft for flight, verify proper servicing, and to detect degradation that may have occurred during the previous flight.

TYCOM—Type Commander.

TYPE MAINTENANCE CODE—A one-character numeric or alphabetic code that identifies the type of maintenance performed.

UAV—Unmanned Aerial Vehicle.

UIC—Unit Identification Code.

UNSCHEDULED MAINTENANCE—Maintenance, other than the fix phase of scheduled maintenance, occurring during the interval between scheduled downtime maintenance periods.

UPKEEP—The preventive, restorative, or additive work performed on aircraft, equipment, and SE by the operating units and aircraft SE activities. The term applies to any method of processing aircraft required to ensure the completion of standard operating periods or service tours, including, but not limited to the servicing, periodic inspections, functional and bench test, replacement, preservation, modification, and repair. An upkeep process extends from the time some of the work is started until all the work is completed, including temporary interruptions in direct labor; it also includes upkeep, evaluation, test, and correction of discrepancies determined thereby. Upkeep is divided into two categories: standard and special.

VIDS/MAF—Visual Information Display System/Maintenance Action Form—A multi-purpose document used in the MDS and VIDS.

WD CODE—When Discovered Code—A one-character alphabetic code that identifies when the need for maintenance was discovered.

WEAPON SYSTEM—A weapon and those components/parts required for its operation. (The term is not precise unless specific parameters are established.)

WEAPONS TEST EQUIPMENT—Specialized equipment of an electrical or electronic design used to test, maintain or service aircraft weapons, bombs, rockets, missiles, special weapons, torpedoes mines, or any other explosive ordnance. This equipment is a category of WSE.

WORK CENTER CODE—A three-character code that identifies work centers. They are used in MDR to identify a work center performing the maintenance action documented.

WORK CENTER SUPERVISOR—The person assigned the responsibility of maintenance management within a given work center.

WRA—Weapons Replaceable Assembly.

WSE—Weapons Support Equipment.

WUC—Work Unit Code—A one-, three-, five-, or seven-character numeric or alpha/numeric code. It identifies a system, subsystem, set, major component, repairable subassembly, or part of an end item being worked on. WUCs are assigned and controlled by NATEC under the direction of COMNAVAIRSYSCOM and published in WUC manuals for end items in three major categories: (1) T/M/S for aircraft, drones, and missiles; (2) aircraft flight/tactical trainers; and (3) aeronautical SE. The system code is the first two positions of the WUC and is used to identify the system within the aircraft/equipment on which work is being performed. These codes are found in the applicable WUC manual.

ZONAL INSPECTION—A general inspection of a specific area of aircraft or SE at a scheduled interval. These inspections are for obvious defects, such as leaks, frayed cables, cracks, corrosion, or physical damage. Zonal inspections are normally performed in conjunction with other scheduled maintenance tasks by the rating assigned. For example, an AT rating assigned to perform an inspection on a radar antenna might also be assigned a zonal inspection of the entire compartment for obvious defects.

APPENDIX II

REFERENCES USED TO DEVELOP THE TRAMAN

NOTE: Although the following references were current when this TRAMAN was published, their continued currency cannot be assured. When consulting these references, keep in mind that they may have been revised to reflect new technology or revised methods, practices, or procedures. You therefore need to ensure that you are studying the latest references.

Chapter 1

Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards, NAVPERS 18068F, Volume I, Bureau of Naval Personnel, Washington, DC, Change 19, 17 May 1999.

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Chapter 2

Department of the Navy Correspondence Manual, SECNAVINST 5216.5D, Office of the Secretary of the Navy, Washington DC, Change 1, 28 May 1998.

Department of the Navy Directives Issuance System, SECNAVINST 5215.1C, Office of the Secretary of the Navy, Washington, DC, Change 4, 9 February 1982.

Department of the Navy File Maintenance Procedures and Standard Subject Identification Codes (SSIC), SECNAVINST 5210.11D, Office of the Secretary of the Navy, Washington, DC, 20 October 1987.

Department of the Navy (DON) Information Security Program (ISP) Regulation, SECNAVINST 5510.36, Office of the Secretary of the Navy, Washington, DC, 17 March 1999.

Department of the Navy Naval Telecommunications Procedure Telecommunication Users Manual, NTP 3(J), Naval Computer and Telecommunications Command, Washington, DC, July 1997.

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Chapter 3

Department of the Navy (DON) Information Security Program (ISP) Regulation, SECNAVINST 5510.36, Office of the Secretary of the Navy, Washington, DC, 17 March 1999.

NAVAIR Technical Publications Library Program Management Program, Win_1.06, Naval Air Systems Command, Washington, DC, undated.

Naval Air Systems Command Technical Directives System, NAVAIR 00-25-300, Naval Air Systems Command, Washington, DC, 1 September 1996.

Naval Air Systems Command Technical Manual Program, NAVAIR 00-25-100, Naval Air Systems Command, Washington, DC, 1 October 1997.

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Navy Standard Technical Manual Identification Numbering System (TMINS), N0000-00-IDX-000/TMINS, Office of the Chief of Naval Operations, Washington, DC, 28 September 1988.

Chapter 4

NALCOMIS OMA User Manual (UM), Space and Naval Warfare Systems Center, Chesapeake, VA, 31 March 1999.

NATOPS General Flight and Operating Instructions, OPNAVINST 3710.7R, Office of the Chief of Naval Operations, Washington, DC, 15 January 1997.

The Naval Aviation Maintenance Program, (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Chapter 5

Aircraft Material Readiness Reporting, COMNAVAIRLANTINST/COMNAVAIRPACINST 5442.5D, Commander Naval Air Force, Pacific, San Diego, CA, and Commander Naval Air Force, Atlantic, Norfolk, VA, 10 March 1994.

Aircraft and Training Devices Material Condition Definitions, Mission-Essential Subsystem Matrices (MESMs), and Mission Descriptions, OPNAVINST 5442.4M, Office of the Chief of Naval Operations, Washington, DC, Change 1, 1 July 1992.

NLCOMIS OMA User Manual (UM), Space and Naval Warfare Systems Center, Chesapeake, VA, 31 March 1999.

Naval Air Systems Command Technical Directive Systems, NAVAIR 00-25-300, Naval Air Systems Command, Arlington, VA, 1 September 1996.

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Chapter 6

NALCOMIS OMA User Manual (UM), Space and Naval Warfare Systems Center, Chesapeake, VA, 31 March 1999.

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Survival Equipment Asset Tracking System /Increased Capabilities (SEATS/ICAPS) User's Manual, Naval Air Systems Command, Washington, DC, 1 September 1993.

Weight and Balance Control, NAVAIR 01-1B-50, Naval Air Systems Command, Washington, DC, 1 October 1990.

Weight and Balance Data, NAVAIR 01-1B-40, Naval Air Systems Command, Washington, DC, 1 October 1990.

Chapter 7

Aircraft Inventory Reporting System (AIRS), OPNAVINST 5442.2G Office of the Chief of Naval Operations, Washington, DC, 06 July, 1992.

Chapter 8

The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G Office of the Chief of Naval Operations, Washington, DC, 1 February 1998.

Chapter 9

Aircraft Engine Management System (AEMS), NAVAIRINST 13700.15B, Naval Air Systems Command, Washington, DC, 5 March 1997.

NALCOMIS OMA User Manual (UM), Space and Naval Warfare Systems Center, Chesapeake, VA, 31 March 1999.

INDEX

A

Aeronautical Equipment Service Record (AESR), 8-1
 Aeronautical Equipment Service Record (cover)
 (OPNAV 4790/29), 8-2
 forms, 8-1
Airborne weapons loading lists, 3-2
Aircraft accounting audit report, 7-20
 content, 7-21
 correction, 7-21
 transmission, 7-21
Aircraft discrepancy book, 5-38
Aircraft discrepancy report, 3-27
Aircraft Engine Management System, 9-1
 engine transaction report, 9-3
 management codes, 9-1
Aircraft Engine Record Card, 9-9
Aircraft flight reporting, 5-30
Aircraft inspections, 4-5
 scheduled, 4-9
 types, 4-5
 unscheduled, 4-7
Aircraft Inventory Record, 6-32
Aircraft inventory reporting system, 7-1
 data element fields, 7-2
 multiple action OPNAV XRAY report, 7-14
 OPNAV XRAY report, 7-2
Aircraft logbook, 6-1
 custody, 6-1
 disposition, 6-3
 entries, 6-3
 forms, 6-4
 reconstruction, 6-3
 signatures, 6-3
 transfer, 6-2

Aircraft maintenance organization, 1-2, 1-4
 depot maintenance, 1-3
 intermediate maintenance, 1-2
 maintenance administration, 1-5
 organizational maintenance, 1-2, 1-5
Aircraft material readiness report, 5-36
Aircraft Record "A" Card, 7-16
Aircraft service period manual, 3-2
Aircraft Weight and Balance Record System, 6-37
Assembly Service Record (OPNAV 4790/106A), 6-20,
 8-12
Audit of disbursed libraries, 3-26
Audit of library, 3-24
Automatic distribution requirements list, 3-18
Aviation Life Support System History Records, 6-30
 Aircrew Personal Equipment Record (OPNAV
 4790/159), 6-32
 Aircrew Systems Record (OPNAV 4760/138),
 6-32
 Parachute Record (OPNAV 4790/101), 6-30
 Seat Survival Kit Record (OPNAV 4790/137),
 6-30

B

Balance manuals, 3-2

C

Classified information, 2-5
 classifications, 2-5
 For Official Use Only materials, 2-6
 security of classified material, 2-6
 security of classified publications, 3-24
 transmission of classified material, 2-6
Component Manuals, 3-1
Component Repair/Beyond Capability of Maintenance
 (BCM) Report (MDR-7), 5-7

Correspondence, 2-7
 assembling, 2-11
 e-mail, 2-20
 endorsement, 2-12
 facsimile transmission, 2-20
 filing, 2-20
 handling incoming mail, 2-7
 joint letter, 2-12
 memorandum, 2-20
 preparation, 2-7
 security classification, 2-9
 standard format, 2-9
 standard subject identification codes, 2-20
 Corrosion Control/Treatment Report (MDR-11), 5-7

D

Depot maintenance, 3-1
 Directives, 2-17
 identifying and numbering, 2-19
 issuance system, 2-17
 requisitioning, 2-19
 security identification, 2-19
 types, 2-18
 Dispersed library audit, 3-26

E

Electronic mail, 2-20
 End-of-Quarter Report of Flying Hours for Installed Engines, 9-9
 content, 9-9
 correction, 9-9
 transmission, 9-9
 Engine Composition Tracking (ECOMTRAK), 8-22
 Engine Transaction Report, 9-3
 correction, 9-8
 data element fields, 9-4
 numbering, 9-3
 preparation, 9-3
 Engineering investigation, 3-28
 Equipment History Record Card (OPNAV 4790/113), 6-24, 8-15
 Equipment inspections, 4-5
 scheduled, 4-9
 types, 4-5
 unscheduled, 4-6
 Equipment manual, 3-1
 Equipment Master Roster (E-00), 5-20
 Equipment Operating Record (OPNAV 4790/31A), 8-3

F

Failed Parts/Parts Required Report (MDR-8), 5-7
 Filing procedures, 2-20
 Foreign Object Damage (FOD) Report (MDR-10), 5-7
 Functional flight check, 5-37

H

Hazardous material report, 3-27
 Historical files, 5-40

I

Illustrated parts breakdown listing, 3-2
 Inspection Record (OPNAV 4790/22A), 6-6, 8-3
 Inspections, 4-5
 Installed Explosive Device Record (OPNAV 4790/26A), 6-17, 8-10
 Intermediate maintenance, 1-2, 1-9
 Intermediate Technical Directive Compliance Report (MDR-4-1), 5-7
 Inventory Record (OPNAV 4790/27A), 6-20, 8-12

J

Job Control Number (JCN) Consolidation Report (MDR-3), 5-3

L

Library audits, 3-24

M

MAF Copy 1 Daily Audit Report (DAR), 5-3

MAF Work Request, 5-29

Maintenance Action By Bureau/Serial Number Report (MDR-5), 5-7

Maintenance Action By System and Component Report (MDR-6), 5-7

Maintenance action form, 4-11

- data fields, 4-14
- terms and codes, 4-11
- types, 4-13

Maintenance administration division, 2-1

Maintenance administration, 1-5, 1-10

Maintenance control tasks, 4-1

Maintenance data reporting, 5-3

Maintenance data reports, 5-3

- Component Repair/Beyond Capability of Maintenance Report (MDR-7), 5-7
- Corrosion Control/Treatment Report (MDR-11), 5-7
- Failed Parts/Parts Required Report (MDR-8), 5-7
- Foreign Object Damage (FOD) Report (MDR-10), 5-7
- Intermediate Technical Directive Compliance Report (MDR-42), 5-7
- Job Control Number Consolidation Report (MDR-3), 5-3
- MAF Copy 1 Daily Audit Report (DAR), 5-3
- Maintenance Action by Bureau/Serial Number Report (MDR-5), 5-7
- Maintenance Action by System and Component Report (MDR-6), 5-7
- Monthly Production Report (MDR-2), 5-3
- No Defect Report (MDR-12), 5-17
- Repair Cycle Data Report (MDR-9), 5-7
- Technical Directive Compliance Report (MDR-4-1), 5-7
- When Malfunction Was Discovered Report (MDR-13), 5-17

Maintenance Data System, 5-1

Maintenance instruction manual, 3-1

Maintenance material control, 1-8, 1-10

Maintenance organization, 1-2

Maintenance requirements cards, 4-4

Manual numbering systems, 3-3

Material Reporting Subsystem, 5-1

Memorandum, 2-12

Message, 2-14

- preparation, 2-16
- terminology, 2-14
- types, 2-16

Miscellaneous/History (OPNAV 4790/25A), 6-15,8-7

Module Service Record (OPNAV 4790/135), 8-15

Monthly Flight Summary (OPNAV 4790/21A), 6-6

Monthly Maintenance Plan, 5-28

- intermediate maintenance activity, 5-29
- organization maintenance level, 5-28

Monthly Maintenance Summary, 5-26

Monthly Production Report (MDR-2), 5-3

N

NALCOMIS Production Reports, 5-17

NATOPS manuals, 3-2

NAVAIR publication numbering system, 3-3

Naval Aeronautical Publications Index, 3-6

Naval aircraft flight record, 4-23

Naval Aviation Maintenance Discrepancy Reporting Program, 3-26

Naval Aviation Maintenance Program, 1-1

- maintenance types, 1-3
- management, 1-5
- Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2, 1-1
- organization, 1-5

Naval Flight Record Subsystem, 4-24

- Individual master roster (NAVFLIRS-00), 4-26
- Monthly Aircraft Logistics Data Report (NAVFLIRS-4), 4-49
- Monthly Aircraft Mission Report (NAVFLIRS-2), 4-26

Naval Flight Record Subsystem—Continued

Monthly Aircraft Utilization Report (NAV-FLIRS-1), 4-26

Monthly Individual Flight Activity Report (NAVFLIRS-3), 4-49

NAVFLIRS Daily Audit Report, 4-24

Naval messages, 2-14

Navy Oil Analysis Program, 5-36

No Defect Report (MDR-12), 5-17

O

Office arrangement and procedures, 2-2

desk arrangement, 2-3

office arrangement, 2-2

office machines, 2-4

receptionist duties, 2-3

taking instructions, 2-4

telephone procedures, 2-3

use of working hours, 2-4

Official correspondence, 2-7

OPNAV XRAY report, 7-2

correction, 7-15

data element fields, 7-2

Organizational maintenance, 1-2, 1-5

P

Periodic maintenance information cards, 4-4

Planned Maintenance System publications, 3-2

checklists, 3-2

daily, special, preservation, conditional, and aircraft service period manuals, 3-2

maintenance requirements cards, 4-2

periodic maintenance information cards, 3-2, 4-4

sequence control cards, 4-4

Planned Maintenance System, 4-2

Preservation/Depreservation Record (OPNAV 4790/136A), 6-17, 8-10

Production control tasks, 4-1

Publications, 3-1

Q

Quality assurance, 1-7

Quality assurance division, 1-10

Quality deficiency report, 3-27

R

Repair Cycle Data Report (MDR-9), 5-7

Repair/Rework Record (OPNAV 4790/23A), 6-10, 8-7

Reports management, 2-22

Reports tickler file, 2-22

S

Scheduled Removal Component Card (OPNAV 4790/28A), 6-24, 8-15

Standard subject identification codes, 2-20

Stores loading list, 3-2

Stores reliability cards, 3-2

Structural Life Limits (OPNAV 4790/142), 6-4

Structural repair manual, 3-2

Subsystem Capability Impact Reporting (SCIR), 5-17

codes, 5-19

reports, 5-20

terms, 5-19

Support Equipment Inventory Reporting, 5-20

Support equipment records, 5-39

T

Tactical manuals, 3-3

Technical Directive Compliance Report (MDR 4-1), 5-7

Technical Directives (OPNAV 4790/24A), 6-10, 8-7

Technical directives, 3-7

completion, supersedure, and cancellation, 3-8

management, 3-10

numbering system, 3-10

priority, 3-8

requisitioning, 3-13

updating, 3-8

Technical manual identification numbering system, 3-3

Technical publication deficiency report, 3-28
Technical publication library, 3-13
 automatic distribution requirements list, 3-18
 central library audit, 3-21
 disbursed library audit, 3-26
 initial outfitting, 3-17
 management, 3-19
 NATEC library program, 3-13
 onetime requests, 3-19
 transaction files, 3-20
Technical publications, 3-1
 change incorporation, 3-22
 changes, 3-21
 filing and storage, 3-19
 maintenance manuals, 3-1
 operation manuals, 3-2
 receipt and recording, 3-20

Technical publication library—Continued
 revisions, 3-21
 screening and review, 3-20
 updating, 3-21
Tickler file, 2-22
Training, 2-23

W

Weight and balance manuals, 3-2
Weight and balance records, 6-37
When Malfunction Was Discovered Report (MDR-13),
 5-17
Work requests, 5-29
 MAF Work Request, 5-29
 Standard Depot-Level Maintenance (SDLM)
 Special Work Request, 5-30
 Work Request Customer Service, 5-30
Work unit code manuals, 3-2

Assignment Questions

Information: The text pages that you are to study are provided at the beginning of the assignment questions.

ASSIGNMENT 1

Textbook Assignment: “Naval Aviation Maintenance Program (NAMP)” and “Maintenance Administration.”
Pages 1-1 through 2-17.

- 1-1. What publication or instruction seeks to achieve and improve aviation material readiness and safety standards through the optimum use of resources?
 1. NAVAIR 00-25-100
 2. SECNAVINST 5215.5
 3. OPNAVINST 4790.2
 4. NAVAIR 00-25-300
- 1-2. At what level of maintenance are aircraft servicing and preflight inspections performed?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Rework
- 1-3. At what level of maintenance is shop-type testing of aircraft components most likely performed?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Rework
- 1-4. What type of maintenance is performed in large industrial-type facilities by military and civilian personnel?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Upkeep
- 1-5. Separation of aircraft maintenance tasks into three levels of maintenance is based on space requirements, skill level of personnel, scope of responsibility, and what other factor?
 1. Number of aircraft
 2. Size of aircraft
 3. Complexity of tasks
 4. Number of tasks to be accomplished
- 1-6. What maintenance level removes and installs a component on an aircraft?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Upkeep
- 1-7. What level of maintenance repairs and bench tests a defective hydraulic pump?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Upkeep
- 1-8. What level of maintenance manufactures aircraft modification kits?
 1. Organizational
 2. Intermediate
 3. Depot
 4. Upkeep
- 1-9. At what level or levels of maintenance are civilians normally the primary source of manpower?
 1. Organizational only
 2. Intermediate only
 3. Depot only
 4. Organizational, intermediate, or depot

- 1-10. All aircraft maintenance that is performed within naval aviation falls in what two categories?
1. Rework and inspections
 2. Inspections and servicing
 3. Servicing and upkeep
 4. Upkeep and rework
- 1-11. Maintenance is required to restore an aircraft structurally in an industrial-type facility. This is an example of what type of maintenance?
1. Upkeep
 2. Rework
 3. Servicing
 4. Inspecting
- 1-12. On naval air stations, what department or division conducts organizational-level maintenance on assigned aircraft?
1. The AIMD of the air station
 2. Operations maintenance division of an onboard tenant squadron
 3. Operations maintenance department of an onboard tenant squadron
 4. Operations maintenance division of the air station
- 1-13. What type or types of personnel staff an AIMD?
1. Permanently assigned civilian personnel only
 2. Permanently assigned civilian personnel and permanently assigned military personnel
 3. Permanently assigned military personnel and designated temporarily assigned military personnel from organizational-level maintenance activities
 4. Permanently assigned military personnel and designated temporarily assigned civilian personnel from depot-level maintenance activities
- 1-14. A line relationship is a relationship that exists between what two organizational components?
1. A servicing staff supervisor and a production line supervisor
 2. A superior and a subordinate
 3. Two subordinates
 4. Two departments
- 1-15. What officer directly supervises the production divisions of an aviation organizational maintenance activity?
1. Commanding officer
 2. Maintenance officer
 3. Maintenance material control officer
 4. Assistant maintenance officer
- 1-16. What is the function of a staff division within an organizational maintenance activity?
1. To control the workload
 2. To provide administrative services and support for production divisions
 3. To schedule aircraft through all phases of the maintenance process
 4. To prescribe and set policy for the maintenance department
- 1-17. What work center at an OMA maintains a master message board with a record of the actions that were taken?
1. Maintenance control
 2. Quality assurance
 3. Maintenance administration
 4. Material control
- 1-18. What is the basic concept of quality assurance?
1. Data correction
 2. Data validation
 3. Defect correction
 4. Defect prevention

- 1-19. Maintaining the central technical publications library is a function of what work center?
1. Maintenance control
 2. Quality assurance
 3. Material control
 4. Maintenance administration
- 1-20. What work center verifies an MRC's incorporation into the NALCOMIS database?
1. Quality assurance
 2. Maintenance control
 3. Maintenance administration
 4. Cognizant production work center
- 1-21. In an OMA, what work center maintains aircraft logbooks and associated records?
1. Production control
 2. Maintenance control
 3. Quality assurance
 4. Maintenance administration
- 1-22. In an OMA, what work center is the liaison between the maintenance department and the local aviation supply department (ASD)?
1. Maintenance control
 2. Material control
 3. Maintenance administration
 4. Quality assurance
- 1-23. In an OMA operating under NALCOMIS, what work center collects, screens, and forwards MDS data to the data services facility?
1. Maintenance control
 2. Material control
 3. Quality assurance
 4. Maintenance administration
- 1-24. If an item of accountable material is lost, damaged, or destroyed, the material control work center should initiate what action?
1. Investigation
 2. Search
 3. Survey
 4. Inquest
- 1-25. Within the maintenance department, what work center or division inventories aircraft upon receipt and transfer?
1. Maintenance control
 2. Quality assurance
 3. Material control
 4. Operations
- 1-26. What are the organizational elements of an OMA maintenance department?
1. Aircraft, line, avionics/armament, and unmanned aerial vehicle
 2. Avionics/armament, aircraft, and quality assurance/analysis
 3. Aircraft, line, power plants, and avionics/armament
 4. Line, airframes, power plants, and avionics/armament
- 1-27. Which of the following is a function of the line division?
1. Administering the plane captain program
 2. Maintaining custody of support equipment
 3. Performing daily inspections
 4. Each of the above
- 1-28. In an IMA, the management of the maintenance administration work center is the responsibility of what officer?
1. Maintenance officer
 2. Maintenance material control officer
 3. Administration department officer
 4. Assistant maintenance officer

1-29. In an IMA, responsibility for the cleanliness and security of vacant or unassigned spaces rests with what work center or division?

1. Maintenance administration
2. Aircraft
3. Production control
4. Avionics/Armament

1-30. In an IMA, what work center or division screens an incoming component to determine the responsibility and capability for repair of the component?

1. Production control
2. Quality assurance
3. AMSU
4. Maintenance administration

1-31. In an IMA, what work center or division plans, schedules, and assigns maintenance tasks within the maintenance department?

1. Maintenance control
2. Production control
3. Maintenance administration
4. Material control

1-32. In an IMA, what work center or division maintains aircraft electrical systems?

1. Aviation life support systems
2. Airframes
3. Avionics
4. Power plants

1-33. In an IMA, what work center or division maintains mobile electric power plants?

1. Airframes
2. Power plants
3. Aviation life support systems
4. Support equipment

- | |
|--|
| <ol style="list-style-type: none">A. Maintaining a master maintenance message boardB. Drafting and publishing the 3M SummaryC. Receiving and distributing mailD. Preparing maintenance-related correspondence |
|--|

Figure 1 -A

IN ANSWERING QUESTION 1-34, REFER TO FIGURE 1 -A.

1-34. The responsibilities of the maintenance administration division include what task or tasks?

1. A and B only
2. A, B, and D only
3. A, C, and D only
4. A, B, C, and D

1-35. After checking into the maintenance administration division, you should immediately ascertain which of the following information?

1. Function of the office
2. Function of the activity
3. Names of people in your chain of command
4. Each of the above

1-36. Which of the following is the best use of your time during periods of office slack time?

1. Studying for your rating exam
2. Visiting with your shipmates
3. Completing a challenging crossword puzzle
4. Reading the latest edition of Mech magazine

- | |
|---|
| <ul style="list-style-type: none"> A. Central processing unit B. Keyboard C. Monitor D. Mouse E. Printer |
|---|

Figure 1-B

IN ANSWERING QUESTION 1-37, REFER TO FIGURE 1-B.

1-37. What are examples of basic components of a computer?

1. A and B only
2. A, B, and C only
3. A, B, C, and D only
4. A, B, C, D, and E

1-38. What type of key is available on a computer to assist you in performing various processes?

1. Rotary
2. Digital
3. Function
4. Icon

1-39. What feature on the computer eliminates the need to hit the return key to start to type the next line of text?

1. Tab key
2. Wraparound
3. Space bar
4. Rotary key

1-40. If you are an AZ striker (non-“A” school graduate), what minimum number of words per minutes are you required to type before you are eligible to compete in the advancement examination for AZ3?

1. 20 wpm
2. 15 wpm
3. 10 wpm
4. 5 wpm

1-41. Detailed procedures for transmitting and handling classified material are found in what instruction?

1. OPNAVINST 4790.2
2. SECNAVINST 5215.5
3. SECNAVINST 5510.36
4. NAVAIRINST 13720.15

1-42. What are the approved classifications for classified material?

1. Top Secret, Secret, and Priority
2. For Official Use Only, Top Secret, and Secret only
3. Top Secret, Secret, and Confidential
4. For Official Use Only, Top Secret, Secret, and Confidential

1-43. What officer is responsible for ensuring that all classified material is properly safeguarded within a command?

1. Commanding officer
2. Maintenance officer
3. Classified material custodian
4. Assistant maintenance officer

1-44. As a person who has been cleared and authorized to handle Secret material, you are authorized to take which of the following actions?

1. Handle any Secret material anytime you want to handle it
2. Handle Secret material only when there is a reason to handle it
3. Read all incoming Secret material
4. Handle Top Secret as well as Secret material

You recently were detailed to Sea Control Squadron Two One (VS-21) stationed at NAS East Coast and assigned to the Maintenance Administration division. Your duties include providing departmental administrative support, drafting and submitting naval correspondence, and maintaining administrative files. On your first day on the job, you are tasked with preparing a classified (Secret) standard letter.

Figure 1-C

IN ANSWERING QUESTIONS 1-45 THROUGH 1-55, REFER TO FIGURE 1-C, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

- 1-45. To what instruction should you refer for detailed procedures in preparing the letter?
1. OPNAVINST 4790.2
 2. SECNAVINST 5215.1
 3. SECNAVINST 5216.5
 4. OPNAVINST 5442.2
- 1-46. Which of the following is a correct description of the left and right margins on the first page of the letter you are preparing?
1. Two inches each for the left and right
 2. One and one-half inch for the left and two inches for the right
 3. Two inches for the left and one inch for the right
 4. One inch each for the left and right
- 1-47. What element of the letter will be used for referencing and filing purposes?
1. Letterhead title
 2. Endorsement
 3. Reference line
 4. Identification symbols
- 1-48. The subject of your letter is MAINTENANCE AND MATERIAL MANAGEMENT. What type of code should you assign the correspondence so it can be grouped with related correspondence?
1. Standard subject identification code (SSIC)
 2. Word unit code
 3. Originator's code
 4. Reference code
- 1-49. What type of information is provided in SECNAVINST 5210.11?
1. Plain language addresses
 2. SSICs
 3. Reference codes
 4. Originator's codes
- 1-50. Since your letter will have a Secret classification, you should type this designation in capital letters at what location on the letter?
1. At the left margin, two lines below the date
 2. At the right margin, two lines above the originator's code
 3. In the center of the page, two lines below the top margin
 4. In the center of the page, two lines above the bottom margin
- 1-51. The letter has three references. In what order should you list the references?
1. Chronologically by their dates of origination
 2. In the order that they were received by your activity
 3. In the order that they are discussed in the text of the letter
 4. In order of seniority of the officials in whose names the references were distributed

1-52. The final paragraph of your letter is five lines long, but you have enough space for four lines on the current page. What action should you take?

1. Edit the paragraph to four lines
2. Go below the bottom margin and type all five lines
3. Type three lines on the current page and two lines on the signature page
4. Delete the last paragraph

1-53. Where should you type the signature line for your letter?

1. In the center of the page, four lines below the last line of text
2. In the center of the page, six lines below the last line of text
3. At the left margin, four lines below the last line of text
4. At the left margin, six lines below the last line of text

1-54. Your letter is ready for signature, but the signer is not available. What designation should you type in the signature block to accompany the individual's name who has been formally appointed to sign the letter?

1. By direction
2. Acting
3. By direction of the Commanding Officer
4. For the Commanding Officer

1-55. You should number the first page and each succeeding page of the letter?

1. True
2. False

Your leading petty officer has just tasked you to draft an endorsement to a letter for a humanitarian transfer and a naval GENADMIN message.

Figure 1-D

IN ANSWERING QUESTIONS 1-56 THROUGH 1-68, REFER TO FIGURE 1-D, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

1-56. Since your activity is adding an endorsement, your activity is most likely what type of addressee?

1. "From" addressee
2. "To" addressee
3. "Via" addressee
4. "Copy to" addressee

1-57. When should you use a same-page endorsement?

1. Only when the endorsement will fit on the same page as the letter
2. Only when you are sure that no revisions will be made to the endorsement
3. When the endorsement will fit on the same page as the letter and when you are sure revisions will not be made to the endorsement
4. Only when the endorsement comments on a prior endorsement

1-58. There have been two previous endorsements added to the original letter, but this is only the first one added by your activity. What endorsement number should you use?

1. FIRST
2. THIRD
3. 1ST
4. 3RD

- 1-59. Before you forward the message to the Naval Telecommunication Center for transmission, who specifically must authorize it?
1. Drafter
 2. Releaser
 3. Leading Petty Officer
 4. Leading Chief Petty Officer
- 1-60. As the composer of the message, you would most likely be performing the duties of what individual or authority?
1. Drafter
 2. Originator
 3. Releaser
 4. Transmitter
- 1-61. You prepare the message, but it cannot be transmitted due to simulated emergency conditions. To what condition does this control on transmission of the message refer?
1. Restriction
 2. Prohibition
 3. Minimize
 4. Limitation
- 1-62. Besides the subject line you place on the message, what item will be used to identify your message?
1. Precedence
 2. Ref
 3. RMKS
 4. DTG
- 1-63. Sea Control Squadron 28 is the action addressee of the message. How should this address appear on the naval message?
1. Sea Control Squadron 28
 2. Sea Control Squadron Twenty Eight
 3. SEACONRON 28
 4. SEACONRON TWO EIGHT
- 1-64. To what reference should you refer when composing the naval message?
1. OPNAVINST 3710.7
 2. OPNAVINST 4790.2
 3. NTP 3
 4. MTF-E
- 1-65. You may use what special characters when typing the naval message?
1. Period (.), comma (,), and colon (:)
only
 2. Quotation marks (""), question mark (?), and brackets (()) only
 3. Dash (-) and slant (/) only
 4. Period (.), comma (,), colon (:), quotation marks (""), question mark (?), parentheses (()) dash (-), and slant (/)
- 1-66. What message sets are mandatory on your GENADMIN message?
1. SUBJ and RMKS
 2. RMKS and REF
 3. SUBJ and NARR
 4. RMKS and NARR
- 1-67. Your message has four references. What additional message set is mandatory on your message?
1. AMPN
 2. NARR
 3. EXER
 4. OPER
- 1-68. If you were unsure of how the Sea Control Squadron address should look on the message, to what source should you refer?
1. Base Operator
 2. Military Locator
 3. DPVS
 4. DTG

ASSIGNMENT 2

Textbook Assignment: "Maintenance Administration (continued)" and "Technical Publication Library."
Pages 2-17 through 3-29.

- 2-1. What instruction details procedures for the directives issuance system?
1. OPNAVINST 3710.7
 2. OPNAVINST 4790.2
 3. SECNAVINST 5215.1
 4. SECNAVINST 5210.11
- 2-2. What type of correspondence prescribes or establishes policy, method, or procedure?
1. Standard letter
 2. Naval message
 3. Endorsement
 4. Directive
- 2-3. Periodic checklists are issued to activities that receive directives through the Navy Directive Issuance System. What is the purpose of the checklist?
1. To group directives by subject matter
 2. To determine the currentness and completeness of an activity's set of directives
 3. To determine what directives are instructions and what directives are notices
 4. To distinguish between directives of a continuing nature and directives of a temporary nature
- 2-4. What type of Navy directive contains information of a continuing nature or requires continuing action?
1. Instruction
 2. Notice
 3. Bulletin
 4. Order
- 2-5. What type of Navy directive is of a onetime nature and contains information or action that is applicable for a brief period?
1. Instruction
 2. Notice
 3. Bulletin
 4. Order
- 2-6. What type of Navy directive contains provisions for its own self-cancellation?
1. Instruction
 2. Notice
 3. Bulletin
 4. Change
- 2-7. Instructions and notices that are issued in the Navy Directive Issuance System are similar in which of the following ways?
1. They provide for their own cancellation
 2. They contain information of a temporary nature
 3. They have the same force and effect
 4. They contain information of a continuous nature
- 2-8. What additional information should you always include when you reference OPNAV Notice 4790?
1. Date
 2. Office symbol
 3. Identification symbol
 4. Hull number

2-9. What number that is listed below identifies a notice with subject classification number 4790?

1. 4790.1
2. 4790/1
3. 4790-1
4. 4790

- | |
|---|
| <ol style="list-style-type: none">A. Represents the subject of a documentB. Provides a method of filing and identifying correspondenceC. Identifies 15 subjects groupsD. Appears on standard letters |
|---|

Figure 2-A

2-10. Your activity issues an original instruction with a subject classification number 5440. The instruction is the third instruction that is issued on the same subject and is classified Confidential. What should the identifier be for this third instruction?

1. 3-5440
2. 3-C5440
3. C5440.3
4. 5440.3C

2-11. What type of communication is used for formal and informal communications and automatically provides a record of the communication?

1. Telephone
2. Facsimile (fax) transmission
3. Electronic mail (e-mail)
4. Intercom system

2-12. Which of the following is a characteristic of a fax machine copy?

1. The copy carries the same authority as the original document
2. The cost of faxing a large document is relatively inexpensive
3. There are no security concerns
4. Large volumes of information may be stored

IN ANSWERING QUESTION 2-13, REFER TO FIGURE 2-A.

2-13. An SSIC serves what functions?

1. A and B only
2. B and D only
3. A, B, and D only
4. A, B, C, and D

2-14. In NAVAIR designation 7810.2, what is indicated by the .2?

1. The first change to NAVAIRINST 7810.2
2. The second amendment that NAVAIR has issued under the subject classification number 7810
3. The second change to NAVAIRINST 7810
4. The second instruction that NAVAIR has issued under the subject classification number 7810

2-15. What type of file should maintenance administration maintain to list reports that have a recurring reporting requirement?

1. Master maintenance message board file
2. Tickler file
3. ETR file
4. XRAY file

- 2-16. What type of training should be accomplished under the supervision of experienced personnel during actual performance of a maintenance task?
1. Computer-based training (CBT)
 2. MTIP
 3. Classroom formal training
 4. On-the-job training
- 2-17. What publication or type of publication provides a listing of assigned alphanumeric codes for the identification of equipment?
1. NAVSUP Pub 2002
 2. OPNAVINST 5442.4
 3. WUC manual
 4. MIM
- 2-18. What type of publication provides a basis for scheduling, planning and performing scheduled maintenance tasks?
1. IPB
 2. SRM
 3. WUC
 4. PMS
- 2-19. To what type of publication should you refer to obtain information about forced component removal items and replacement intervals?
1. PMIC
 2. MIM
 3. IPB
 4. SRM
- 2-20. To what publication should you refer for source, maintenance, and recoverability codes?
1. SRM
 2. IPB
 3. WUC
 4. MIM
- 2-21. What type of publication contains a description of a weapons system and instruction for its effective use?
1. Maintenance
 2. Turnaround
 3. Operational
 4. Inspection
- 2-22. What NAVAIR technical publication number prefix identifies an aircraft/airframe publication?
1. 00
 2. 01
 3. 02
 4. 03
- 2-23. What technical manual numbering system is patterned after a 13-digit national stock number?
1. Decimal
 2. Conventional
 3. TMINS
 4. Digital
- 2-24. What publication contains a listing of published TDs as they apply to a particular aircraft?
1. NAVAIR 00-25-100
 2. NAVAIR 00-25-300
 3. NAVAIR 00-500C
 4. NAVAIR 00-500A
- 2-25. What publication should be used to ensure that all existing changes have been incorporated in an airborne weapons checklist?
1. NAVSUP PUB 2002
 2. OPNAVINST 4790.2
 3. NAVAIR 00-500C
 4. NAVAIR 01-700

QUESTIONS 2-26 THROUGH 2-37 RELATE TO THE TPL OPERATION AND THE TECHNICAL DIRECTIVE SYSTEM.

2-26. What publication or instruction contains policies and procedures governing the TD system?

1. NAVAIR 00-25-100
2. NAVAIR 00-25-300
3. NAVAIR 00-25DRT-1
4. NAVAIR 00-500C

2-27. Which of the following is a policy or procedure concerning TDs.

1. When a TD is received, route copies to all work centers
2. The TD system is the only authorizing method for directing accomplishment of equipment modification
3. When a TD is received, route the TD directly to the action work center
4. Cancellation of a TD is the process by which the TD is removed from the active file after its incorporation

2-28. What type of TD should be issued when an equipment situation is critical and the TD requires immediate distribution?

1. Rapid action change
2. Interim change
3. Hazardous material
4. Interim rapid action

2-29. Which of the following TDs will be superseded by a formal TD?

1. IAFC 216
2. AVC 2030
3. AFB 191
4. RAC 34

2-30. What type of TD is normally issued by naval message and directs a onetime inspection to determine if a given condition exist?

1. Instruction
2. Change
3. Order
4. Bulletin

2-31. TDs are categorized into groups based on what criteria?

1. Urgency and frequency only
2. Urgency, frequency and type only
3. Type and purpose only
4. Type, purpose, and urgency

2-32. What category of TD is used when a configuration change was incorporated before the TD was officially issued?

1. Record purpose
2. Routine
3. Urgent
4. Immediate

2-33. What are the priority categories for TDs?

1. Record purpose and rapid
2. Urgent and rapid action
3. Urgent and immediate only
4. Record purpose, urgent, immediate, and routine

2-34. A TD may have only so many amendments before it must be revised. A TD must be revised after what amendment has been issued?

1. Amendment A
2. Amendment B
3. Amendment C
4. Amendment D

- 2-35. What methods are used to update TDs?
1. Rapid action change and interim change
 2. Amendment and rapid action minor engineering change
 3. Rapid action change and change recommendations
 4. Revision and amendment
- 2-36. Which of the following is a procedure concerning TDs?
1. Supersede is the process by which TDs are placed in the active file
 2. A TD may be cancelled after it incorporated
 3. Once TD is incorporated, it may not be cancelled
 4. An amendment is used to cancel other amendments
- 2-37. Stock numbers for ordering TDs should be found in what document or publication?
1. ADRL
 2. NAVAIR 00-500C
 3. NAVSUP Pub 2002
 4. OPNAVINST 4790.2
- 2-38. As the CTPL librarian, to what division are you assigned?
1. Maintenance
 2. Quality assurance
 3. Avionics
 4. Administration
- 2-39. Which of the following duties is your responsibility as the CTPL librarian?
1. Ordering publications for work centers
 2. Distributing technical publications, changes, and revisions to work centers
 3. Verifying the weekly summary of issued TDs
 4. Each of the above
- 2-40. What type of technical publication library is located in the power plants and airframes work centers?
1. External
 2. Secondary
 3. Dispersed
 4. Subsidiary
- 2-41. Airframes needs an extra copy of the Corrosion Prevention publication. What document should you refer to for requisitioning procedures?
1. NAVAIR 00-25-100
 2. NAVAIR 00-25-300
 3. NAVAIR 00-25DRT-1
 4. NAVAIR 00-25T-1

You are attached to VS-21 homeported at NAS East Coast and are assigned as the CTPL librarian. Your duties include, but are not limited to, establishing a CTPL, providing TPL training work center librarians, and requisitioning (ordering) technical publications, changes, and revisions.

Figure 2-B

IN ANSWERING QUESTIONS 2-38 THROUGH 2-48, REFER TO FIGURE 2-B, THE TEXTBOOK, AND FIGURES AND REFERENCES USED IN THE TEXTBOOK.

- 2-42. Which of the following is a feature of the TPL program?
1. Use of the CECR form is not required for activities that use the TPL program
 2. CTPL operating procedures outlined in NAVAIR 00-25-100 take precedence over procedures used in the TPL program
 3. The TPL program is mandatory for all activities with automatic distribution requirements of 10 or less publications
 4. The TPL program tracks all changes and revisions for dispersed libraries
- 2-43. Of the following documents, which one or ones are required for activities that use the automatic TPL program?
1. CECR only
 2. ADRL only
 3. CECR and ADRL
 4. NWPL catalog card
- 2-44. What publication should you refer to for the latest change or revision date of the Corrosion Prevention Manual?
1. NAVAIR 00-500A
 2. NAVAIR 00-500C
 3. NAVSUP Pub 2002
 4. NAVSUP Pub 1205
- 2-45. To what document should you refer to verify if the Corrosion Prevention Manual is currently on automatic distribution?
1. NAVSUP Pub 2002
 2. AIL
 3. NAVAIR 00-25DRT-1
 4. ADRL
- 2-46. You discover an error in the quantity of a publication that is being received. What document should you submit to correct the discrepancy?
1. NAVSUP Pub 2002
 2. CAT 2 TPDR
 3. ADRL
 4. CAT 1 TPDR message
- 2-47. The correct number of Corrosion Prevention manuals are being received. What method should you use to order an extra copy?
1. Special request
 2. Onetime request
 3. AIL update
 4. ADRL update
- 2-48. What method or methods can be used to obtain the extra copy of the Corrosion Prevention manual?
1. DD Form 1348 only
 2. DAAS message only
 3. SALTS only
 4. DD Form 1348, DAAS message, and SALTS
- 2-49. What information should you stamp on the cover page of all changes and revisions that you receive?
1. Activity only
 2. Location only
 3. Copy number only
 4. Activity, location, and copy number
- 2-50. The revision you received was issued because what minimum percentage of the technical publication was affected by a change?
1. 30%
 2. 40%
 3. 50%
 4. 60%

- 2-51. Which of the following is a policy concerning change to the technical publication?
1. A change consists of replacement pages to part of an existing publication
 2. A change is a complete rewrite of an existing publication
 3. A pen-and-ink change is permissible when an interim change is incorporated
 4. An interim change that affects a CD-ROM disk requires no action
- 2-52. Why was an IRAC selected as the means to disseminate technical publication change information?
1. It is the most cost-effective means
 2. It is the fastest means
 3. It is the most efficient means
 4. It is the only authorized means
- 2-53. What is the disposition of the IRAC after it has been incorporated in a technical publication?
1. Destroyed
 2. Forwarded to maintenance control
 3. Filed in a binder labeled "IRACs"
 4. Stored behind the title page of the affected publication
- 2-54. How long should you maintain IRAC 28 on file in the CTPL?
1. Until directed by higher authority
 2. Until the publication is completely rewritten
 3. Until the publication is cancelled
 4. Until receipt of the formal RAC
- 2-55. Which of the following is an action that the technical library should take with regard to text in a technical manual that is affected by an IRAC?
1. Place the letter C in the left margin opposite the text
 2. Rewrite the text in blue or black ink
 3. Draw a vertical black line in the margin opposite the text
 4. Cut and paste or tape the change over the text
- 2-56. Which of the following items of information should be annotated on a page affected by an IRAC?
1. IRAC number with its date-time group
 2. Issuing authority
 3. Location
 4. Copy number
- 2-57. During incorporation of a change in one of your CTPL's publications, you notice that an interim change is missing. To what document should you refer to find which interim changes have been issued but not yet received?
1. Automatic distribution requirements listing
 2. Audit inventory list
 3. Weekly summary of issued TDs
 4. IRAC Tracker
- 2-58. What part of the change entry certification record should you retain on file after incorporation of the IRAC 28?
1. Part 1
 2. Part 2

- 2-59. What page of a technical publication lists all changes and revisions issued since the original date of the publication?
1. Cover page
 2. Page 1
 3. List of effective pages
 4. Introductory page
- 2-60. What form should you issue to ensure that IRAC 28 is routed to Airframes?
1. DD Form 1348
 2. DD Form 1205
 3. CECR, OPNAV 5070/12
 4. OPNAV Form 3710/6
- 2-61. Four copies of NAVAIR 01-1A-509 are located in dispersed libraries. You received Changes 4, 5, and 6 for all four copies of this publication. How many CECRs should you issue to track these three changes to all four copies?
1. 12
 2. 7
 3. 8
 4. 4
- 2-62. The Airframes work center must incorporate IRAC 28 within what number of days?
1. 1 day
 2. 2 days
 3. 3 days
 4. 4 days
- 2-63. On what form or list should you record incorporation of the CTPL's copy of IRAC 28?
1. CECR, Part 1
 2. CECR, Part 2
 3. ADRL
- 2-64. To what directive should you refer for information on how to manage classified publications in a technical publication library?
1. Department of the Navy Security Classification Guides, OPNAVINST 5513.1
 2. Navy Physical Security, OPNAVINST 5530.14
 3. Department of the Navy Personnel Security Program, SECNAVINST 5510.30
 4. Department of the Navy (DON) Information Security Program (ISP) Regulation, SECNAVINST 5510.36
- 2-65. Which of the following situations requires that the CTPL be audited?
1. An activity's mission changes
 2. CTPL librarian transfers
 3. Whenever directed by higher authority
 4. Each of the above
- 2-66. What checklist should be used for an audit of the CTPL?
1. Physical security checklist
 2. Computerized self-evaluation checklist
 3. Turnaround checklist
 4. Pocket checklist
- 2-67. CTPL audit results and corrective actions that were taken should be maintained in what location?
1. CTPL tickler files
 2. CTPL transaction file
 3. QA quarterly work center audit file
 4. QA trend analysis files

2-68. Which of the following organizational components or personnel has responsibility for quarterly audits of work center libraries?

1. Individual work centers
2. Maintenance administration
3. CTPL librarian
4. Maintenance control

2-69. Which of the following should be reviewed during the work center quarterly audit?

1. Condition of publications
2. Proper handling of TDs
3. Proper storage of classified publications
4. Each of the above

Power Plants and Airframes discover deficiencies in technical publications while making changes and using the publications

Figure 2-E

IN ANSWERING QUESTIONS 2-70 THROUGH 2-75, REFER TO FIGURE 2-E.

2-70. During incorporation of a change to a technical manual the power plants supervisor informed you that a publication has a technical information deficiencies that could affect safety of flight. What program governs the appropriate course of action?

1. NAMDRP
2. IMRL
3. ICRL
4. CTPL

2-71. What format or form should be used to report deficiencies in tactical publications?

1. SALTS
2. OPNAV Form 3710/6
3. OPNAV Form 4790/66
4. CAT 1 priority message

2-72. What report should be used to report this deficiency?

1. QDR
2. HMR
3. TPDR
4. EI

2-73. What format or form should use to report this deficiency?

1. OPNAV Form 3710/6
2. OPNAV Form 4790/66
3. CAT 1 TPDR priority naval message
4. SALTS

2-74. Airframes has informed you that one of their publications has incorrect part numbers. What methods should be used to report this deficiency?

1. CAT 1 TPDR priority naval message
2. Rapid action minor engineering change
3. OPNAV Form 3710/6
4. CAT 2 TPDR

2-75. After getting confirmation that the deficiency report has been received, what method, if any, should you use to correct the erroneous information in a publication?

1. Use whiteout or correction tape to remove the incorrect information and leave blank until receipt of a formal change
2. Type the correct information in the margins opposite the affected text
3. Pen-and-ink correction
4. None

ASSIGNMENT 3

Textbook Assignment: "Maintenance Control and Production Control" and "Maintenance Data System (MDS)." Pages 4-1 through 5-46.

3-1. What work center at the aviation organizational maintenance level schedules and plans the actions of all other work centers?

1. Quality assurance
2. Material control
3. Maintenance control
4. Production control

3-2. What officer is responsible to the maintenance officer (MO) for the material support of the maintenance department?

1. Maintenance material control officer
2. Quality assurance officer
3. Assistant maintenance officer
4. Operations officer

- A. Maintaining aircraft discrepancy books (ADB)
- B. Controlling the daily workload
- C. Assigning workload priorities
- D. Maintaining weight and balance records
- E. Maintaining the central technical publications library

Figure 3 -A

IN ANSWERING QUESTION 3-3, REFER TO FIGURE 3-A.

3-3. Maintenance control is responsible for what tasks?

1. A and D only
2. B and C only
3. A, B, C, and D
4. D and E

3-4. Which of the following is a management information system that provides a means to collect, process, store, review, and report maintenance data?

1. MTIP
2. NAVFLIRS
3. NALCOMIS
4. ATPL

- A. Providing a means to detect impending equipment failures
- B. Forecasting and planning manpower requirements
- C. Facilitating an effective fraud, waste, and abuse program
- D. Simplifying complex maintenance tasks

Figure 3-B

IN ANSWERING QUESTION 3-5, REFER TO FIGURE 3-B.

3-5. What are the purposes of the Planned Maintenance System (PMS)?

1. A and B only
2. B and C only
3. A, B, and C
4. A, B, and D

3-6. PMS publications provide the basis for scheduling and performing what type of maintenance tasks?

1. Aircraft refueling
2. Scheduled maintenance
3. Troubleshooting
4. Overhaul

- 3-7. Of the following types of publications, which one is an example of a PMS publication?
1. Structural repair manual (SRM)
 2. Maintenance requirements card (MRC)
 3. Illustrated parts breakdown (IPB)
 4. Maintenance instruction manual (MIM)
- 3-8. What PMS publication provides minimum requirements for the accomplishment of scheduled maintenance tasks?
1. SCC
 2. PMIC
 3. MRC
 4. MIM

- A. Component or assembly removal or replacement intervals
- B. Conditional inspection listing
- C. Airframe structural life limited items
- D. Abbreviated requirements for turnaround and preoperational inspections

Figure 3-C

IN ANSWERING QUESTION 3-9, REFER TO FIGURE 3-C.

- 3-9. A PMIC contains what requirements?
1. A and B only
 2. B and C only
 3. A, B, and C
 4. C and D
- 3-10. What type of inspection is performed before operation of equipment to verify proper servicing?
1. Preflight
 2. Preoperational
 3. Conditional
 4. Daily

- 3-11. A daily inspection is considered valid for a period of 72 hours provided that no maintenance other than servicing was performed in addition to what other condition?
1. Less than two flights took place during the period
 2. The pilot in command flew no previous flights during that day
 3. No flight took place within the period
 4. The operations (OPs) code for the previous two flights remained the same
- 3-12. What form is used to certify completion of a daily and turnaround inspection?
1. OPNAV Form 4790/38
 2. OPNAV Form 4790/60
 3. OPNAV Form 5790/25A
 4. OPNAV Form 4790/136A
- 3-13. An acceptance inspection requires verification of the Monthly Flight Summary record. What record in the aeronautical equipment service record (AESR) should also be verified for correct operating hours during acceptance inspections?
1. Miscellaneous/History
 2. Inspection Record
 3. Equipment Operating Record
 4. Inventory Record
- 3-14. Engine overspeed and hard landing are examples of what type of inspection?
1. Conditional
 2. Daily
 3. Transfer
 4. Zonal
- 3-15. A conditional inspection that specifies fluid sampling requires that an aircraft logbook entry be made.
1. True
 2. False

- 3-16. Which of the following are characteristics of ASPA evaluations?
1. Evaluations are required between 6 months prior to and 3 months after the period end date for ASPA aircraft
 2. Evaluators may recommend that an ASPA aircraft be inducted into rework immediately and their service tours terminated
 3. Evaluations include aircraft logbook and physical examination of aircraft
 4. All of the above
- 3-17. What type of inspection is based on elapsed calendar time, operating hours, cycles, or events?
1. Daily
 2. Transfer
 3. Special
 4. Acceptance
- 3-18. Components having a scheduled removal component (SRC) card, equipment history record (EHR), module service record (MSR), or assembly service record (ASR) should be inventoried during what type of inspection?
1. Special
 2. Daily
 3. Conditional
 4. Phase
- 3-19. An aircraft is scheduled for a 14-day special inspection. What deviation may be applied to this inspection to facilitate accomplishment?
1. Plus or minus 3 days
 2. Plus or minus 3 percent
 3. Plus or minus 10 days
 4. Plus or minus 10 percent
- 3-20. An aircraft is approaching 100-flight hours and is due for its 100-flight-hour inspection. When is the earliest time that this inspection may be accomplished without requiring adjustment of the next inspection due hours?
1. 60 hours
 2. 70 hours
 3. 80 hours
 4. 90 hours
- 3-21. Which of the following is a policy concerning authorized deviations to inspections?
1. After the plus or minus 3 days or 10 percent authorized deviation has been applied and expired, an aircraft is restricted from further use
 2. A plus 10 percent extension is only authorized for low cycle fatigue items
 3. If an inspection is performed within the plus or minus 10 percent authorized deviation, a Miscellaneous/History record entry is required
 4. If an inspection is performed earlier than authorized deviations, the next inspection is based on the hour, cycle, or event that the inspection was originally

- A. Support Action Form (SAF)
- B. Naval Aircraft Flight Record (NAVFLIR)
- C. Single-Item Requisition (DD Form 1348)
- D. Maintenance Action Form (MAF)

Figure 3-D

IN ANSWERING QUESTION 3-22, REFER TO FIGURE 3-D.

- 3-22. Maintenance, material, and flight data is recorded on what MDS source documents?
- 1. A and B only
 - 2. A and C only
 - 3. A, B, and C
 - 4. B, C, and D

- A. On-equipment work
- B. The removal and subsequent processing of a component at an IMA
- C. Man-hours expended during foreign object damage (FOD) walk down
- D. Off-equipment work

Figure 3-E

IN ANSWERING QUESTION 3-23, REFER TO FIGURE 3-E.

- 3-23. The MAF's purpose is to document what type of task?
- 1. A and B only
 - 2. B and C only
 - 3. A, B, and C
 - 4. A, B, and D

- 3-24. Which of the following actions should be documented on the maintenance action form (MAF)?
- 1. Man-hours that are expended in performing general housecleaning of work center spaces
 - 2. Incorporation of technical directives
 - 3. Man-hours that are expended in verifying daily audit reports
 - 4. Man-hours that are expended in initiating source documents

- 3-25. What person should sign the ENTRIES REQUIRED SIGNATURE block on the MAF?
- 1. The person who initiated the MAF
 - 2. The technician who completed work on the discrepancy
 - 3. The logs and records person who screened the MAF for possible aircraft logbook/historical record entries
 - 4. The person who discovered the discrepancy

- 3-26. An aircraft is undergoing depot-level repairs while in the physical custody of the reporting custodian. What inventory code should be used on the MAF?
- 1. 0
 - 2. A
 - 3. 2
 - 4. 3

- 3-27. What code is used on the MAF to identify the degree of degradation to reduced mission capability of aircraft and the system responsible for the reduction?
- 1. Work Unit Code
 - 2. Inventory code
 - 3. Type Maintenance code
 - 4. Equipment Operational Capability code

- 3-28. What code is used on the MAF to identify each individual maintenance action?
1. Bureau/Serial number
 2. Job control number
 3. Transaction code
 4. Work Unit Code
- 3-29. What does the three-digit JCN day that is assigned to a MAF indicate?
1. The day that a maintenance discrepancy was discovered
 2. The day that the JCN was assigned to the MAF
 3. The day that work was completed on a maintenance discrepancy
 4. The day that work actually began on a maintenance discrepancy
- 3-30. A maintenance activity is operating under NALCOMIS OMA. What code determines which tasks a maintenance technician is authorized to access and perform?
1. Equipment Operational Capability (EOC) code
 2. Personal Identification Code (PIN)
 3. Special Maintenance Qualification (SMQ) code
 4. Personal Access Code (PAC)
- 3-31. A maintenance activity is operating under NALCOMIS OMA. After a MAF is initiated, one copy is routed to the appropriate work center. What is the disposition of the second copy?
1. Sent to the data services facility
 2. Routed to QA
 3. Placed on the right side of the ADB
 4. Recorded in the aircraft logbook
- 3-32. Upon completion of a discrepancy, a completed MAF is printed and placed on the left side of the ADB. How long should the completed MAF remain in the ADB?
1. For 72 hours, provided no flights or maintenance other than servicing is performed
 2. 10 subsequent flights
 3. As long as the discrepancy remains outstanding
 4. Until verification of the next daily audit report
- 3-33. A maintenance activity is operating under NALCOMIS OMA. Upon completion of a maintenance discrepancy, the original discrepancy MAF currently in the ADB should be removed from the ADB and disposed in what manner?
1. Retained for six months from the completion date and then discarded
 2. Routed to QA for trend analysis
 3. Routed to the data services facility for processing
 4. Discarded
- 3-34. A maintenance activity is operating under NALCOMIS OMA. What action should the squadron analyst take if he or she finds an incorrect MAF during the screening process?
1. Reject the MAF and return the MAF back to the work center for correction
 2. Approve the MAF and make corrections later on the daily audit report
 3. Delete the MAF from the data base
 4. Notify the DSF of the error

- 3-35. What manual provides detailed operating procedures for activities operating under NALCOMIS OMA?
1. Naval Correspondence Manual
 2. NALCOMIS OMA End User's Manual
 3. Naval Air Systems Command Technical Manual Program
 4. Naval Air Training and Operating Procedures Standardization General Flight and Operating Instructions Manual

- 3-36. What document is used as the sole source for collecting naval aircraft flight data?
1. Yellow sheet
 2. MAF
 3. Naval Aircraft Flight Record (NAVFLIR)
 4. FREDs form

- 3-37. What OPNAV instruction prescribes general documentation procedures for completion of the naval aircraft flight record?
1. OPNAVINST 5442.4
 2. OPNAVINST 5442.2
 3. OPNAVINST 4790.2
 4. OPNAVINST 3710.7

- | |
|---|
| <ol style="list-style-type: none"> A. Amount of oxygen, fuel, and oil expended during flight B. Crew members on board an aircraft during flight C. Flight hours flown and landings performed D. Types of missions flown |
|---|

Figure 3-F

IN ANSWERING QUESTION 3-38, REFER TO FIGURE 3-F.

- 3-38. The NAVFLIR provides for documentation of what data?
1. A and B only
 2. A, B, and D
 3. B and C only
 4. B, C, and D

- 3-39. NAVFLIR should be retained in the maintenance department for a minimum of how long?
1. 1 complete phase cycle
 2. 6 months
 3. 3 months
 4. 30 days

- 3-40. A pilot in command with two crew members completes an air mission consisting of three flights. Two TMR codes describe the total mission requirements. What other condition or conditions must be met so that one NAVFLIR can document the three flights?
1. The operations code must be the same for each flight only
 2. Maintenance or servicing must not have been performed at intermediate stops other than the addition of fuel, oil, or oxygen only
 3. The operations code must be the same for each flight and maintenance or servicing must not have been performed at intermediate stops other than the addition of fuel, oil, or oxygen
 4. All crew members must be assigned to the same activity

- 3-41. Part I of the NAVFLIRS Daily Audit Report reports what flight data?
1. Data submitted from the previous day that was found to be valid
 2. Data submitted during the previous reporting period that was found to be invalid
 3. Data submitted during the current reporting period that was found to be invalid
 4. Data submitted during the current and previous reporting periods that was found to be invalid
- 3-42. What report is prepared monthly and identifies the total aircraft assigned to an activity and includes the hours flown as well as the name, grade, and flight qualifications of each aircrewman?
1. NAVFLIRS-00
 2. NAVFLIRS-1
 3. NAVFLIRS-2
 4. NAVFLIRS-3
- 3-43. What management information system provides statistical data on aeronautical equipment for management purposes?
1. MDS
 2. IPB
 3. MIM
 4. PMIC
- 3-44. What MDS subsystem deals with the most complex and widest range of data?
1. SCIR
 2. NAVFLIR
 3. MDR
 4. MR
- 3-45. What MDS subsystem deals with supply actions that support aviation maintenance?
1. SCIR
 2. NAVFLIRS
 3. MDR
 4. MR
- 3-46. What maintenance data report identifies parts that have high AWP times?
1. MDR-2
 2. MDR-5
 3. MDR-6
 4. MDR-8
- 3-47. What maintenance data report identifies the number of man-hours that were expended on the removal and installation of known components that have no malfunctions or defects?
1. MDR-13
 2. MDR-12
 3. MDR-11
 4. MDR-9
- 3-48. To what source should you refer for a description and list of available NALCOMIS reports?
1. OPNAVINST 5442.2
 2. OPNAVINST 4790.2
 3. NALCOMIS End User's Manual
 4. SESS User's Manual
- 3-49. To what NALCOMIS report should you refer for information about outstanding material requisitions?
1. Aircraft Material Status Report
 2. Inspections By Type Equipment Code
 3. Aircraft Phase Inspection Report
 4. Aircraft Daily Status Report

- 3-50. What MDS subsystem tracks full mission capable, partial mission capable, and not mission capable data for specific type and model aircraft?
1. SCIR
 2. NAVFLIRS
 3. MDR
 4. MR
- 3-51. What instruction provides guidelines for determining the first position of the three-digit EOC code?
1. NAVAIRINST 13700.15
 2. OPNAVINST 5442.4
 3. SECNAVINST 5216.5
 4. OPNAVINST 4790.2
- 3-52. Transaction code 00 should be used on the MAF to document what type of aircraft inventory transaction?
1. Change in MCRs
 2. Strike from naval service
 3. Receipt into inventory reporting by a reporting custodian
 4. Transfer to another reporting custodian
- 3-53. A change in MCRS for an aircraft should be reflected on which of the following documents?
1. MDR-12
 2. SAF
 3. E-00
 4. ADR

- 3-54. Which of the following is a procedure concerning the E-00?
1. The quality assurance work center should update the roster
 2. Aircraft or equipment that were lost during the previous period should be listed on the roster
 3. The roster should reflect the inventory of an activity as of 0001 on the first day of the month
 4. The roster should list only aircraft or SE inventory with transaction codes of 00, 01, 02, and 03
- 3-55. What report shows the total number of hours that an equipment was limited from performing its assigned mission?
1. MDR 4-1
 2. MR-2
 3. NAVFLIRS-1
 4. SCIR-3

- | |
|--|
| <ol style="list-style-type: none"> A. Repair of systems that are high man-hour consumers B. Known or anticipated maintenance requirements for an upcoming detachment C. Average man-hours per flight hour, flight or per departure D. Systems or components that have high failure rates |
|--|

Figure 3-G

IN ANSWERING QUESTION 3-56, REFER TO FIGURE 3-G.

- 3-56. What type or types of information should be included in a monthly maintenance summary?
1. B
 2. A only
 3. C only
 4. A, C, and D

- A. Provides scheduled control of the predictable maintenance workload
- B. Contains data about components that were high man-hour consumers
- C. Contains information about possible upcoming aircraft acceptances and transfers
- D. Contains information about upcoming scheduled inspections

Figure 3-H

IN ANSWERING QUESTION 3-57, REFER TO FIGURE 3-H.

- 3-57. The Monthly Maintenance Plan (MMP) possesses what characteristic or characteristics?
- 1. B
 - 2. A only
 - 3. C only
 - 4. A, C, and D
- 3-58. What document should you consult to find a current list of quality assurance representatives and collateral duty inspectors?
- 1. Monthly Maintenance Summary
 - 2. Monthly Maintenance Plan
 - 3. List of prospective losses to the command
 - 4. List of prospective gains to the command
- 3-59. In an OMA, what officer has the responsibility for preparation of the MMP?
- 1. Maintenance material control officer
 - 2. Maintenance officer
 - 3. Assistant maintenance officer
 - 4. Quality assurance officer

- A. Anticipated changes in the operational commitments of supported activities
- B. A projected schedule of items to be inducted for check and test
- C. List of aircraft scheduled for phase inspection
- D. A projected schedule of armament weapons support equipment inspections

Figure 3-1

IN ANSWERING QUESTION 3-60, REFER TO FIGURE 3-I.

- 3-60. What items should be included in the IMA MMP?
- 1. A only
 - 2. B only
 - 3. C only
 - 4. A, B, and D
- 3-61. What form is used by an OMA to request assistance from a supporting IMA for work that is beyond the capability of the OMA?
- 1. OPNAV Form 3710/4
 - 2. OPNAV Form 4790/16A
 - 3. OPNAV Form 4790/60
 - 4. OPNAV Form 4790036
- 3-62. What form is used by an IMA to request customer services from depot-level maintenance activity for work that is beyond the capability of the IMA?
- 1. OPNAV Form 3710/4
 - 2. OPNAV Form 4790/28
 - 3. OPNAV Form 4790/36A
 - 4. OPNAV Form 4790/60

3-63. What is the material condition of an aircraft that can complete ALL of its assigned missions with ALL equipment operational?

1. FMC
2. PMC
3. OPC
4. MC

3-64. What is the report submission deadline for the RECTYP 79 report?

1. 2400 on the tenth working day after the report date
2. 1500 on the third working day after the report date
3. 1200 on the first working day after the report date
4. 0800 on the third day after the report date

3-65. What report informs ACCs of activities with maintenance- or supply-related problems that affect an aviation activity's ability to complete its assigned mission?

1. Monthly Maintenance Summary
2. MMP
3. MDR-2
4. AMRR

- A. Upon installation of a new engine
 - B. Before and after engine maintenance that involves the lubricating system
 - C. Before and after a test cell run
 - D. Immediately after an accident

Figure 3-J

IN ANSWERING QUESTION 3-66, REFER TO FIGURE 3-J.

3-66. Oil sampling is a requirement for what situation or situations?

1. A only
2. A and B only
3. B and D only
4. A, B, C, and D

3-67. Whenever oil analysis is initiated or terminated or when the oil monitoring laboratory changes, an entry is required on what equipment logbook record?

1. Structural Life Limits
2. Equipment Operating Record
3. Miscellaneous/History
4. Inspection Record

- A. An aircraft has not flown in 1 week
 - B. SDLM
 - C. An engine or propeller has been installed in an aircraft
 - D. An aircraft has not flown in 30 days and is returned to flight status

Figure 3-K

IN ANSWERING QUESTION 3-68, REFER TO FIGURE 3-K.

3-68. A functional check flight is required after what situation or situations occur?

1. A
2. B only
3. B and C only
4. B, C, and D

3-69. What form is signed by a designated representative to certify that an aircraft is safe for flight?

1. NAVFLIR
2. Aircraft Inspection and Acceptance Record
3. MAF
4. Inspection Record

3-70. What form is used to record acceptance, transfer, custody, rework, TD compliance, or preservation and depreservation actions of SE?

1. OPNAV 4790/36
2. OPNAV 4790/51
3. OPNAV 4790/128
4. OPNAV 4790/136

3-71. Upon transfer of an aircraft, what disposition should you make of the aircraft's inspection files and the electronic history data tape files?

1. Retain for 6 months
2. Retain for 1 complete phase cycle
3. Forward with the aircraft
4. Forward to the National Records Center

ASSIGNMENT 4

Textbook Assignment: “Maintenance Control and Production Control” and “Maintenance Data System (MDS).” Pages 4-1 through 5-45.

THIS ASSIGNMENT IS A REVIEW OF CHAPTERS 4 AND 5 OF THE TEXTBOOK. IN ANSWERING THE QUESTIONS, REFER TO THE SITUATION DESCRIBED IN THE FIGURES IN THIS ASSIGNMENT, THE APPROPRIATE CHAPTER IN THE TEXTBOOK, AND TO REFERENCES DISCUSSED IN THE TEXTBOOK. QUESTIONS DO NOT FOLLOW TEXTBOOK ORDER.

You are attached to Sea Control Squadron 103 (VS-103) that is stationed at NAS East Coast. Your squadron flies the S-3 Viking and consists of 10 aircraft. You are assigned to maintenance control. Your duties include, but are not limited to: initiating maintenance action forms (MAFs); maintaining general aircraft files and aircraft discrepancy books (ADBs); providing input and preparation of the monthly maintenance plan, monthly maintenance summary (3M), aircraft summary data report (RECTYP 79 message), and the aircraft material readiness report; maintaining support equipment records; and researching and extracting data from maintenance, material, and flight data reports.

Figure 4-A

IN ANSWERING QUESTIONS IN THIS ASSIGNMENT, REFER TO THE INFORMATION IN FIGURE 4-A, INFORMATION IN THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

Aircraft 160145 just returned from flight and has a blown mainmount. It will also need a hard landing inspection. Airframes will go in work on the discrepancies at 1300.

Figure 4-B

IN ANSWERING QUESTIONS 4-1 THROUGH 4-13, REFER TO THE INFORMATION IN FIGURE 4-B, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

- 4-1. What work center should assign the work center and the priority to perform the required maintenance on aircraft 160145?
 1. Quality Assurance
 2. Airframes
 3. Maintenance Control
 4. Material Control

- 4-2. When operating NALCOMIS OMA to initiate a MAF, what specific menu should you go to, to select the type of MAF to initiate?
 1. Main menu
 2. Initiate maintenance action menu
 3. Maintenance menu
 4. Update MAF menu

- 4-3. Maintenance control approves the MAF, assigns a JCN, and prints two copies of the MAF. What is the disposition of the two copies?
 1. One copy is routed to QA, the second copy is sent to Airframes
 2. One copy is routed to the maintenance technician, the second copy is sent to the maintenance chief
 3. One copy is routed to Airframes, the second copy is placed on the right side of the ADB
 4. One copy is placed on the left side of the ADB, the second copy is routed to Airframes

- 4-4. When Airframes goes IN WORK on the mainmount discrepancy, which of the following actions should Airframes take with regard to the MAF?
1. Update the MAF to an IN WORK status
 2. Assign an MCN to the MAF
 3. Update the MAF to an awaiting maintenance status
 4. Assign a JCN to the MAF
- 4-5. Maintenance that is required to complete the mainmount discrepancy cannot be completed due to an awaiting parts situation. How should Airframes update the MAF's awaiting parts status?
1. By annotating the MAF copy in the ADB
 2. By annotating AWP across the top of the work center copy of the MAF
 3. By inputting electronically through the work center's video display terminal work station
 4. By making necessary changes on the monthly production report
- 4-6. Airframes has completed work on the mainmount discrepancy. NALCOMIS will post the maintenance technician's CORRECTED BY signature and rate information only when what information has been entered into the system?
1. Technician's authorized log in and password
 2. Technician's social security number
 3. System's administrator's authorization
 4. Airframes' log in and the technician's log in
- 4-7. Maintenance control must now clear the discrepancy. Maintenance control can retrieve the MAF from the NALCOMIS database by using either of what two codes?
1. WUC or JCN
 2. MCN or TEC
 3. DCN or WUC
 4. MCN or JCN
- 4-8. After maintenance control approves the completed MAF, two copies are printed. One copy is placed on the left side of the ADB. For what period should this copy remain in the ADB?
1. 6 months or one complete phase cycle, whichever is greater
 2. 6 months from block B30, the completion date
 3. 10 subsequent flights
 4. 10 consecutive discrepancies
- 4-9. After maintenance control clears the MAF, the maintenance analyst screens the MAF and finds two errors. What action should the analyst take?
1. Reject the MAF back to Airframes
 2. Correct the MAF on immediately
 3. Delete the MAF from the NALCOMIS database
 4. Submit the erroneous MAF as is and make correction on the daily audit report
- 4-10. What type of inspection is the hard landing inspection?
1. Special
 2. Conditional
 3. Circumstantial
 4. ASPA

4-11. Upon completion of the hard landing inspection, what record-keeping action is required to document the completion?

1. An aircraft logbook entry
2. An administrative message to the cognizant wing
3. An aircraft material readiness report
4. A RECTYP 79 report

4-12. After the hard landing inspection MAF is completed, a signature is posted to the MAF's ENTRIES REQUIRED SIGNATURE section. What does the signature in this section indicate?

1. Logs and records personnel have processed the MAF to data services
2. No further logbook entries are required or all applicable entries have been made
3. All tools and materials required to complete the job are accounted for
4. The MAF is correct in its entirety

4-13. The ENTRIES REQUIRED SIGNATURE for a NALCOMIS MAF is computer generated.

1. True
2. False

You have been informed that aircraft 160145 is due for a 14-day inspection. However, due to operational commitments, the inspection will not be performed as scheduled and the authorized deviation will be applied. Another aircraft, aircraft 164864, is due a 100-hour inspection. Due to the same operational commitments, the 100-hour inspection will be performed early at 85 hours.

IN ANSWERING QUESTIONS 4-14 THROUGH 4-21, REFER TO THE INFORMATION IN FIGURE 4-C, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

4-14. What type of inspection is the 14-day inspection?

1. Conditional
2. Daily
3. Special
4. Circumstantial

4-15. What is the authorized deviation for the 14-day inspection due on aircraft 160145?

1. Plus or minus 14 days
2. Plus or minus 10 days
3. Plus or minus 7 days
4. Plus or minus 3 days

4-16. On what document should accomplishment of the 14-day inspection be documented?

1. Aircraft Inspection and Acceptance Record
2. Monthly Maintenance Plan
3. Maintenance Action Form
4. Monthly Maintenance Summary

4-17. Upon initiation of the 14-day inspection document, it is placed inside the ADB. How long should it remain there?

1. For 10 subsequent flights
2. Plus or minus 3 days
3. Until completion of the inspection
4. 6 months from the block B30 completion date

Figure 4-C

- 4-18. After completion of the 14-day inspection, what block on the MAF indicates that the applicable MAF has been screened for aircraft logbook entries?
1. Corrected by
 2. Inspected by
 3. Entries required signature
 4. Maintenance control
- 4-19. Which of the following actions should be taken for the missed inspection on aircraft 160145 after the authorized deviation has been applied and has expired?
1. The aircraft should be restricted from further use until completion of the inspection
 2. Completion of the inspection should be delayed until the next 28-day inspection is due
 3. A naval message should be submitted to the cognizant wing to request further instructions
 4. Completion of the inspection should be delayed until the next 14-day inspection is due
- 4-20. The next 100-hour inspection due on aircraft 168864 is based on what information?
1. The date that the inspection was completed
 2. The hour that the inspection was begun
 3. The day that a JCN was assigned to the MAF
 4. The hour that SCIR data was recorded
- 4-21. On what aircraft logbook record should an entry be made that indicates the reason for the deviation and the next 100-hour inspection due date for aircraft 168864?
1. Inspection Record (Periodical)
 2. Miscellaneous/History
 3. Inspection Record (Conditional)
 4. Aircraft Inspection and Acceptance Record

Today is 3 April and your squadron just received an aircraft from NAS West Coast. The aircraft is in a fully operational status.

Figure 4-D

IN ANSWERING QUESTIONS 4-22 THROUGH 4-31, REFER TO THE INFORMATION IN FIGURE 4-D, INFORMATION IN THE TEXT, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

- 4-22. Which of the following inspections or evaluations should be performed on the new aircraft?
1. Circumstantial
 2. Special
 3. Acceptance
 4. ASPA
- 4-23. During the aircraft logbook screening process, you find the “Removal/Replacement” block blank on one of the SRC cards. What publication should you consult to find the correct removal and replacement schedule?
1. Work Unit Code manual
 2. Periodic maintenance information cards
 3. Maintenance requirements cards
 4. NAMP
- A. Verification of the Monthly Flight Summary and Equipment Operating Records
- B. An inventory of equipment listed on the aircraft inventory records
- C. Functional check flight
- D. Engine test cell run

Figure 4-E

IN ANSWERING QUESTION 4-24, REFER TO FIGURE 4-D AND 4-E.

4-24. The inspection on the new aircraft includes what actions?

1. A and B only
2. C and D only
3. A, B, and C only
4. A, B, C, and D

4-25. Acceptance of the new aircraft should be documented on a MAF. What type MAF code should be used when your maintenance activity is operating under NALCOMIS OMA?

1. AA
2. AC
3. AI
4. AN

4-26. What inventory code should be used on the MAF to identify that the aircraft is fully operational?

1. A
2. 1
3. 2
4. 3

4-27. At 1430, work began on the inspection. What job status code should be assigned to the MAF?

1. IW
2. JC
3. WP
4. AM

4-28. Another MAF is needed to reflect a GAIN of the new aircraft. What transaction code should be assigned to the GAIN MAF?

1. 03
2. 02
3. 01
4. 00

4-29. What document should be updated to reflect the squadron's inventory and the new aircraft GAIN?

1. RECTYP 79 report
2. Monthly maintenance summary
3. Equipment Master Roster (E-00)
4. Monthly Aircraft Utilization report

4-30. The E-00 must also be updated. What work center should do the update?

1. Quality Assurance
2. Maintenance Control
3. Material Control
4. Maintenance Administration

4-31. Your squadron is scheduled to gain two additional aircraft this month. Which of the following documents is a likely source to find exactly when this aircraft will be received?

1. I-level MMP
2. O-level MMP
3. I-level Monthly Maintenance summary
4. O-level Monthly Maintenance summary

The maintenance officer (MO) has directed you to research information that is needed to complete a report that she is presently at work on.

Figure 4-F

IN ANSWERING QUESTIONS 4-32 THROUGH 4-36, REFER TO THE INFORMATION IN FIGURE 4-F, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

4-32. The MO needs a listing of what technical directives have been incorporated in aircraft 164643 and 158864 during the last reporting period. What MDR should you consult?

1. MDR-2
2. MDR-3
3. MDR4-1
4. MDR-5

4-33. The MO also needs to know how many heat exchanger systems failed and the number of man-hours expended in heat exchanger repair during the previous 3 months. What report should you consult?

1. MDR-6
2. MDR-7
3. MDR-9
4. MDR-12

4-34. Included in your report of heat exchanger repair should be a list of items that were removed and reinstalled with no known defects. What report should you use to find this information?

1. MDR-13
2. MDR-12
3. MDR-11
4. MDR-10

4-35. What MDR report should you consult to find how many flights were aborted (cancelled) due to mechanical failure?

1. MDR-13
2. MDR-12
3. MDR-6
4. MDR-5

4-36. Finally, the maintenance officer needs to know the status of all material requisitions outstanding against aircraft 168864. What report should you consult?

1. Aircraft Daily Status report
2. Aircraft/Equipment Workload report
3. Aircraft Material Readiness Report
4. Aircraft Material Status report

The maintenance chief has tasked you to initiate paperwork for the local manufacture of two hydraulic lines. Manufacture of these hydraulic lines is beyond the capability of your squadron.

Figure 4-G

IN ANSWERING QUESTIONS 4-37 THROUGH 4-40, REFER TO THE INFORMATION IN FIGURE 4-G, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

4-37. From what activity should you request assistance for the manufacture of the hydraulic lines?

1. SDLM
2. ACC
3. Supporting IMA
4. Supporting Wing

4-38. Manufacture of the hydraulic lines should be request on what form?

1. Request chit
2. MAF
3. Work Request customer Service
4. SDLM Work Request

4-39. What type MAF code should be used?

1. W R
2. M A
3. A M
4. A C

- 4-40. Upon initiation, the form for the local manufacture is delivered to the supporting activity. Who must approve and sign the form?
1. The MO
 2. The maintenance control supervisor only
 3. The production control supervisor only
 4. The maintenance control and production control supervisors

The Systems Administrator/Analyst has requested your assistance in preparing this month's maintenance summary.

Figure 4-H

IN ANSWERING QUESTIONS 4-41 THROUGH 4-45, REFER TO THE INFORMATION IN FIGURE 4-H, INFORMATION IN THE TEXTBOOK, AND INFORMATION IN REFERENCES DISCUSSED IN THE TEXTBOOK.

- A. High failure rate items
- B. Man-hours that were expended in the repair of components with no known defect
- C. Malfunction of components that caused flight cancellations
- D. Items that have scheduled removal/replacement schedules and are to be removed during the month

Figure 4-I

IN ANSWERING QUESTION 4-41, REFER TO FIGURE 4-I.

- 4-41. What items should be included in the monthly maintenance summary?
1. A and B only
 2. B and C only
 3. A, B, and C only
 4. A, B, C, and D

- 4-42. What report should you use to find the total number of days a component was in the repair cycle (turnaround time)?
1. MDR-3
 2. MDR-9
 3. SCIR 5-2
 4. SCIR 5-3

- 4-43. Which of the following malfunction codes, found in MDR-11, identifies a corrosion treatment action?

1. 040
2. 170
3. 799
4. 814

- 4-44. The number of man-hours that were expended by maintenance control personnel in general record keeping is documented on the MDR-2, MDR-7, and MDR-12.

1. True
2. False

- 4-45. One page in the maintenance summary should report subsystem performance and mission capability. What reporting subsystem should you use to find this data?

1. SCIR
2. MR
3. MDR
4. NAVFLIR

Your squadron is currently deployed but is now in port. You have been asked to assist in preparation of the Aircraft Material Readiness Report and the Monthly Aircraft Summary Data report.

Figure 4-J

IN ANSWERING QUESTIONS 4-46 THROUGH 4-55, REFER TO THE INFORMATION IN FIGURE 4-J, INFORMATION IN THE TEXTBOOK, AND INFORMATION REFERENCES DISCUSSED IN THE TEXTBOOK.

4-46. What is the purpose of the Monthly Report of Aircraft Summary Data?

1. To provide a summarization of statistical data about an aircraft's capability to perform assigned missions
2. To notify the ACC of the squadron of potential maintenance- and supply-related problems
3. To identify critical shortages of experienced maintenance technicians
4. To keep the ACC of the squadron aware of the physical location of all aircraft

4-47. Equipment In Service (EIS), Equipment Out of Service (EOS), and Not Mission Capable, Partial Mission Capable, and Full Mission Capable data should be included in the Monthly Report of Aircraft Summary Data. Which of the following documents contain procedures for enumerating these elements?

1. OPNAVINST 4790.2
2. NAVAIR 00-25-300
3. OPNAVINST 5442.2
4. NAVAIRINST 13700.15

4-48. A message can be used to submit the Monthly Report of Aircraft Summary Data. What is the other authorized method to transmit this data?

1. By facsimile (FAX)
2. Naval letter
3. SALTS
4. DEERS

4-49. The Monthly Report of Aircraft Summary Data should arrive at the ACC not later than 2400 on the 10th day of the month after the report date. This deadline applies to what methods of data transmission?

1. FAX and naval letter
2. Naval letter and naval message
3. Naval message and SALTS
4. SALTS and DEERS

QUESTIONS 4-50 THROUGH 4-55 REFER TO THE AMRR THAT IS PREPARED FOR COMMANDERS WHO SUPPORT YOUR AIRWING.

4-50. The AMRR that includes data for your squadron should be submitted how often?

1. Daily
2. Weekly
3. Monthly
4. Semiannually

- | |
|--|
| <ol style="list-style-type: none">A. Next port visit, if in portB. Next and last carrier onboard delivery (COD)C. Significant maintenance- and supply-related problems impacting readinessD. Number of aircraft due phase inspections |
|--|

Figure 4-K

IN ANSWERING QUESTION 4-51, REFER TO FIGURE 4-K.

4-51. What types of data should you include in the AMRR?

1. A and B only
2. B and C only
3. A, B, and C only
4. A, B, C, and D

- 4-52. Repair of five aircraft listed on the AMRR can not be completed due to maintenance requirements. All five aircraft can perform at least one, but not all, of their assigned missions. What material readiness condition describes these aircraft?
1. OPCM
 2. FMCM
 3. PMCM
 4. NMCM
- 4-53. Maintenance on three aircraft listed can not be completed due to a lack of parts and materials. Neither of the three aircraft can perform any of its assigned missions. What material readiness condition describes these aircraft?
1. NMCS
 2. NMCM
 3. OPCM
 4. OPCS
- 4-54. Some aircraft can perform all of the missions that they were assigned with all equipment working. What aircraft material readiness condition describes these aircraft?
1. OPC
 2. FMC
 3. NMC
 4. PMC
- 4-55. Which of the following shipboard divisions or departments shares responsibility for the preparation of the AMRR?
1. Engineering
 2. AIMD
 3. Deck
 4. Air
- 4-56. For what minimum period of time should the FCF checklist be retained?
1. 6 months from the data in block B30 of the MAF completion date
 2. One complete special inspection cycle
 3. One complete phase inspection cycle or 6 months, which ever is longer
 4. 3 months from completion date
- 4-57. Upon an aircraft's transfer, what should be the disposition of the ADB?
1. Retained by the transferring activity for 6 months
 2. Forwarded to the National Records Center
 3. Accompany the aircraft
 4. Disposed of locally
- 4-58. What document is used to record technical directive compliance for the rework of SE or custody of SE?
1. OPNAV 4790/51
 2. OPNAV 4790/52
 3. OPNAV 4790/60
 4. OPNAV 4790/66
- 4-59. What form should be used to document preoperational inspections that are performed on SE?
1. OPNAV 4790/138
 2. OPNAV 4790/66
 3. OPNAV 4790/60
 4. OPNAV 4790/52
- 4-60. Which of the following computer-based automated systems is designed to track inventory, inspection scheduling, technical directive accounting, and subcustody management of SE?
1. SESS
 2. ECAMS
 3. ECOMTRAK
 4. COMPUSEC

QUESTIONS 4-56 THROUGH 4-61 REFER TO GENERAL OPERATING PROCEDURES FOR MAINTENANCE CONTROL AND PRODUCTION CONTROL.

4-61. The current and two previous months is the required retention period for which of the following files or reports?

1. NALCOMIS data files
2. MDR reports
3. MMPs
4. Completed copy 1's of MAFs

- | |
|--|
| <ol style="list-style-type: none">A. NALCOMIS data filesB. Aircrewman's flight equipment fileC. General aircraft filesD. Technical directive compliance files |
|--|

Figure 4-L

IN ANSWERING QUESTION 4-62, REFER TO FIGURE 4-L.

4-62. Upon transfer of an aircraft, what files should be included in the transfer package?

1. A and B only
2. B and C only
3. A and D only
4. A, C, and D

ASSIGNMENT 5

Textbook Assignment: “Aircraft Logbooks” and “Aircraft Inventory Reporting System (AIRS).” Pages 6-1 through 7-23.

- 5-1. A purpose of the aircraft logbook is to record which of the following maintenance actions performed on aircraft?
1. Oil changes and aircraft washes
 2. Corrosion inspections and minor corrosion treatments
 3. Tire and wheel changes
 4. Modifications and major repairs
- 5-2. If your squadron receives an aircraft logbook with questionable entries, what course of action should your activity take?
1. Refuse to accept the logbook
 2. Research the discrepancies and, after receipt of correspondence from the transferring activity specifying the course of action, make the appropriate corrections
 3. Correct the entries by using data from a similar aircraft logbook
 4. Defer action for standard depot-level maintenance (SDLM) action
- 5-3. What manufacturer or representative is responsible for initiating an aircraft logbook when the aircraft is accepted at a contractor's plant?
1. The manufacturer of the airframe
 2. The manufacturer of all the components of the aircraft
 3. Either the manufacturer of the airframe or the manufacturer of all the components, depending on where the aircraft was assembled
 4. The naval plant representative at the contractor's plant
- 5-4. Aircraft logbooks are kept in the maintenance control office. At the organizational-level, what officer is responsible for maintaining aircraft logs and records?
1. The quality assurance officer (QAO)
 2. The assistant maintenance officer (AMO)
 3. The maintenance material control officer (MMCO)
 4. The production control officer (PCO)
- 5-5. An aircraft is transferred to another reporting custodian. What should be the disposition of the aircraft logs and record?
1. The logs and records should accompany the aircraft
 2. The logs and records should be forwarded to the National Records Center
 3. The logs and records should be maintained on file for 1 year, and then forwarded to the National Records Center
 4. The logs and records should be forwarded to the central repository at the Commander Naval Air Systems Command (COMNAVAIRSYSCOM)
- 5-6. When a ferry pilot is involved in an aircraft transfer, which of the following actions is the ferry pilot's responsibility?
1. Inventorying the aircraft
 2. Providing ferry flight time to the accepting activity
 3. Closing out the logbook
 4. Performing a phase inspection on the aircraft before delivery

- 5-7. Which of the following administrative records are transferred with an aircraft?
1. Weight and balance records only
 2. Aircraft discrepancy book (ADB) only
 3. Aircraft inspection and general files only
 4. Weight and balance records, aircraft discrepancy book (ADB), and aircraft inspection and general files
- 5-8. Upon sale or transfer of aircraft, what is the disposition of classified information in the logbook?
1. The information is forwarded to the National Records Center
 2. The information is transferred with the aircraft
 3. The information is removed from the records or cleared for release through the appropriate channels before transfer
 4. Logs and records with the information are retained for 1 year, and then disposed of locally
- 5-9. Which of the following sources should be used to reconstruct aircraft logbooks that are lost or destroyed?
1. Aircraft general files only
 2. OPNAV XRAY files and engine transaction reports (ETRs) only
 3. Records from the aircraft manufacturer only
 4. Aircraft general files, OPNAV XRAY files, and engine transaction report (ETR) files, and records from the aircraft manufacturer
- 5-10. A squadron's aircraft maintenance officer may designate certain personnel authorization to sign aircraft logbooks. Which of the following is a policy concerning this designation?
1. The designation must be approved by the commanding officer
 2. The person designated should be a commissioned officer
 3. The designation must be in writing with final approval resting with the commanding officer
 4. The designation is in writing by the maintenance material control officer (MMCO)
- 5-11. What is the purpose of the manila envelope pasted inside the back binder cover of the aircraft logbook?
1. To store all ASR, EHR, and MSR items applicable to the aircraft
 2. To store a list of authorized weight and balance personnel
 3. To hold data that should be included in the aircraft's history, but for which there is no designated space in the logbook
 4. To hold copies of the most recently completed naval aircraft flight records
- 5-12. What is the purpose of the Structural Life Limits record?
1. To maintain a current record of structural life-limited components designated for depot-level replacement
 2. To maintain a record of structural stress limits on the airframe that would require special rework
 3. To provide a history of structural damage to the aircraft
 4. To provide a list of items replaced due to structural damage

- 5-13. Part I of the Monthly Flight Summary form should only be completed by what persons or activities?
1. Squadrons
 2. Appropriate fleet support activities
 3. Squadrons' logs and records clerks
 4. MOs of squadrons
- 5-14. On what record in the aircraft logbook can the current service period that the aircraft is in be found?
1. Inspection Record
 2. Repair/Rework record
 3. Monthly Flight Summary record
 4. Miscellaneous/History record
- 5-15. Which of the following is an acceptable method for making entries on the Monthly Flight Summary record?
1. Temporary entries should be made in pencil or typewritten
 2. Temporary entries may be made with a felt-tipped pen or a grease pencil
 3. Permanent entries may be made in ink or typewritten
 4. Permanent entries may be made with a felt-tipped pen or typewritten
- 5-16. On what aircraft logbook record, if any, should engine washes, postflight and preflight inspections, and oil sampling be logged?
1. The Periodic Inspection Record
 2. The Conditional Inspection Record
 3. The Calendar Inspection Record
 4. None
- 5-17. A squadron aircraft is converted from a "B" model to a "C" model. On which of the following records should this conversion be recorded?
1. Inspection Record
 2. Inventory Record
 3. Assembly Service Record
 4. Repair/Rework Record
- 5-18. Technical Directive Status Accounting (TDSA) List 02 is a record of technical directives (TDs) applicable to an specific aircraft and is reported in what status?
1. Not in stock
 2. Not applicable
 3. Not incorporated
 4. Not installed
- 5-19. Which of the following types of TDs make up TDSA Lists 02 and 04?
1. Airframe changes only
 2. Airframe bulletins only
 3. Airframe changes and airframe bulletins
 4. Airframe notices and airframe bulletins
- 5-20. When TDSA List 02 is annotated, what Status code should be entered next to the SER column to indicate the TD has been completely incorporated?
1. C
 2. K
 3. R
 4. U
- 5-21. When a TD is removed, an entry is required on which of the following records?
1. Repair/Rework Record
 2. Miscellaneous/History Record
 3. Inspection Record
 4. Inventory Record

- 5-22. What publication contains detailed information on the TDSA system?
1. NAVAIR 00-25-100
 2. NAVAIR 00-25DRT-1
 3. NAVAIR 00-25-300
 4. NAVAIR 00-25-500
- 5-23. Which of the following records requires a signature with each entry?
1. Miscellaneous/History Record
 2. Equipment History Record
 3. Installed Explosive Device Record
 4. Inventory Record
- 5-24. When an aircraft is accepted or transferred, a specific statement is entered on the Miscellaneous/ History record stating that which of the following situations exist?
1. Flight hours and operating hours have been verified
 2. All integral parts of the aircraft are accounted for
 3. Maximum flight hour and operating hour limitations have not been exceeded
 4. All outstanding inspections have been completed
- 5-25. What automated database management system is used to process, store, and retrieve information on cartridge-actuated devices (CADS) and aircrew escape propulsion systems (AEPS)?
1. SEATS/ICAPS
 2. ECAMS
 3. CTLP
 4. AIRS
- 5-26. Which of the following forms found in aircraft logbook are generated through the SEATS/ICAP program?
1. Structural life Limits
 2. Technical Directive Lists 02 and 04
 3. Miscellaneous/History
 4. Installed Explosive Device Record
- 5-27. An entry in the aircraft logbook Inventory Record is required for which of the following actions?
1. An aircraft engine reinstallation
 2. A propeller installation
 3. An EHR card component installation on the airframe
 4. An auxiliary power unit (APU) removal
- 5-28. Equipment requiring ASR, EHR, MSR, and SRC cards are listed on the Inventory Record and should be inventoried during which of the following inspections?
1. Daily inspections
 2. Conditional inspections
 3. Phase inspections
 4. Preoperational inspections
- 5-29. Replacement intervals for Assembly Service Record (ASR) items can be found in the latest edition of what applicable publication?
1. Maintenance Requirements Cards (MRCs)
 2. Periodic Maintenance Information Cards (PMICs)
 3. Maintenance Instruction Manuals (MIMs)
 4. Illustrated Parts Breakdowns (IPBs)

- 5-30. Which of the following is a procedure for maintaining Equipment History Record (EHR) cards?
1. A new EHR card is initiated and the old card destroyed when a card has no space remaining for further entries
 2. EHR cards and SRC cards should always be tracked together
 3. When a new EHR card is initiated, forward a copy of the new card to the maintenance engineering cognizant field activity (MECFA)
 4. Upon an aircraft's transfer, EHR cards are removed from the logbook and forwarded to the central repository
- 5-31. When an SRC card component is removed from the aircraft, what should be the disposition of the SRC card?
1. The card should be forwarded to the central repository at NADEP
 2. The card should accompany the component
 3. The card should be forwarded to the National Records Center
 4. The card should be filed, and a new card initiated
- 5-32. If an SRC card is lost or destroyed, from what source should you get the necessary data to initiate a new card?
1. NAVAIR
 2. NAVFAC
 3. NADEP
 4. ATCM at COMNAVAIRSYSCOM
- 5-33. What automated database management system provides users with a accurate means to process, store, and retrieve information on Aviation Life Support Systems (ALSS)?
1. AIRS
 2. ECAMS
 3. CTPL
 4. SEATS
- 5-34. What is the disposition of the hardback copy of the Parachute Record when the parachute is installed in an aircraft?
1. The record is maintained under the seat of the aircraft in which it is installed
 2. The record is maintained in the manila envelope in the inside cover of the logbook binder
 3. The record is maintained in the aircraft logbook
 4. The record is attached to and accompanies the parachute
- 5-35. When components of the Seat Survival Kit are removed for inspection at the local intermediate maintenance activity (IMA), what copy or copies of the Seat Survival Kit Records should accompany the equipment?
1. The hardback copy only
 2. The original copy only
 3. The original or hardback copy, depending on whether the equipment is being repaired or inspected
 4. The original and hardback copy

- 5-36. When you replace an old Aircrew Systems Record with a new record, which of the following actions should you take with regard to the old record?
1. Transcribe applicable data from the old record to the new record
 2. Place the old record in the manila envelope in the back of the logbook
 3. Staple the old record to the new record
 4. Retain the old record in the aircraft files of 6 months
- 5-37. The copy of the maintenance action form (MAF) that is placed under the Aircrew Personal Equipment Record is retained for at least how long after the MAF is processed?
1. 12 months
 2. 6 months
 3. 3 months
 4. 1 month
- 5-38. What form or record is used to maintain a continuous chain of accountability of specific equipment designated for use on an aircraft?
1. Equipment Master List
 2. Equipment Master Roster
 3. Aircraft Inventory Record
 4. Aircraft Equipment Record
- 5-39. Of the following items, which ones should be included on the Aircraft Inventory Record?
1. Life rafts only
 2. Life rafts and portable fire extinguishers only
 3. Portable fire extinguishers and first aid kits only
 4. Life rafts, portable fire extinguishers, and first aid kits
- 5-40. When a ferry pilot who is not attached to either the transferring or accepting activity is involved in an aircraft transfer, the ferry pilot is specifically responsible for what inventory items?
1. Loose items for which no storage is available
 2. Pilferable items and classified items
 3. Rigidly fixed items
 4. Items that are an integral part of the aircraft
- 5-41. An aircraft is scheduled to be transferred from one squadron to another for operational service. The transferring activity discovers missing inventory items they can neither locate nor supply. Which of the following actions should be taken by the transferring activity with regard to the missing items?
1. Transfer the aircraft without any special notation on the aircraft inventory records about the items
 2. Obtain authorization from the cognizant controlling custodian to transfer the aircraft without the items
 3. Make the necessary entries for the items on the aircraft logbook Inventory Record and transfer the aircraft
 4. Notify the receiving squadron about the items and transfer the aircraft
- 5-42. Which of the following situations requires that an aircraft be weighed?
1. A phase inspection is completed
 2. The recorded weight and balance is suspected of being in error
 3. The weight and balance clerk (AZ) is transferred to another squadron
 4. The weight and balance officer is transferred to another activity

- 5-43. The Aircraft Inventory Reporting System (AIRS) provides instructions for reporting which of the following items of information concerning naval aircraft?
1. Tire and wheel changes
 2. Hydraulic contamination tests
 3. Readiness, use, and logistics
 4. Special inspections
- 5-44. Your squadron receives an aircraft from another operating squadron. What means should be used to report the receipt of this aircraft?
1. Engine Transaction Report (ETR)
 2. Aircraft Discrepancy Report
 3. Aircraft Accounting Audit Report
 4. OPNAV XRAY report
- 5-45. In addition to items A through E, what items of information are required on all OPNAV XRAYs except Part I, change of location XRAYs?
1. V only
 2. Remarks only
 3. F and Remarks only
 4. F, V, and Remark
- 5-46. What "INFO" addressee is mandatory on all OPNAV XRAY reports?
1. NATEC
 2. NADEP
 3. NAVAVNDEPOT
 4. COMNAVAIRSYSCOM
- 5-47. The subject line of OPNAV XRAY reports consists of five items of information. What two items remain the same for all OPNAV XRAY reports submitted?
1. Controlling custodian and serial number
 2. The word "XRAY" and the report symbol "5442-1"
 3. The controlling custodian and the report symbol "5442-1"
 4. The controlling custodian and reporting custodian
- 5-48. Which of the following is a policy concerning the assignment of aircraft bureau numbers (BUNOs)?
1. NAVAIR may assign the same BUNO to more than one airframe
 2. A BUNO must consist of six digits with a hyphen after the first number
 3. CNO assigns a BUNO
 4. The activity that physically accepts the aircraft assigns the BUNO
- 5-49. What date should be reported in item C of the OPNAV XRAY Report?
1. The date the action occurred
 2. The date the report was drafted
 3. The date the report was submitted
 4. The date the report was released
- 5-50. What OPNAV XRAY Action code indicates receipt of an aircraft at the start of an operating period?
1. A
 2. F
 3. G
 4. R

- 5-51. What OPNAV XRAY Action code indicates an aircraft undergoing conversion for a model designation change?
1. A
 2. G
 3. R
 4. M
- 5-52. What OPNAV XRAY Action code is used to report aircraft change of location?
1. A
 2. F
 3. G
 4. L
- 5-53. What OPNAV XRAY Status code should be used to describe an operating combat aircraft undergoing repair by a depot facility at the squadron site?
1. G40
 2. G30
 3. A10
 4. A12
- 5-54. What OPNAV XRAY Status code should be used to describe an aircraft undergoing conversion (special rework) at a depot facility?
1. G41
 2. G40
 3. G30
 4. G10
- 5-55. What OPNAV XRAY Status code should be used to describe an aircraft en route to special rework by surface transport for modernization?
1. FBO
 2. FCO
 3. IDO
 4. ICO
- 5-56. What OPNAV XRAY Status code should be used to describe an aircraft stricken due to depreciation?
1. 1SO
 2. 2SO
 3. 3SO
 4. 4SO
- 5-57. An aircraft with an operating period of 24 months is received into an operating command in July 1997. What should be the predicted period end date (PED) of this aircraft?
1. June 1999
 2. July 1999
 3. June 2000
 4. July 2000
- 5-58. An aircraft incurs substantial damage by bird strike during a unit training mission. A depot maintenance activity will repair the aircraft. What Strike and Damage code should be used on the OPNAV XRAY to report this action?
1. 5A1C
 2. 51AC
 3. 5AAC
 4. 54AC
- 5-59. A squadron aircraft is damaged by a tow tractor while the aircraft is being towed. The squadron will perform the necessary repair actions to return the aircraft to service. What Strike and Damage code should be used on the OPNAV XRAY to report this action?
1. 51KA
 2. 51RI
 3. 54RA
 4. 54KA

- 5-60. Under which of the following conditions should item O be included on an OPNAV XRAY Report?
1. An aircraft is being transferred from one activity to another
 2. A previously submitted OPNAV XRAY Report is being corrected or deleted
 3. An inservice OPNAV XRAY Report is being identified
 4. Damage is being reported
- 5-61. Which of the following is an OPNAV XRAY Report correction procedure?
1. The first action on the report is reported exactly as the previously submitted incorrect report, with exception of the word "CORRECT" in item Z
 2. The second action on the report correctly reports the action with the word "DELETE" in item Z
 3. Reports with errors in the action or info addressees require no correction
 4. Reports with error in the Subject line or Remarks section are corrected by submitting a message referencing the original XRAY report date-time group (DTG), serial number, and corrective action
- 5-62. What card provides a local history of naval aircraft to reporting custodians?
1. The Aircraft Inventory Record card
 2. The Aircraft Record "A" card
 3. The Aircraft Engine Record card
 4. The Scheduled Removal Component card
- 5-63. What should be the disposition of the Aircraft Record "A" card after an aircraft is transferred?
1. After the data is recorded and transcribed to the appropriate reporting forms, the card should be destroyed locally
 2. After the data is recorded and transcribed to a new form, the card should be forwarded to the central repository
 3. The card should be maintained on file by the transferring activity for 12 months, and then disposed of locally
 4. The card should be kept on file for a period of 6 months, and then sent to the new custodian of the aircraft
- 5-64. Refer to figures 7-4 and 7-5 in your text. What data is recorded on the Aircraft Record "A" card?
1. The types and monthly totals of the aircraft's landings
 2. The total mission requirements codes for each flight of the aircraft
 3. Discrepancies that caused the aircraft to be grounded for a period of 24 hours or more
 4. Non-aging time
- 5-65. When initiating an Aircraft Record "A" card, on what record should you find the current aircraft service period of the aircraft?
1. The Monthly Flight Summary
 2. The Miscellaneous/History Record
 3. The Equipment Operating Record
 4. The Preservation/Depreservation Record

5-66. Aircraft Accounting Audit Reports provide update of the CNO data banks for aircraft management. At what intervals should these reports be submitted?

1. Monthly
2. Quarterly
3. Annually
4. Semiannually

ASSIGNMENT 6

Textbook Assignment: “Aeronautical Equipment Service Record (AESR)” and “Aircraft Engine Management System (AEMS).” Pages 8-1 through 9-12; and “Aircraft Logbooks” and “Aircraft Inventory Reporting Program (AIRS).” Pages 6-1 through 7-33.

- 6-1. The Aeronautical Equipment Service Record (AESR) is a loose-leaf log contained within a separate cover for insertion into the logbook or a separate binder. What type of component or equipment records is maintained in the AESR?
1. Components that are rigidly fixed to the aircraft
 2. Ground support equipment used to support flight operations
 3. support equipment used to secure aircraft after flight operations such as shrouds, covers, and wing locks
 4. Aeronautical equipment that is an integral part of the aircraft
- 6-2. What activity is responsible for initiating an AESR?
1. The activity originally accepting the equipment
 2. The manufacturer of the equipment
 3. The cognizant field activity (CFA)
 4. The activity transferring the equipment
- 6-3. Which of the following equipment requires an AESR?
1. B-4 maintenance stand
 2. Auxiliary power unit (APU)
 3. Aircraft horizontal stabilizer
 4. Liquid oxygen (LOX) converter
- 6-4. What items of information should be recorded on each record in the AESR?
1. The bureau number (BUNO) of the aircraft the equipment is installed on
 2. Identification data and serial number of the equipment
 3. The signature of the person making an entry on the applicable record
 4. The date the record was initiated and placed in the AESR
- 6-5. Which of the following records should be stored in the manila envelope attached to the back inside cover of the AESR?
1. Equipment History Records (EHRs)
 2. Assembly Service Records (ASRs)
 3. Engine setup and test records
 4. Modular Service Records (MSRs)
- 6-6. Many records are common to both the aircraft logbook and the AESR. Which one of the following records is unique to the AESR?
1. Repair/Rework record
 2. Technical Directives record
 3. Equipment Operating Record
 4. Inspection Record
- 6-7. Entries on the Equipment Operating Record are required upon equipment transfer. At what other frequency are entries required on this record?
1. Weekly
 2. Monthly
 3. Biannually
 4. Annually

- 6-8. Overtemp and hot start are two examples of what type inspection?
1. Phase
 2. Conditional
 3. Special
 4. Daily
- 6-9. An engine has just been removed from an aircraft for transfer. On what record, if any, in the AESR should the transfer inspection be recorded?
1. The special inspection record
 2. The phase inspection record
 3. None
- 6-10. A minimum number of how many years of data should be maintained on the conditional inspection record?
1. 1 year
 2. 2 years
 3. 3 years
 4. 4 years
- 6-11. What procedure is used to record technical directives (TDs) that affect a component that has an MSR, EHR, ASR, or SRC card?
1. The TD is recorded on the MSR, EHR, ASR, or SRC card only if the TD is a revision
 2. The TD is recorded on the MSR, EHR, ASR, or SRC card only if the applicable TD affects integral components of the equip
 3. The TD is recorded on the MSR, EHR, ASR, or SRC card, along with a notation to see the applicable TD page
 4. The TD identification is entered on the applicable TD page, and a notation is made in the Title/Remarks column to see the applicable MSR, EHR, ASR, or SRC card
- 6-12. The Miscellaneous/History record records pertinent information for which no other place has been designated. Which of the following types of information is recorded on this record?
1. Installation of an SRC card components
 2. Corrosion control treatment performed
 3. Navy Oil Analysis Program (NOAP) information
 4. Removal and replacement of aircraft mainmounts (tires)
- 6-13. An aircraft is in the process of being preserved. The preservation requirement does not apply to the installed engine. What type entry, if any, is required on the engine Preservation/Depreservation record of the AESR?
1. Enter "no preservation entry required for engine, aircraft preservation only"
 2. Enter the date the aircraft was preserved and annotate "aircraft only" in the remarks section
 3. Enter the same date the aircraft was preserved
 4. None
- 6-14. Which of the following AESR records is used to record data on modular engines?
1. SRC
 2. ASR
 3. EHR
 4. MSR

- 6-15. Which of the following procedures should be used to make entries on the MSR?
1. Entries should be printed in pencil
 2. Designated entries should be made in blue ink
 3. Entries should be printed in black ink or typewritten only
 4. Entries should be typewritten or printed in black ink except temporary entries, which should be made in pencil
- 6-16. What system is used to track operating time cycles or counts on selected life-limited engine components?
1. ACOMTRAK
 2. ECOMTRAK
 3. ECAMS
 4. SEATS
- 6-17. What reporting system provides data on inventory management and reporting of aircraft engines, propulsion systems, and modules (EPSM)?
1. AIRS
 2. AEMS
 3. ICRL
 4. IMRL
- 6-18. What instruction prescribes reporting procedures for the aircraft engine management system (AEMS)?
1. NAVAIRINST 13700.1
 2. NAVAIRINST 13700.9
 3. NAVAIRINST 13700.11
 4. NAVAIRINST 13700.15
- 6-19. What information does an AEMS status code provide?
1. Type airframe in which an engine is installed and the length of time it is expected to be installed
 2. Type airframe from which an engine was removed and the length of time it is expected to be non-ready for issue (non-RFI)
 3. An engine's condition, its stage of progress in the maintenance cycle, or the purpose for which it is being used
 4. Type engine and the length of time it will be out of material condition reporting status (MCRS)
- 6-20. What AEMS status code describes an installed engine in an operating aircraft?
1. 11
 2. 21
 3. 24
 4. 33
- 6-21. What AEMS status code identifies an engine that has been stricken?
1. 41
 2. 48
 3. 49
 4. 90
- 6-22. Which of the following relationships exists concerning the use of AEMS status codes and STAR codes?
1. Status codes are often used without STAR codes
 2. STAR codes are often used without status codes
 3. Status codes amplify or qualify STAR codes
 4. STAR codes are always used without status codes

- 6-23. What report does a reporting custodian use to inform a controlling custodian of the use, status change, or custody change of an aircraft engine?
1. OPNAV XRAY Report
 2. Engine Transaction Report (ETR)
 3. Aircraft Accounting Audit Report (AAAR)
 4. Support Equipment Transaction Report (SETR)
- 6-24. What is the submission deadline for ETRs?
1. 2400 hours on the date of action
 2. 2400 hours on the first working day following the date of action
 3. 5 working days following the date of action
 4. 3 working days following the date of action
- 6-25. Reporting custodians should submit an ETR for which of the following situations?
1. An aircraft grounded due to an engine discrepancy that requires troubleshooting
 2. An engine is within 1 week of its scheduled phase inspection induction date
 3. An engine must be removed and transferred for repair as unserviceable
 4. An aircraft is due a phase A inspection
- 6-26. Which of the following is an example of an ETR serial number?
1. 1
 2. 001
 3. 001-96
 4. 1-96
- 6-27. Data elements 0 through 6 and 19 are required on all ETRs. What additional data elements are required for status/STAR code 11-90?
1. 12, 13, 14 only
 2. 9, 12, 13, 14 only
 3. 9, 10, 12, 13, 14 only
 4. 7, 8, 9, 10, 12, 13, 14
- 6-28. An aircraft has accumulated 1235.7 flight hours. When these hours are reported in item 9 of an ETR, how should they appear?
1. 1235
 2. 1235.7
 3. 1236
 4. 01235
- 6-29. Completed ETRs should be maintained on file for what minimum time?
1. 6 months
 2. 12 months
 3. 24 months
 4. 36 months
- 6-30. What card provides a standardized record for local management of aircraft engines?
1. Aircraft record A card
 2. Engine record card
 3. SRC card
 4. Meter card
- 6-31. Your squadron has custody of 5 dual-engine aircraft. What number of active aircraft engine record cards should be on file?
1. 20
 2. 15
 3. 10
 4. 5

IN ANSWERING QUESTION 6-27, REFER TO FIGURE 9-2 IN THE TEXTBOOK.

6-32. What factor determines the time frames for which an End-of-Quarter (EOQ) report should be submitted?

1. Type of aircraft in which an engine is installed
2. Type of engine being reported
3. Type of squadron submitting the report
4. Type of aircraft the activity submitting the report operates

6-33. Which of the following is a procedure you should follow concerning submission of an EOQ?

1. Installed engines in your activity's reporting custody should be included in your report regardless of the aircraft's physical location
2. An engine installed in an aircraft in your activity that is undergoing rework should be excluded from your report
3. Uninstalled engines removed from your activity's aircraft and undergoing repair at an AIMD should be included in your report
4. Defective uninstalled engines at your activity awaiting shipment should be included in your report

6-34. What is the status and STAR code for EOQ reports?

1. 11-90
2. 11-70
3. 11-60
4. 11-50

6-35. What is the submission deadline for EOQ reports?

1. 2400 hours on the third working day following the end of the reporting month
2. 2400 hours on the first working day following the end of the reporting month
3. 5 working days following the end of the reporting month
4. 3 working days following the end of the reporting month

6-36. What two modes are available to submit EOQ reports submitted?

1. Naval letter and message
2. Naval letter and E-mail
3. Naval message and AEMS on-line computer
4. Overnight mail and AEMS on line computer

QUESTIONS 6-37 THROUGH 6-71 IN THIS ASSIGNMENT (ASSIGNMENT 6) BEGIN A REVIEW OF CHAPTERS 6, 7, 8, AND 9 OF YOUR TEXTBOOK. IN ANSWERING THESE QUESTIONS, REFER TO THE SITUATION DESCRIBED IN THE FIGURES IN THIS ASSIGNMENT, THE APPROPRIATE CHAPTER IN THE TEXTBOOK, AND TO REFERENCES DISCUSSED IN THE TEXTBOOK. QUESTIONS 6-37 THROUGH 6-71 DO NOT FOLLOW TEXTBOOK ORDER.

VS-41, stationed at NAS West Coast, is transferring aircraft bureau number (BUNO) 158814 (2126.0 flight hours) to your squadron, VS-51, stationed at NAS East Coast, in accordance with COMNAVAIRLANT aircraft transfer order (ATO) 127-96. Aircraft 158814 has engine serial numbers 323543 (1212.0 hours) and 323296 (1015.5 hours) installed. BUNO 158814, in a full combat ready status, was flown by ferry pilot (not attached to either VS-41 or VS-51) to your activity. COMNAVAIRLANT is VS-51's controlling custodian, and COMSEACONWINGSLANT is the supporting wing. You must take the administrative steps involved in acceptance of this aircraft.

Figure 6-A

IN ANSWERING QUESTIONS 6-37 THROUGH 6-60, REFER TO FIGURE 6-A, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 6-37. Upon screening of BUNO 158814's aircraft logbook during acceptance, you find an obvious mistake in record keeping in part IV, Monthly Data section. What course of action should you take?
1. Make a Miscellaneous/History record entry describing the error
 2. Defer action for SDLM's Monthly Flight Summary record consolidation
 3. Correct the mistake and initial or sign off the correction
 4. Request that VS-41 and COMSEACONWINGSLANT indicate what corrective action to take

An aircraft logbook entry should be made stating that flight hours in period and flight hours since new have been verified to be correct.

Figure 6-B

IN ANSWERING QUESTIONS 6-38 AND 6-39, REFER TO FIGURES 6-A AND 6-B.

- 6-38. To what aircraft logbook record or card does this entry refer?
1. Monthly Flight Summary
 2. Aircraft Record "A" Card
 3. AESR cover
 4. Aircraft Engine Record Card
- 6-39. On what logbook record should you make this entry?
1. Monthly Flight Summary
 2. Miscellaneous/History
 3. Equipment Operating Record
 4. Inspection Record

A phase B inspection on BUNO 158814 will be performed early on the aircraft and both engines.

Figure 6-C

IN ANSWERING QUESTIONS 6-40 THROUGH 6-42, REFER TO FIGURES 6-A AND 6-C.

- 6-40. When completed, on what records should you log this phase inspection?
1. Aircraft logbook phase inspection and monthly flight summary records
 2. Aircraft logbook inspection record and both AESR engine inspection records
 3. Both AESR engine inspection records
 4. Both AESR engine inspection records and both AESR equipment operating records
- 6-41. Due to the early performance of the phase B inspection, the next phase inspection induction hours will be adjusted. On what record should you log this adjustment?
1. Aircraft Inspection Record only
 2. Aircraft Miscellaneous/History record only
 3. AESR Inspection Record only
 4. Aircraft Miscellaneous/History record and both AESR Miscellaneous/History record
- 6-42. The phase B inspection on engine serial number 323296 has been completed. What entry should you make in the "Type or Description of Inspection" block of engine serial number 323296's inspection record?
1. Phase B
 2. Phase B/1015
 3. Phase B/1015.5
 4. Phase B/1016.0

During the phase B inspection, a local form listing all components having an EHR, MSR, or SRC card and their serial numbers should be prepared.

Figure 6-D

IN ANSWERING QUESTIONS 6-43 AND 6-44, REFER TO FIGURE 6-D.

- 6-43. For what purpose should you use this form?
1. To identify those components that are to be removed for corrosion treatment and prevention and sent to AIMD
 2. To identify those components that will be removed and replaced during the phase inspection due to over usage
 3. To verify that components listed on the local form match those installed items that are recorded in the aircraft logbook or AESR
 4. To verify the component's manufacturer and national stock number (NSN)
- 6-44. In what location or on what record in the aircraft logbook or AESR should you find a list of components that require the record or card?
1. Inventory Record
 2. Inside the manila folder pasted to the back cover of the logbook binder
 3. Miscellaneous/History record
 4. In the aircraft general files

An OPNAV XRAY report, Engine Transaction Report, Aircraft Record A Card, and an Aircraft Engine Record card must be initiated to complete administrative steps in acceptance of BUNO 158814. The OPNAV XRAY report will be your activity's 21 st OPNAV XRAY report of the year.

Figure 6-E

IN ANSWERING QUESTIONS 6-45 THROUGH 6-60, REFER TO FIGURES 6-A AND 6-E, THE TEXTBOOK, AND REFERENCES USED IN THE TEXTBOOK.

6-45. Receipt of the aircraft must be reported to the controlling custodians for inventory and custody change updates. By what means should you report the receipt of this aircraft?

1. Engine transaction report
2. Aircraft Accounting Audit Report
3. OPNAV XRAY report
4. By E-mail

6-46. What should be the SUBJ line of your OPNAV XRAY report?

1. XRAY PAC 021 VS-41 OPNAV 5442-1
2. VS-51 XRAY OPNAV 5442-1 PAC
3. LANT 021 VS-51 XRAY OPNAV 5442-1
4. LANT XRAY VS-51021 OPNAV 5442-1

6-47. What status code should you use in your OPNAV XRAY report?

1. A10
2. BY1
3. C10
4. D10

6-48. Item P, is required on your OPNAV XRAY report. What information should you enter in item P?

1. LANT Navy/10
2. PAC Navy/20
3. VS-51/10
4. VS-41/20

6-49. What location should you indicate in item V of your OPNAV XRAY report?

1. The location of the activity transferring the aircraft
2. The physical location of the activity of the ferry pilots who flew the aircraft
3. The physical location of the aircraft
4. The location of the aircraft controlling custodian

6-50. You must initiate a new aircraft record "A" card. From what aircraft logbook record should you find information about the current aircraft service period?

1. Miscellaneous/History
2. Inspection Record
3. Monthly Flight Summary
4. Structural Life Limits

6-51. The OPNAV XRAY report reporting receipt of BUNO 158814 should be recorded on your newly initiated aircraft record "A" card. What specific information should you enter in the REASON/AUTHORITY block of the aircraft record "A" card?

1. BUNO 158814 received from VS-41 in an operating status
2. Aircraft 158814 received in an full mission capable (FMC) status from VS-41
3. PAC ATO 127-96
4. LANT ATO 127-96

IN ANSWERING QUESTION 6-52, REFER TO FIGURE 7-4 IN CHAPTER 6 OF THE TEXTBOOK.

- 6-52. What source should you use to complete “OPNAV XRAY Report Transaction” section of the Aircraft Record “A” card?
1. The aircraft logbook Miscellaneous History record
 2. The ETR message
 3. The OPNAV XRAY message
 4. The aircraft discrepancy book
- 6-53. Receipt of the engines must also be reported for inventory and custody change purposes. What method should you use to report receipt of the two installed operating engines?
1. Engine transaction report
 2. Aircraft accounting audit report
 3. OPNAV XRAY report
 4. Broad arrow report
- 6-54. What status and STAR code combination should you use?
1. 11-90
 2. 11-64
 3. 11-61
 4. 11-60
- 6-55. In addition to data elements 0 through 6, and 19 (Remarks), what other data elements should you provide on your ETR?
1. 9, 13, 14 only
 2. 9, 12, 13, 14 only
 3. 7, 9, 10, 12, 13, 14 only
 4. 7, 8, 9, 10, 12, 13, 14
- 6-56. What total number of transaction serial numbers should you use on your ETR to report the receipt of BUNO 158814 with installed engines?
1. One
 2. Two
 3. Three
 4. Four
- 6-57. Item 9, flight hours since new, is a required data element. What information should you place in item 9 on your ETR for engine serial number 323543?
1. 1212
 2. 12120
 3. 1212.0
 4. 01212
- 6-58. On which of the following cards should you log the submission of your ETR?
1. SRC card
 2. Aircraft record “A” card
 3. Aircraft engine record card
 4. Aircraft accounting audit report card
- 6-59. Your ETR is complete and ready for submission. You do not have access to an AEMS on-line computer system. What alternative method should you use to transmit your ETR?
1. Fax
 2. E-mail
 3. Naval message
 4. Naval letter
- 6-60. The acceptance inspection in BUNO 158814 is complete. On what aircraft logbook page should you log this acceptance inspection?
1. Periodic inspection record
 2. Conditional inspection record
 3. Special inspection record
 4. Calendar inspection record

- 6-61. You must make an entry on the Miscellaneous/History record in the AESR concerning operating hours. To what record does this entry refer?
1. Equipment Operating Record
 2. Module Service Record
 3. Assembly Service Record
 4. Monthly Flight Summary record

After submission of your last ETR, you discover an error in a previously submitted report.

Figure 6-F

IN ANSWERING QUESTIONS 6-62 AND 6-63, REFER TO FIGURE 6-F, THE TEXTBOOK, AND REFERENCES USED IN THE TEXTBOOK.

- 6-62 Which of the following actions should you take on the erroneous ETR?
1. Wait until official notification is received from the controlling custodian
 2. Call or fax the correct information to the controlling custodian
 3. Wait and include the corrected information on the next ETR submitted
 4. Draft an ETR correction report

- 6-63 Which of the following procedures should you use when submitting ETR correction reports?

1. Use the same ETR number as the ETR being corrected
2. Include only the corrected information
3. Delay submission of ETR correction report until transmitting the next ETR report
4. Include the word "CORRECT" in the first transaction on the correction report

ASSIGNMENT 7

Textbook Assignment: “Aircraft Logbook,” Aircraft Inventory Reporting System (AIRS),” “Aeronautical Equipment Service Record (AESR),” and “Aircraft Engine Management System (AEMS).” Pages 6-1 through 9-12.

THE QUESTIONS IN THIS ASSIGNMENT (ASSIGNMENT 7) COMPLETE THE REVIEW OF CHAPTERS 6 THROUGH 9 OF YOUR TEXTBOOK. IN ANSWERING THESE QUESTIONS, REFER TO THE SITUATION DESCRIBED IN THE FIGURES IN THIS ASSIGNMENT, THE APPROPRIATE CHAPTER IN THE TEXTBOOK, AND TO REFERENCES DISCUSSED IN THE TEXTBOOK. QUESTIONS IN ASSIGNMENT 7 MAY NOT FOLLOW TEXTBOOK ORDER.

You are attached to VS-51 physically located at NAS East Coast and are assigned to the logs and records section. Your duties as logs and records clerk include making aircraft logbook entries, aeronautical equipment service record entries, and local record entries. In addition, you are tasked with submitting aircraft status reports and engine management reports.

VS-51 flies the S3B aircraft with two TF41-400A engines installed. A primary mission of VS-51 is antisubmarine warfare.

Figure 7-A

IN ANSWERING QUESTIONS IN THIS ASSIGNMENT, REFER TO FIGURE 7-A, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

The catapult launch bar, a scheduled removal component (SRC) card item, installed on BUNO 156864 must be removed and forwarded to a Depot-level maintenance activity for its 100-hour inspection.

Figure 7-B

IN ANSWERING QUESTIONS 7-1 AND 7-2, REFER TO FIGURE 7-B, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-1. In what manner should you dispose of the SRC card for the removed component?
1. Forward a copy of the card to the central repository
 2. File the card for 12 months, then forward the card to the central repository
 3. File the card for 12 months, then destroy the card
 4. Forward the card along with the component
- 7-2. What action, if any, must you take with regard to the old SRC card?
1. Copy the card and forward the original to the central repository
 2. Close out the card
 3. Initiate a new card and attach it to the old card before you transfer the launch bar
 4. None

A replacement catapult launch bar and the SRC card have been received from supply and the launch bar must be installed on BUNO 156864. BUNO 156864 has accumulated 1,275 catapults (CATs). The replacement interval is 100 catapults.

Figure 7-C

IN ANSWERING QUESTIONS 7-3 THROUGH 7-5, REFER TO FIGURE 7-C, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-3. From what type of publication should you find the replacement interval for this new catapult launch bar?
1. Maintenance instruction manual
 2. Illustrated parts breakdown
 3. Maintenance requirements cards
 4. Periodic maintenance information cards
- 7-4. What is the replacement due for the new catapult launch bar?
1. T1400
 2. T1375
 3. T1350
 4. T1300
- 7-5. An entry recording removal of the old and installation of the new launch bar is required. On what records should you record this installation?
1. Miscellaneous/History and SRC card
 2. Repair/Rework Record and SRC card
 3. Inventory Record and SRC card
 4. Structural Life Limits Record and SRC card

IN ANSWERING QUESTIONS 7-6 AND 7-7, REFER TO FIGURE 6-6 IN THE TEXTBOOK.

- 7-6. What does the C next to serial column on Airframe Change (AFC) 242 List 02 indicate?
1. AFC 242 was issued and then canceled
 2. AFC 242 has been completely incorporated
 3. AFC 242 is not applicable
 4. AFC 242 was previously complied with
- 7-7. Upon installation AFC 242 and after annotation of list 02, what other documentation action is required for this TD?
1. Delete AFC 242 from List 02
 2. Annotate the Technical Directives page
 3. Annotate the List 04
 4. Submit a MAF to delete AFC 242 from the database

Today, Sunday afternoon, an operating aircraft in material condition reporting status (IN-MCRS), BUNO 158684, sustained heavy damage to the port side of the vertical stabilizer while parked on the flight line during a hail storm. Damage is heavy, but special rework repairs are in process by the Jacksonville Naval Depot (NADEP) facility field team at your activity's site. You must carry out the administrative requirements to report damage and document the repair of BUNO 158684.

Figure 7-D

IN ANSWERING QUESTIONS 7-8 THROUGH 7-15, REFER TO FIGURE 7-D, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

7-8. What report should you submit to report the damage to BUNO 158684?

1. Aircraft strike report
2. Maintenance damage report
3. OPNAV XRAY report
4. Aircraft damage report

7-9. What action code should you use in your report?

1. E
2. S
3. X
4. Y

7-10. Required data elements are A through F, V, and Remarks for your report. What additional data elements are required in your initial report?

1. G and S
2. J and N
3. K and S
4. P and N

7-11. What Strike/Damage code should you use in your report?

1. 5AAC
2. 51HC
3. 11AB
4. 11AA

7-12. What should be the appropriate status code for BUNO 158684 in your report?

1. A12
2. D30
3. G30
4. 130

7-13. On which of the following records or reports should you log your outgoing report?

1. Aircraft Engine Record Card
2. Repair/Rework Record
3. Aircraft Record "A" Card
4. Miscellaneous/History record

7-14. On which of the following aircraft logbook records should you record the repair action?

1. Repair/Rework Record
2. Work Request
3. Structural Life Limits records
4. Structural Repair/Rework record

7-15. What is the deadline for submission of your report on the damage to BUNO 158684?

1. 2400, Sunday
2. 2400, Monday
3. 1600, Sunday
4. 1200, Monday

Today is Monday, 0900. BUNO 158684's port engine, serial number 341516, must be removed and replaced due to low oil pressure. You must submit the required engine transaction report (ETR).

Figure 7-E

IN ANSWERING QUESTIONS 7-16 THROUGH 7-23, REFER TO FIGURE 7-E, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-16. What total number of transactions in your report are needed to completely document removal and replacement of engine serial number 341516?
1. Five
 2. Two
 3. Three
 4. Four
- 7-17. What removal/downgrade/repair code should you use on your ETR?
1. 1T
 2. 3W
 3. 5Q
 4. 5W
- 7-18. What is the correct format for data element 1, engine serial number, on your ETR?
1. 341516
 2. 3415160
 3. 0341516
 4. 034151
- 7-19. Engine serial number 341516 has 103.5 hours. What entry should you make for item 9, Flight Hours Since New, on your ETR?
1. 0103.5
 2. 00103.5
 3. 00104
 4. 00103
- 7-20. To identify the removed engine, you should record reason for removal, job control number (JCN), shipping document number, activity transferred to, and status/STAR code on what AESR record?
1. Repair/Rework Record
 2. Inventory Record
 3. Miscellaneous/History record
 4. Equipment History Record card
- 7-21. Upon receipt of the replacement engine and AESR, you should make a specific entry concerning which of the following records in the AESR Miscellaneous/History record?
1. Equipment Operating Record
 2. Equipment History Record
 3. Monthly Flight Summary
 4. Inventory Record
- 7-22. On what record should you record the engine position number of the new installed engine?
1. Equipment Operating Record
 2. AESR cover
 3. Equipment History Record card
 4. Assembly Service Record
- 7-23. On what card or record should you log the submission of your ETR?
1. Aircraft Engine Record card
 2. OPNAV XRAY report record
 3. Aircraft Record "A" Card
 4. Equipment History Record card
- The Aircraft Accounting Audit Report is due. One of VS-51's aircraft will transfer the day before the report date.
- Figure 7-F
- IN ANSWERING QUESTIONS 7-24 THROUGH 7-27, REFER TO FIGURE 7-F, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.**
- 7-24. What local record should you use as a source to prepare the report?
1. Maintenance Time Sheet
 2. OPNAV XRAY report records
 3. Aircraft Engine Record Card
 4. Aircraft Record "A" Card

- 7-25. In what manner should you treat the transferring aircraft in your report?
1. Include the aircraft in your report and make appropriate comments in the remarks section
 2. Exclude the aircraft from your report entirely
 3. Include the aircraft in your report and submit an update OPNAV XRAY report after the aircraft transfers
 4. Exclude the aircraft from your report, and submit a notification message to the controlling custodian

- 7-26. During preparation of the report, you notice that the current status of one aircraft has not been reported. What action should you take?
1. Ask for permission to include the aircraft on the next report
 2. Call the action addressee to inform the addressee of the error
 3. Submit an updating OPNAV XRAY report
 4. Delete the aircraft from the report

- 7-27. One aircraft has 1226.8 flying hours in life. How should flying hours in life, item X, appear on the report?
1. 1226.8
 2. 1227
 3. 001226
 4. 001227

Your leading chief has just discovered an error in the reported strike/damage code on a previously submitted OPNAV XRAY report.

Figure 7-G

IN ANSWERING QUESTIONS 7-28 THROUGH 7-31, REFER TO FIGURE 7-G, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-28. What is the deadline for submission of the correction report?
1. 2400 the day after the error is discovered
 2. 1600 on the day you are notified of the error
 3. 1200 the day after the error is discovered
 4. 0800 on the day after you are notified of the error

- 7-29. What total number of transactions on the OPNAV XRAY report is/are required to delete and correct this report?
1. One
 2. Two
 3. Three
 4. Four

- 7-30. The last OPNAV XRAY serial number used was 015. The serial number for the incorrect OPNAV XRAY report was 009. What serial number should you assign to the correction OPNAV XRAY report?
1. 009
 2. 010
 3. 015
 4. 016

- 7-31. NAVAVNDEPOTOPCEN and COMNAVAIRSYSCOM are mandatory info addressees on your correction report. What additional command should be an "INFO" addressee?
1. CNET
 2. CNO
 3. CINCLANTFLT
 4. CINCPACFLT

VS-51's End-of-Quarter (EOQ) report is due. VS-51 has six aircraft assigned. Five aircraft are at NAS East Coast. The sixth aircraft is on detachment at NAS West Coast.

Figure 7-H

IN ANSWERING QUESTIONS 7-32 THROUGH 7-36, REFER TO FIGURES 7-A AND 7-H, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-32. What action should you take for the aircraft and installed engines on detachment at NAS West Coast?
1. Include the engines in your report. Report the hours logged on the Equipment Operating Record from last month's monthly entry
 2. Omit the engines from your report
 3. Include the engines on your report. Contact the detachment for the correct number of hours to be reported
 4. Include the engines on the report. Report the hours used on the last report submitted
- 7-33. What series STAR code should you use on the report?
1. 60
 2. 70
 3. 80
 4. 90
- 7-34. In what order should you list the aircraft and engines on your EOQ report?
1. In any order
 2. In BUNO number and engine position number order
 3. In engine serial number and engine position number order
 4. In engine serial number and BUNO number order

- 7-35. What item of information determines the submission date of your EOQ report?
1. S3B aircraft
 2. TF34-400A engines
 3. NAS East Coast
 4. Sea Control Squadron
- 7-36. What report symbol should you use on the EOQ report for VS-51?
1. 13700-9
 2. 5442-1
 3. 4790-1
 4. 3110-9

You were just informed that a MC53 Cartridge Actuated Device (CAD) installed in BUNO 158814 must be replaced.

Figure 7-I

IN ANSWERING QUESTIONS 7-37 AND 7-38, REFER TO FIGURE 7-1, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

- 7-37. In what logbook record should you log the removal and replacement of the MC53 CAD?
1. Inventory Record
 2. Installed Explosive Device Record
 3. Weight and Balance record
 4. Structural Life Limits record
- 7-38. The SEATS/ICAPS program automatically computes what date upon installation of the new MC53 CAD and entry onto the system?
1. The date of manufacture
 2. The installation date
 3. Service life expiration date
 4. Acceptance date into the Navy inventory

A Phase A inspection has just been completed on BUNO 158684 at 2104.4 hours. The scheduled inspection was due at 2154.4 hours but was performed early due to operational commitments. The inspection interval for this aircraft is two phase inspections (Phase A and Phase B) at 170 hours each. Phase inspections are authorized a 10 percent deviation. The next phase due is computed from the hour the inspection was begun.

Figure 7-J

IN ANSWERING QUESTIONS 7-39 THROUGH 7-43, REFER TO FIGURE 7-J, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

7-39. On what logbook record should you record the deviation from the old inspection induction hours?

1. Inspection Record
2. Structural Life Limits record
3. Scheduled Removal Component card
4. Miscellaneous/History record

7-40. On your entry about the deviation, you should ensure that what specific information is included?

1. The next phase inspection due, flight hours due at, and reason for deviation of inspection
2. The reference publications and man-hours expended to complete the inspection
3. A notation specifying that the Seat Survival Kit Records, Aircrew Systems Records, and Aircrew Personal Equipment Records were inventoried during the inspection
4. A list of applicable Maintenance Requirement Cards (MRCs) used to complete the inspection

7-41. The next inspection due, Phase B, is due at what flight hours on BUNO 158684?

1. 2154.4 hours
2. 2274.4 hours
3. 2324.4 hours
4. 2444.4 hours

7-42. What entry should you record in the "Type or Description of Inspection" block of the Inspection Record to document completion of the Phase A inspection?

1. Phase A/2104.4
2. Phase B/2154.4
3. Phase A/2154.4
4. Phase B/2274.4

7-43. A local form should be prepared consisting of a list of what items or components for inventory during this Phase A inspection?

1. Items listed on the Structural Life Limits record
2. ASR, EHR, MSR, or SRC card components
3. Classified and pilferable items
4. Components that are rigidly fixed in the aircraft

You were just handed a completed maintenance action form (MAF) documenting the removal of a technical directive, Power Plant Change 123.

Figure 7-K

IN ANSWERING QUESTIONS 7-44 THROUGH 7-48, REFER TO FIGURE 7-K, THE TEXTBOOK, AND REFERENCES DISCUSSED IN THE TEXTBOOK.

7-44. On which of the following records should you log PPC 123's removal?

1. Inventory Record of the applicable AESR
2. List 02 in the aircraft logbook
3. List 04 in the aircraft logbook
4. Technical Directives record in the applicable AESR

7-45. What TD Status code should you use for PPC 123's removal?

1. C
2. K
3. Q
4. R

7-46. What additional information should you record in the Status code block along with the new Status code?

1. Date removed
2. Initials of someone authorized to sign logbooks and records
3. Reason for removal
4. Short title of the item removed

7-47. On what additional AESR record should PPC 123's removal be logged?

1. Inventory Record
2. Equipment Operating Record
3. Miscellaneous/History record
4. AESR Front Cover

7-48. On the additional entry for PPC 123's removal, you should ensure that what items of information are included in the record?

1. Total manhours expended and elapsed maintenance time required to remove PPC 123
2. The names of the work center supervisor and maintenance technician who removed PPC 123
3. Reason for removal, location of removed parts, and the reference authorizing removal of PPC 123
4. Document number of the MAF recording removal of PPC 123 and appropriate equipment operational capability (EOC) code at the time of removal

IN ANSWERING QUESTIONS 7-49 THROUGH 7-55, REFER TO FIGURE 9-1 IN THE TEXTBOOK AND REFERENCES DISCUSSED IN THE TEXTBOOK. FIGURE 9-1 is VFA000's OUTGOING MESSAGE.

7-49. What code indicates the exact reason engine serial number 0360347 is being removed?

1. 24
2. 74
3. 5C
4. X

7-50. What information is indicated by the lone "2" in the removal transaction number 001?

1. Number of engines being reported
2. Engine position number
3. Number of engines installed on the aircraft
4. Number of previous ETRs submitted on this engine

- 7-51. Transaction 002 shows the engine transfer and lists the activity where the engine is being transferred as well as the document number and the date of the transfer. In which of the following additional locations should you record this information?
1. AESR Inventory Record
 2. Miscellaneous/History record in the aircraft logbook
 3. Inventory Record of the aircraft logbook
 4. AESR Miscellaneous/History record
- 7-52. What additional items of information should you record along with the activity where the engine was transferred, document number, and date of engine transfer?
1. The aircraft the engine was previously installed in and the number of flight hours on the replacement engine
 2. The Status code of the aircraft and flight hours since new
 3. The Status and STAR code, reason for removal, and job control number
 4. Type engine, model, and series number
- 7-53. In transaction 003, Status Code 2 1 indicates that the engine is in what status?
1. Serviceable, uninstalled, and RF1
 2. Serviceable, installed, and RF1
 3. Serviceable, uninstalled, and non-RF1
 4. Serviceable, installed, and non-RF1
- 7-54. What is indicated by the "1-98" in the subject line?
1. The ETR was submitted in January
 2. This was the first ETR submitted by VFA000
 3. This was the first engine transferred by VFA000
 4. This was the first engine received by VFA000
- 7-55. What Status code and STAR code combination indicates receipt of the replacement engine?
1. 11-NA
 2. 21-61
 3. 24-60
 4. 24-74

