INITIAL

NAVY TRAINING SYSTEM PLAN

FOR THE

USMC KC-130J

ADVANCED TANKER

OCTOBER 1998

October 1998

USMC KC-130J ADVANCED TANKER

EXECUTIVE SUMMARY

The KC-130J aircraft is a medium sized transport tanker with capability for intra-theater and inter-theater airlift and aerial refueling operations. The KC-130J is capable of in-flight refueling of both fixed and rotary wing aircraft. It also retains the capability for worldwide delivery of combat troops, personnel, and cargo by airdrops or airland to austere, bare-base sites. The KC-130J is capable of day, night, and adverse weather operations. This new model features a two-crew member flight system, Skip Allison AE2100D3 engines, all-composite Dowty R391 propellers, digital avionics and mission computers, enhanced performance, and improved reliability and maintainability.

Beginning in FY96, the U.S. Air Force (USAF) started procuring the C-130J as a replacement for the older C-130E and C-130H. The U.S. Marine Corps (USMC) will receive five KC-130Js through an Engineering Change Proposal to the USAF contract. Additional procurements of the KC-130J for the USMC are planned but no set schedule has been established.

Manpower requirements to support the KC-130J have been established based on the requirements of the C-130E. Activity manpower documents providing detailed information about C-130 activities are available and will be the baseline for the KC-130J. Additional information will be included when it becomes available in future updates to this Initial Navy Training System Plan.

KC-130J training for USMC pilots and maintenance personnel will be provided by Lockheed Martin Aeronautical Systems (LMAS) in Marietta, Georgia. When additional KC-130J aircraft beyond the initial five have been procured, there will be a requirement for follow-on training. When required, follow-on training will be established at Marine Aerial Refueler Transport Training Squadron (VMGRT)-253 for pilot and aircrew personnel, and at VMGRT-253 Fleet Replacement Enlisted Skills Training (FREST) and Maintenance Training Unit (MTU) 1078 for maintenance personnel. These activities are all located at Marine Corps Air Station (MCAS) Cherry Point, North Carolina.

Initial officer and aircrew training for Qualification Operational Test and Evaluation (QOT&E) is required prior to September 1999. USMC officer and aircrew training requirements to support QOT&E will be satisfied by LMAS at the contractor facility in Marietta, Georgia.

Initial maintenance training for QOT&E is also required prior to September 1999. Contractor maintenance training provided by LMAS at Marietta, Georgia will satisfy USMC maintenance training requirements to support QOT&E. The instructors from MTU 1078 and VMGRT-253 FREST will attend. This will provide the instructors with the knowledge to create or modify maintenance courses for MTU 1078 and the FREST.

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LIST OF ACRONYMS

AMIST	Aviation Maintenance In-Service Training
AMTCS	Aviation Maintenance Training Continuum System
APU	Auxiliary Power Unit
BIT	Built-In Test
BUPERS	Bureau of Naval Personnel
CAI	Computer-Aided Instruction
CBT	Computer-Based Training
CMC	Commandant of the Marine Corps
CMI	Computer-Managed Instruction
CNET	Chief, Naval Education and Training
CNO	Chief of Naval Operations
ECP	Engineering Change Proposal
FD/FI	Fault Detection/Fault Isolation
FREST	Fleet Replacement Enlisted Skills Training
FSR	Field Service Representative
FY	Fiscal Year
GMS	Ground Maintenance System
ICW	Interactive Courseware
LMAS	Lockheed Martin Aeronautical Systems
LRM	Line Replaceable Module
LRU	Line Replaceable Unit
MATMEP	Maintenance Training Management and Evaluation Program
MCAS	Marine Corps Air Station
MMH	Maintenance Man-Hour
MOS	Military Occupational Specialty
MTBF	Mean Time Between Failure
MTIP	Maintenance Training Improvement Program
MTU	Maintenance Training Unit
NA	Not Applicable
NAMP	Naval Aviation Maintenance Program

USMC KC-130J ADVANCED TANKER

LIST OF ACRONYMS

NAVAIRSYSCOM	Naval Air Systems Command
NTSP	Navy Training System Plan
OJT	On-the-Job Training
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
PMA	Program Manager, Air
QOT&E	Qualification Operational Test and Evaluation
RFT	Ready For Training
SDLM	Standard Depot Level Maintenance
SRA	Shop Replaceable Assembly
TBD	To Be Determined
TD	Training Device
TTE	Technical Training Equipment
USAF	United States Air Force
USMC	United States Marine Corps
VMGRT	Marine Aerial Refueler Transport Training Squadron
WRA	Weapon Replaceable Assembly

October 1998

USMC KC-130J ADVANCED TANKER

PREFACE

This is the first iteration of the USMC KC-130J Advanced Tanker Navy Training System Plan (NTSP), not an update to an existing NTSP. The KC-130J is a remanufactured C-130J with Engineering Change Proposal (ECP) # 2209 installed. This Initial NTSP will be updated as more information becomes available.

October 1998

PART I - TECHNICAL PROGRAM DATA

A. NOMENCLATURE-TITLE-PROGRAM

1. **Nomenclature-Title-Acronym.** USMC KC-130J Advanced Tanker

2. **Program Element.** 041600

B. SECURITY CLASSIFICATION

1. **System Characteristics** ..... Unclassified
2. **Capabilities** ..... Unclassified
3. **Functions**..... Unclassified

C. MANPOWER, PERSONNEL, AND TRAINING PRINCIPALS

OPNAV Principal Official (OPO) Program Sponsor..... CNO (N889)

OPO Resource Sponsor ..... CNO (N880)

Marine Corps Program Sponsor..... CMC (APW)

Developing Agency..... NAVAIRSYSCOM (PMA207)

Training Agency ..... CINCLANTFLT (N343)
CINCPACFLT (N343)
CNET (T251)
CMC (APW91)

Training Support Agency..... NAVAIRSYSCOM (PMA205)

Director of Naval Training Manpower and Personnel Mission Sponsor ..... CNO (N12)
CNO (N7)

Marine Corps Combat Development Command
Manpower Management ..... TFS Division

D. SYSTEM DESCRIPTION

1. Operational Uses. The C-130 Hercules transport aircraft, which is still in production, first flew 42 years ago and has been delivered to more than 60 countries. The C-130 operates throughout the military services fulfilling a wide range of operational missions in both peace and war situations. Basic and specialized versions perform a diversity of roles, including airlift support, Distant Early Warning Line and Arctic Ice re-supply, aero-medical missions, aerial spray missions, fire fighting duties for the U.S. Forest Service, and natural disaster relief missions. The C-130E is an extended range development of the C-130B, with large under-wing fuel tanks. A wing modification to correct fatigue and corrosion on C-130Es has extended the life of the aircraft well into the next century.

The basic C-130H is generally similar to the C-130E model but has updated T56-A-T5 turboprops, a redesigned outer wing, updated avionics, and other minor improvements. While continuing to upgrade through modification, the U.S. Air Force (USAF) has budgeted to resume fleet modernization through acquisition of the C-130J version. This new model features a two-crew member flight system, Skip Allison AE2100D3 engines, all-composite Dowty R391 propellers, digital avionics and mission computers, enhanced performance, and improved reliability and maintainability. Beginning in FY96, the USAF started procuring the C-130J as the replacement for the their older C-130E and C-130H. The U.S. Marine Corps (USMC) will receive five KC-130Js through an ECP to the USAF contract.

The KC-130J aircraft is a medium sized transport and tanker with capability for intra-theater and inter-theater airlift and aerial refueling operations. The KC-130J is capable of in-flight refueling of both fixed and rotary wing aircraft. It also retains the capability for worldwide delivery of combat troops, personnel, and cargo by airdrops or airland to austere, bare-base sites. The KC-130J is capable of day, night, and adverse weather operations.

2. Foreign Military Sales. The KC-130J is one of a large family of aircraft used by all services and many foreign governments, as well as civilian aircraft companies. This USMC procurement does not include any Foreign Military Sales.

E. DEVELOPMENTAL TEST AND OPERATIONAL TEST.

The KC-130J Developmental and Operational Tests were completed by Lockheed Martin Aeronautical Systems (LMAS). The Qualification Operational Test and Evaluation (QOT&E) will be conducted at Naval Air Station (NAS) Patuxent River, Maryland, in late FY00 through late FY01.

F. AIRCRAFT AND/OR EQUIPMENT/SYSTEM/SUBSYSTEM REPLACED.

The USMC KC-130J is scheduled to replace the KC-130F model aircraft. Although currently only five aircraft are under contract, additional procurements in future years are planned, but no schedule has been established. The initial procurement of five KC-130Js will replace the oldest F models. These KC-130Js will be assigned to Marine Aerial Refueler Transport Training Squadron (VMGRT)-253 at Marine Corps Air Station (MCAS) Cherry Point, North Carolina.

G. DESCRIPTION OF NEW DEVELOPMENT

1. Functional Description. The KC-130J provides rapid logistic support to operating forces. It can be configured to provide transportation of personnel or cargo. Delivery of cargo may be accomplished by parachute, low level fly-by ground extraction, or landing. As a tactical transport, the KC-130J can carry 92 ground troops or 64 paratroopers and equipment. It can be configured as a medical evacuation platform capable of carrying 74-litter patients plus attendants. The KC-130J can land and takeoff on short runways and can be used on primitive landing strips in advanced base areas. The KC-130J is also capable of providing mission support in emergency evacuation of personnel and key equipment, advanced party reconnaissance, and special warfare operations.

a. Landing Gear. The landing gear is a modified tricycle type (dual nose wheel and two tandem mounted main wheels in each main gear installation) fully retractable hydraulically.

b. Propulsion Units. The propulsion units are four Skip Allison AE2100D3 turboprop engines. The AE2100D3 turboprop engine, rated at 4,591 Propeller Shaft Horsepower takeoff power, consists of a two-rotor, free turbine power section and a propeller gearbox joined by a torque shaft and interconnecting struts.

c. Propellers. The Dowty R391 propeller is a six-bladed, 13.5 foot diameter, variable pitch propeller with a counterweight design and hydraulic pitch control. The propeller blades are an all-composite material design with a modest sweep.

d. Fuel System. The fuel system is a common cross-ship manifold that serves as a refueling system, a fuel supply crossfeed, a ground refueling system, and a fuel jettisoning system.

e. Auxiliary Power Unit. An Auxiliary Power Unit (APU) is installed along with necessary associated accessories and controls for APU operations. The APU will provide bleed air for engine starting without the use of external power.

f. Hydraulic System. The hydraulic system is integrated into the booster, utility, and auxiliary systems. The system is a Type I except for the isolation circuits, which are Type II. The hydraulic booster reservoir is designed with a “negative G” baffle and check valves to provide for transient zero or negative gravity operations.

g. Electrical System. The electrical system includes four regulated transformer rectifier units, five alternating current generators, controls, and conversion equipment to satisfy the diversified power requirements of the various electrical and electronic components, and to provide electrical power for other systems.

h. Flight Station Components, Displays, and Controls. Components, panels, and systems located in the flight station provide the capability for a crew of pilot and copilot to perform airlift mission operations in day, night, visual, and instrument meteorological conditions.

Controls and displays are on consoles and panels within easy reach and view of the pilots. Dual displays, control wheels, and rudder pedals along with a centrally located throttle quadrant allow either the pilot or copilot to operate the aircraft. An augmented crew seat is located behind the center console with shoulder harness fastened and unlocked, has access to the Intercommunications System and Communication Navigation Identification Management System.

i. Avionics Subsystems Architecture. The Avionic Subsystems Architecture forms a coordinated network of MIL-STD-1553B data buses. Segmented into four major groups, the data buses are identified by their associated grouping. The Communication and Navigation data bus consists primarily of communication and navigation subsystems. The avionics data buses, panel data buses, and display data buses connect subsystems, which basically belong to the same functional group.

j. Software. The aircraft employs an architecture that limits the effects of software changes to the immediate software. Where practical, software programs for maintenance activities are separated from the mission, flight, engine control, or other software modules.

2. Physical Description. The KC-130J is a high wing, all metal, long range, land-based monoplane. Power is supplied by four Skip Allison AE2100D3 engines and all-composite Dowty R391 propellers. The principal dimensions are:

Exterior:

Wingspan	132.58 feet
Length.....	97.74 feet
Height	38.90 feet
Stabilizer Span....	52.67 feet

Interior:

Length.....	40.00 feet
Width	10.25 feet
Height	9.00 feet

3. New Development Introduction. The KC-130J will be introduced to the USMC as a new production aircraft. It is a USAF C-130J procurement requiring major modifications through ECP # 2209.

4. Significant Interfaces. Not Applicable (NA).

5. New Features, Configurations, or Material. The KC-130J major enhancements include advanced, two-pilot flight station with fully integrated digital avionics, MIL-STD 1553B data bus architecture, color multifunctional liquid crystal displays, and head-up displays. Additional enhancements include state-of-the-art navigation systems with dual embedded Global Positioning System, Inertial Navigation System, mission planning system, low power color radar,

digital map display, and new digital autopilot. The KC-130J incorporates extensive Built-In Test (BIT) integrated diagnostics with an advisory, caution, and warning system, and new higher power turboprop engines with more efficient six-bladed all-composite propellers.

H. CONCEPTS

1. Operational Concept. The KC-130J is primarily an advanced tanker used to refuel airborne aircraft and rapid ground refueling for aircraft and support equipment. The KC-130J crew consists of a pilot, copilot, augmented crew member, and two reel observers.

2. Maintenance Concept. The Naval Aviation Maintenance Program (NAMP), OPNAVINST 4790.2G, provides general direction and guidance regarding the three-level maintenance concept that will remain in place for the KC-130F and R model aircraft. The NAMP prescribes the classification of maintenance requirements for functional complexity, provides assignment of maintenance levels which have the resources to effectively and economically accomplish maintenance actions, and details the administrative structure for collection of required data. The KC-130J aircraft will utilize a two-level maintenance concept: organizational and contractor depot facility. The KC-130J aircraft has incorporated BIT capability to minimize maintenance requirements where applicable.

a. Organizational. Organizational level maintenance is performed by the operating unit on a day-to-day basis in support of its own operation. These actions include inspections, servicing, handling, fault isolation, removal and replacement of Weapon Replaceable Assemblies (WRA), and performing on-aircraft repairs. Unscheduled tasks will normally be limited to system Fault Detection/Fault Isolation (FD/FI) and replacement of Line Replaceable Units (LRU) and Line Replaceable Modules (LRM). Organizational maintenance will have the ability to FD/FI through the use of BIT and Ground Maintenance System (GMS) troubleshooting to isolate to a single LRU 95 percent of the time in 30 minutes or less. The GMS consists of a computer-controlled Portable Maintenance Aid and a high performance computer workstation in the maintenance facility. The Portable Maintenance Aid is employed to help the technician at the aircraft and also transfer aircraft fault data to the shop computer workstation. The maintenance software for the aircraft, Portable Maintenance Aid, and workstation are a total package known as the Ground-Based Data System.

(1) Preventive Maintenance. Preventive maintenance on the KC-130J aircraft is conducted at specified intervals per established procedures set forth in the Maintenance Requirements Cards. Preventive maintenance actions include aircraft corrosion inspections, periodic aircraft washing, phase and special inspections, lubrication and servicing of the aircraft, and daily, preflight, and turnaround inspections.

(2) Corrective Maintenance. Corrective maintenance consists of fault isolation to a defective WRA or Shop Replaceable Assembly (SRA), removal and replacement of defective WRAs or SRAs, and verification of the repair using BIT, the appropriate test sets, or

Common Support Equipment. WRAs and SRAs requiring repair beyond the capability of the organizational level will be forwarded to the appropriate contractor depot facility.

b. Intermediate. During the Interim Contractor Support (ICS) and warranty phase of this program, the contractor will provide all repair of KC-130J unique repairable LRU/Shop Repairable Units/LRM. No new intermediate level repair requirements are known for the KC-130J at this time.

c. Depot. Depot maintenance actions are those requiring major overhaul or a complete rebuilding, remanufacturing, or modification of parts, assemblies, subassemblies, and end items, including engines, support equipment, and technical directives. Depot level maintenance will be accomplished by LMAS.

d. Interim Maintenance. NA.

e. Life-Cycle Maintenance Plan. The KC-130J aircraft is periodically inspected and reworked during its life-cycle through the Standard Depot Level Maintenance (SDLM) program.

3. Manning Concept. Manpower requirements to support the KC-130J have been established based on the existing requisites of the C-130E. Activity manpower documents providing detailed information about C-130 activities are available and will be the baseline for the KC-130J. Based on a cursory analysis of the operator and maintainer tasks expected to be associated with the KC-130J and its equipment, these tasks have been determined to be within the capabilities of the Marine Corps existing Military Occupational Specialty (MOS) for both officer and enlisted. As a result, it is estimated that no new MOS will be required to support the KC-130J.

a. Estimated Maintenance Man-Hour per Flight Hour. An analysis conducted by Whitney, Bradley, and Brown, Inc., in conjunction with LMAS indicated a 25 percent reduction in the manpower structure. This analysis compared the KC-130F and KC-130J. Table 3 below is a comparison of the manpower savings by MOS at the organizational maintenance level. This information is based on the assumption that all the KC-130F/R aircraft will be replaced by the KC-130J. Since this Initial NTSP only addresses the first buy of five aircraft, this information can only be used for planning purposes.

TABLE 3 - ESTIMATED MANPOWER SAVINGS BY MOS

MOS	KC-130F	KC-130J	SAVINGS	KC-130J ENHANCEMENTS
7380	4	0	4	* Cockpit redesign * System enhancements
7372	19	0	19	* Same as 7380
7382	24	0	24	* Same as 7380

TABLE 3 - ESTIMATED MANPOWER SAVINGS BY MOS				
MOS	**KC-130F**	**KC-130J**	**SAVINGS**	**KC-130J ENHANCEMENTS**
6056	36	28	8	* 174 percent average component Mean Time Between Failure (MTBF) improvement in WC 120 * 33 percent reduction in Maintenance Man Hour (MMH)
6086	6	4	2	* 227 percent average component MTBF improvement in WC 130 * 50 percent reduction in MMH
6316	14	10	4	* 149 percent average component MTBF improvement in WC 210 * 60 percent reduction in MMH
6336	18	14	4	* 272 percent average component MTBF improvement in WC 220 * 70 percent reduction in MMH
6016	34	22	12	* 306 percent average component MTBF improvement in WC 220 * 70 percent reduction in MMH

b. Proposed Utilization. The aircraft utilization rate is expected to remain at today's levels.

c. Recommended Qualitative and Quantitative Manpower Requirements

(1) Qualitative Manpower Requirements. Introduction of the KC-130J into the existing VMGRT-253 squadron will not generate the need for any new MOSs. Since the future buys of the KC-130J aircraft are not known at this time, the impact on manpower requirements is impossible to predict. Initially, manpower savings may be realized by combining the Loadmaster and Flight Engineer functions into a single MOS.

(2) Quantitative Manpower Requirements. KC-130J squadron manpower levels can potentially be reduced when adequate numbers of aircraft replace enough older aircraft, which will begin the process for restructuring the squadron manpower requirements.

4. Training Concept. There are two separate training concepts for the KC-130J, one for the initial buy of five aircraft and a second concept for future planned procurements. The first training concept (for the initial five aircraft) will be largely Contractor-provided while the second concept (for future procurements) will be largely organically provided. The Contractor-provided

training concept will remain in place until the USMC has enough KC-130J assets to warrant converting to organic training. The decision to convert to organic training will be made by CMC.

a. Initial Training. Select USMC officer and aircrew personnel will require initial KC-130J training in order to perform QOT&E functions. This training requirement will be fulfilled by LMAS at their facility in Marietta, Georgia. Select USMC maintenance personnel will also need KC-130J training for the QOT&E. This training requirement will also be fulfilled by LMAS at their facility in Marietta, Georgia. Instructors from Maintenance Training Unit (MTU) 1078 and VMGRT-253 FREST will also attend this training. This will provide them with the knowledge required to create or modify existing maintenance courses when organic training becomes cost effective.

The following is a list of KC-130J officer and aircrew training courses that will be required to satisfy initial training requirements:

Title	**KC-130J Pilot Initial Training**
Description	To provide C-130 pilots with the skills and knowledge required to pilot the KC-130J aircraft.
Location	Contractor facility, Marietta, Georgia
Length	To Be Determined (TBD)
RFT date	TBD
TTE/TD	The KC-130J aircraft will be used.
Prerequisite ....…	Must be a C-130 pilot.

Title	**KC-130J Copilot Initial Training**
Description	To provide C-130 copilots with the skills and knowledge required to copilot the KC-130J aircraft.
Location	Contractor facility, Marietta, Georgia
Length	TBD
RFT date	TBD
TTE/TD	The KC-130J aircraft will be used.
Prerequisite	Must be a C-130 copilot.

Title	**KC-130J Mission Specialist Initial Training**
Description	The tasks for this position have not been determined. This position will be the third seat or augment crewmember. It has not been determined if this position will be officer or enlisted.

Location ..... Contractor facility, Marietta, Georgia

Length ..... TBD

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ....… TBD

Title ..... KC-130J Loadmaster Initial Training

Description ..... To provide C-130 loadmaster personnel with the skills and knowledge required as loadmaster in the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... TBD

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ..... Must be a C-130 loadmaster.

Title ..... KC-130J Reel Observer Initial Training

Description ..... To provide Reel Observers with the skills and knowledge required to recognize basket placement and unsafe conditions in the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... TBD

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ..... Must be a qualified aircrewman.

The following is a list of KC-130J organizational level maintenance courses that will be required to satisfy initial training requirements:

Title ..... KC-130J Organizational Level Power Plants Initial Training

Description ..... To provide MOS 6016 personnel with the skills and knowledge required as a power plants mechanic on the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... 6 weeks (estimated)

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ..... Must be a C-130 power plants mechanic.

Title ..... KC-130J Flight Engineer Organizational Level Ground Maintenance Technician Initial Training

Description ..... To provide MOS 6032 personnel with the skills and knowledge required to be a flight engineer on the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... 8 weeks (estimated)

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ..... Must be a C-130 flight engineer.

Title ..... KC-130J Organizational Level Airframes Initial Training

Description ..... To provide MOS 6056 personnel with the skills and knowledge required to be an airframes mechanic on the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... 4 weeks (estimated)

RFT date ..... TBD

TTE/TD ..... The KC-130J aircraft will be used.

Prerequisite ..... Must be a C-130 airframes mechanic.

Title ..... KC-130J Organizational Level Safety and Survival Equipment Mechanic Initial Training

Description ..... To provide MOS 6086 personnel with the skills and knowledge required to be a safety and survival equipment mechanic on the KC-130J aircraft.

Location ..... Contractor facility, Marietta, Georgia

Length ..... 4 weeks (estimated)

RFT date	TBD
TTE/TD	The KC-130J aircraft will be used.
Prerequisite	Must be a C-130 safety and survival equipment mechanic.

Title	**KC-130J Organizational Level Communication and Navigation Systems Technician Initial Training**
Description	To provide MOS 6316 personnel with the skills and knowledge required to be a communication and navigation systems technician on the KC-130J aircraft.
Location	Contractor facility, Marietta, Georgia
Length	7 weeks (estimated)
RFT date	TBD
TTE/TD	The KC-130J aircraft will be used.
Prerequisite	Must be a C-130 communication and navigation systems technician.

Title	**KC-130J Organizational Level Electrical Systems Mechanic Initial Training**
Description	To provide MOS 6366 personnel with the skills and knowledge required to be an electrical systems mechanic on the KC-130J aircraft.
Location	Contractor facility, Marietta, Georgia
Length	8 weeks (estimated)
RFT date	TBD
TTE/TD	The KC-130J aircraft will be used.
Prerequisite	Must be a C-130 electrical systems mechanic.

b. Follow-on Training. Under the training concept for the initial buy of five KC-130J aircraft, enlisted maintenance training will be provided by LMAS with an On-the-Job Training (OJT) program. An OJT guide will be created for each maintenance training course which will be used by resident LMAS Field Service Representatives (FSR) to administer the program. The OJT program will be conducted at the user's base of operations and will utilize the user's aircraft on an "as available" basis. OJT program schedules will be established on-site by the FSR and the designated government maintenance representative. OJT guides will be provided to the FSR prior to delivery of the first aircraft.

When the number of older model aircraft replaced by the KC-130J justify the development and stand-up of organic courses, KC-130J pilot and aircrew training courses will be established at Marine Aerial Refueler Transport Training Squadron (VMGRT)-253 Fleet Readiness Squadron (FRS). VMGRT-253 Fleet Replacement Enlisted Skills Training (FREST) and MTU 1078 will establish organic maintenance training courses, when directed by CMC, at Marine Corps Air Station (MCAS) Cherry Point, North Carolina.

As mandated by Chief, Naval Education and Training (CNET), all organizational level courses are in the process of integrating Computer-Based Training (CBT) with its basic elements of Computer-Managed Instruction (CMI), Computer-Aided Instruction (CAI) and Interactive Courseware (ICW) into their curricula for classroom presentation and management.

Following is a list of KC-130J officer and aircrew training courses that will be required to support the organic training requirement:

Title	**KC-130J Fleet Replacement Pilot Training**
CIN .....…….	M-2C-XXX1
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide pilots with the skills and knowledge required to pilot the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	To Be Determined (TBD)
RFT date	TBD
Skill identifier ….	MOS 75XX
TTE/TD	TBD
Prerequisite	Must be a pilot.

Title	**KC-130J Fleet Replacement Copilot Training**
CIN .....…….	M-2C-XXX2
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description……..	To provide copilots with the skills and knowledge required to copilot the KC-130J aircraft.
Length	TBD
RFT date	TBD
Skill identifier…..	MOS 75XX
TTE/TD	TBD
Prerequisite ....…	Must be a copilot.

Title	**KC-130J Mission Specialist**
CIN ……..	TBD
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	The tasks for this position have not been determined. This position will be the third seat or augmented crewmember. It has not been determined if this position will be officer or enlisted.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier ….	TBD
TTE/TD	TBD
Prerequisite	TBD

Title	**KC-130J Fleet Replacement Loadmaster Training**
CIN ……..	M-050-XXX3
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide loadmaster personnel with the skills and knowledge required to be a loadmaster in the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier …	73X1
TTE/TD	TBD
Prerequisite	Must be a loadmaster.

Title	**KC-130J Fleet Replacement Reel Observer Training**
CIN ……	M-050-XXX4
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide Reel Observers with the skills and knowledge required to recognize basket placement and unsafe conditions in the KC-130J aircraft.

Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier ….	73X2
TTE/TD	TBD
Prerequisite	Must be a qualified aircrewman.

The following is a list of KC-130J organizational level maintenance courses that will be required to support the organic training requirement:

Title	**KC-130J Organizational Level Power Plants Training**
CIN ……..	M-601-XXX5
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide MOS 601X personnel with the skills and knowledge required to be a power plants mechanic on the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date …….	TBD
Skill identifier ….	641X
TTE/TD	TBD
Prerequisite ....….	Must be a power plants mechanic.

Title	**KC-130J Flight Engineer Organizational Level Ground Maintenance Technician Training**
CIN …….	M-050-XXX6
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide MOS 603X personnel with the skills and knowledge required to be a flight engineer on the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier ….	73X3

TTE/TD ..... TBD

Prerequisite ..... Must be a flight engineer.

Title ..... KC-130J Organizational Level Airframes Training

CIN ……. M-602-XXX7

Model Manager .. VMGRT-253, MCAS Cherry Point

Description ..... To provide MOS 605X personnel with the skills and knowledge required to be an airframes mechanic on the KC-130J aircraft.

Location ..... VMGRT-253, MCAS Cherry Point

Length ..... TBD

RFT date ..... TBD

Skill identifier …. MOS 605X

TTE/TD ..... TBD

Prerequisite ..... Must be an airframes mechanic.

Title ..... KC-130J Organizational Level Safety and Survival Equipment Mechanic Training

CIN …….. M-602-XXX8

Model Manager .. VMGRT-253, MCAS Cherry Point

Description ..... To provide MOS 608X personnel with the skills and knowledge required to be a safety and survival equipment mechanic on the KC-130J aircraft.

Location ..... VMGRT-253, MCAS Cherry Point

Length ..... TBD

RFT date ..... TBD

Skill identifier … MOS 608X

TTE/TD ..... TBD

Prerequisite .....… Must be a safety and survival equipment mechanic.

Title ..... KC-130J Organizational Level Communication and Navigation Systems Technician Training

CIN …….. M-102-XXX9

Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide MOS 631X personnel with the skills and knowledge required to be a communication and navigation systems technician on the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier ….	631X
TTE/TD	TBD
Prerequisite	Must be a communication and navigation systems technician.

Title	**KC-130J Organizational Level Electrical Systems Mechanic Training**
CIN ……..	M-602-XX10
Model Manager ..	VMGRT-253, MCAS Cherry Point
Description	To provide MOS 636X personnel with the skills and knowledge required to be an electrical systems mechanic on the KC-130J aircraft.
Location	VMGRT-253, MCAS Cherry Point
Length	TBD
RFT date	TBD
Skill identifier ….	633X
TTE/TD	TBD
Prerequisite	Must be an electrical systems mechanic.

c. Student Profiles

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
MOS 6016	° C-601-2011, Aviation Machinist's Mate Common Core Class A1 ° C-601-2013, Aviation Machinist's Mate Turboprop Fundamentals Strand Class A1 ° M-601-0412, KC-130 Aircraft Mechanic

SKILL IDENTIFIER	PREREQUISITE SKILL AND KNOWLEDGE REQUIREMENTS
MOS 6032	° Q-050-1500, Naval Aircrewman Candidate School ° M-050-0418, KC-130 Flight Engineer Organizational Level Maintenance
MOS 6056	° C-603-0175, Aviation Structural Mechanic (Structures and Hydraulics) Common Core Class A1 ° C-603-0176, Aviation Structural Mechanic (Structures and Hydraulics) Organizational Level Strand Class A1 ° M-602-0486, Aircraft Airframes Mechanic, KC-130
MOS 6086	° C-602-2035, Aircrew Survival Equipmentman Common Core Class A1 ° M-602-0462, KC-130 Aircraft Pneumatic System Organizational Level Maintenance
MOS 6316	° C-100-2020, Avionics Common Core Class A1 ° C-100-2018, Avionics Technician O-Level Class A1 ° M-102-0451, KC-130 Communication-Navigation Systems Technician
MOS 6366	° C-100-2020, Avionics Common Core Class A1 ° C-602-2039, Aviation Electrician's Mate Organizational Level Strand Class A1 ° M-602-0455, KC-130 Electrical Systems Technician
MOS 6026	° C-601-2011, Aviation Machinist's Mate Common Core Class A1 ° C-601-2013, Aviation Machinist's Mate Turboprop Fundamentals Strand Class A1 ° M-601-3013, T-56 Engine First Degree Intermediate Level Maintenance

d. Training Pipelines. New training tracks will be required when the number of new KC-130J aircraft procured warrant their development.

(1) M-2C-XXX1, KC-130J Fleet Replacement Pilot Training

(2) M-2C-XXX2, KC-130J Fleet Replacement Copilot Training

(3) TBD, KC-130J Mission Specialist

(4) M-050-XXX3, KC-130J Fleet Replacement Loadmaster Training

(5) M-050-XXX4, KC-130J Fleet Replacement Reel Observer Training

(6) M-050-XXX5, KC-130J Organizational Level Power Plants Training

(7) M-050-XXX6, KC-130J Flight Engineer Organizational Level Ground Maintenance Technician

(8) M-050-XXX7, KC-130J Organizational Level Airframes Training

(9) M-050-XXX8, KC-130J Organizational Level Safety and Survival Equipment Mechanic Training

(10) M-050-XXX9, KC-130J Organizational Level Communication and Navigation Systems Technician Training

(11) M-050-XXX10, KC-130J Organizational Level Electrical Systems Mechanic Training

I. ONBOARD (IN-SERVICE) TRAINING

1. Proficiency or Other Training Organic to the New Development. Aircrew receive training through a commercial contract administered by Naval Air Warfare Center Training Systems Division, Orlando, Florida, or at existing military facilities. Commercial pilot and flight engineer training is conducted by Hercules Flight Training Center, Marietta, Georgia. Enlisted maintenance personnel are trained at a variety of Naval Air Maintenance Training Group Detachment MTUs using existing facilities and courses. This Initial NTSP does not change existing training courses at this time but, when additional KC-130J aircraft are procured, new organic courses will be required.

a. Maintenance Training Improvement Program. The Maintenance Training Improvement Program (MTIP) is used to establish an effective and efficient training system responsive to fleet training requirements. MTIP is a training management tool that, through diagnostic testing, identifies individual training deficiencies at the organizational and intermediate levels of maintenance. MTIP is the comprehensive testing of one's knowledge. It consists of a bank of test questions managed through automated data processing. The Deputy Chief of Staff for Training assisted in development of MTIP by providing those question banks (software) already developed by the Navy. LMAS has been contracted to develop the master task list for the KC-130J for incorporation. MTIP was implemented per OPNAVINST 4790.2G. MTIP allows increased effectiveness in the application of training resources through identification of skills and knowledge deficiencies at the activity, work center, or individual technician level. Refresher training is concentrated where needed to improve identified skill and knowledge shortfalls. MTIP is available on the C-130E.

b. Aviation Maintenance In-Service Training. Aviation Maintenance In-Service Training (AMIST) is intended to support the Fleet training requirements now satisfied by

MTIP, and in that sense is the planned replacement. However, it is structured very differently, and will function as an integral part of the new Aviation Maintenance Training Continuum System (AMTCS) that will replace the existing aviation maintenance training structure. AMIST will provide standardized instruction to bridge the training gaps between initial and career training. With the implementation of AMIST, the technician will be provided the training required to maintain a level of proficiency necessary to effectively perform the required tasks to reflect career progression. AMIST will begin when funding becomes available.

AMTCS will redesign the aviation training process (training continuum), and introduce CBT throughout the Navy technical training process. The application and adoption of recent advances in computer hardware and software technology will enable CBT, with its basic elements of CMI, CAI and ICW to be integrated into the training continuum and provide essential support for standardizing technical training. LMAS has been contracted to provide CBT for the KC-130J.

2. Personnel Qualification Standards. NA

3. Other Onboard or In-Service Training Packages. Marine Corps onboard training is based on the current series of MCO P4790.12, Individual Training Standards System and Maintenance Training Management and Evaluation Program (MATMEP). This program is designed to conform with Navy OPNAVINST 4790.2G, as well as Marine Corps maintenance training requirements. It is a performance-based, standardized, level-progressive, documentable, training management and evaluation program. It identifies and prioritizes task inventories by MOS through a front-end analysis process that identifies task, skill, and knowledge requirements of each MOS. MTIP questions coupled to MATMEP tasks will help identify training deficiencies that can be improved with remedial training. (MATMEP will be replaced by AMTCS in approximately FY02.)

J. LOGISTICS SUPPORT

1. Manufacturer and Contract Numbers. The KC-130J aircraft was purchased for the Marine Corps through ECP # 2209 to the Air Force C-130J contract with LMAS.

CONTRACT NUMBER	MANUFACTURER	ADDRESS
TBD	Lockheed Martin Aeronautical Systems	86 South Cobb Drive Marietta, GA 30063

2. Program Documentation. As program documentation becomes available it will be listed here in future updates to this Initial NTSP.

3. Technical Data Plan. As technical publications information becomes available it will be listed here in future updates to this Initial NTSP.

4. Test Sets, Tools, and Test Equipment. An in-depth analysis of the maintenance philosophy for each maintenance level in the identification of special tools and support equipment requirements is ongoing. This information will be updated in future updates to this Initial NTSP.

5. Repair Parts. Supply support for the KC-130J aircraft will be provided by Naval Air Warfare Center Aircraft Division, Indianapolis, through the Material Support Date for common C-130 parts. Unique KC-130J parts will be supplied by LMAS.

6. Human Systems Integration. NA.

K. SCHEDULES

1. Installation and Delivery Schedules. Current planning indicates three KC-130J aircraft are to be delivered during September, October, and November 1999. Initially they will be assigned to Patuxent River, Maryland, for a period of approximately 6 to 12 months. Upon completion of QOT&E at Patuxent River, the aircraft are scheduled for reassignment to VMGRT-253, MCAS Cherry Point. Two additional KC-130J aircraft will be delivered to MCAS Cherry Point in May and June 2000.

2. Ready For Operational Use Schedule. The KC-130J aircraft is ready for operational use upon acceptance by the squadron.

3. Time Required to Install at Operational Sites. NA.

4. Foreign Military Sales and Other Source Delivery Schedule. For information on KC-130J aircraft Foreign Military Sales, refer to PMA207.

5. Training Device and Technical Training Equipment Delivery Schedule. The Training Device and Technical Training Equipment delivery schedule will be included in future updates to this Initial NTSP.

L. GOVERNMENT-FURNISHED EQUIPMENT AND CONTRACTOR-FURNISHED EQUIPMENT TRAINING REQUIREMENTS. NA.

M. RELATED NTSPs AND OTHER APPLICABLE DOCUMENTS. The following documents were referenced during the preparation of this Initial NTSP:

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Preliminary Manufacturer's Model Specification ER/S-7200M/J KC-130J Tanker Aircraft	ER/S-7200M/J	LMAS	Preliminary

DOCUMENT OR NTSP TITLE	DOCUMENT OR NTSP NUMBER	PDA CODE	STATUS
Integrated Logistics Support Working Group Minutes	ILSWG#4	LMAS	Final

APPENDIX A - POINTS OF CONTACT

NAME, ACTIVITY, CODE	FUNCTION	TELEPHONE NUMBERS COMMERCIAL, DSN, FAX INTERNET ADDRESS
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MAJ F. Simonds CMC, MCCDC C5325A	Total Force Structure Division	(703) 784-6241, DSN 278 (703) 278-4914 Fax zoid@mindless.com
Mr. Victor Brown NAVAIRSYSCOM AIR 3.1.4C	Logistics Manager	(301) 757-6814, DSN 757 (301) 757-9800 Fax brown_vl.ntrprs@navair.navy.mil
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LCDR E. Hawkins CINCLANTFLT N343	Aviation NTSP Manager	(757) 322-0104, DSN 836 (757) 322-0141 Fax email none

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CAPT S. Davis BUPERS PERS-4B	Deputy Assistant, Chief of Military Personnel for Distribution	(703) 604-3454, DSN 664 (703) 614-7705 Fax p4b@bupers.navy.mil
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NAME, ACTIVITY, CODE	FUNCTION	TELEPHONE NUMBERS COMMERCIAL, DSN, FAX INTERNET ADDRESS
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