TM 11-4920-209-15-1

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS,

AND DEPOT MAINTENANCE MANUAL INCLUDING

REPAIR PARTS AND SPECIAL TOOLS LIST

TABLE, TILTING, GYRO INSTRUMENT

TESTING MX-4042A/ASW-12

This copy is a reprint which includes current pages from Changes 1.

HEADQUARTERS, DEPARTMENT OF THE ARMY
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TECHNICAL MANUAL
No. 11-4920-209-15-1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *10 May 1968*

Operator, Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tool Lists
TABLE, TILTING, GYRO INSTRUMENT TESTING MX-4042A/ASW-12

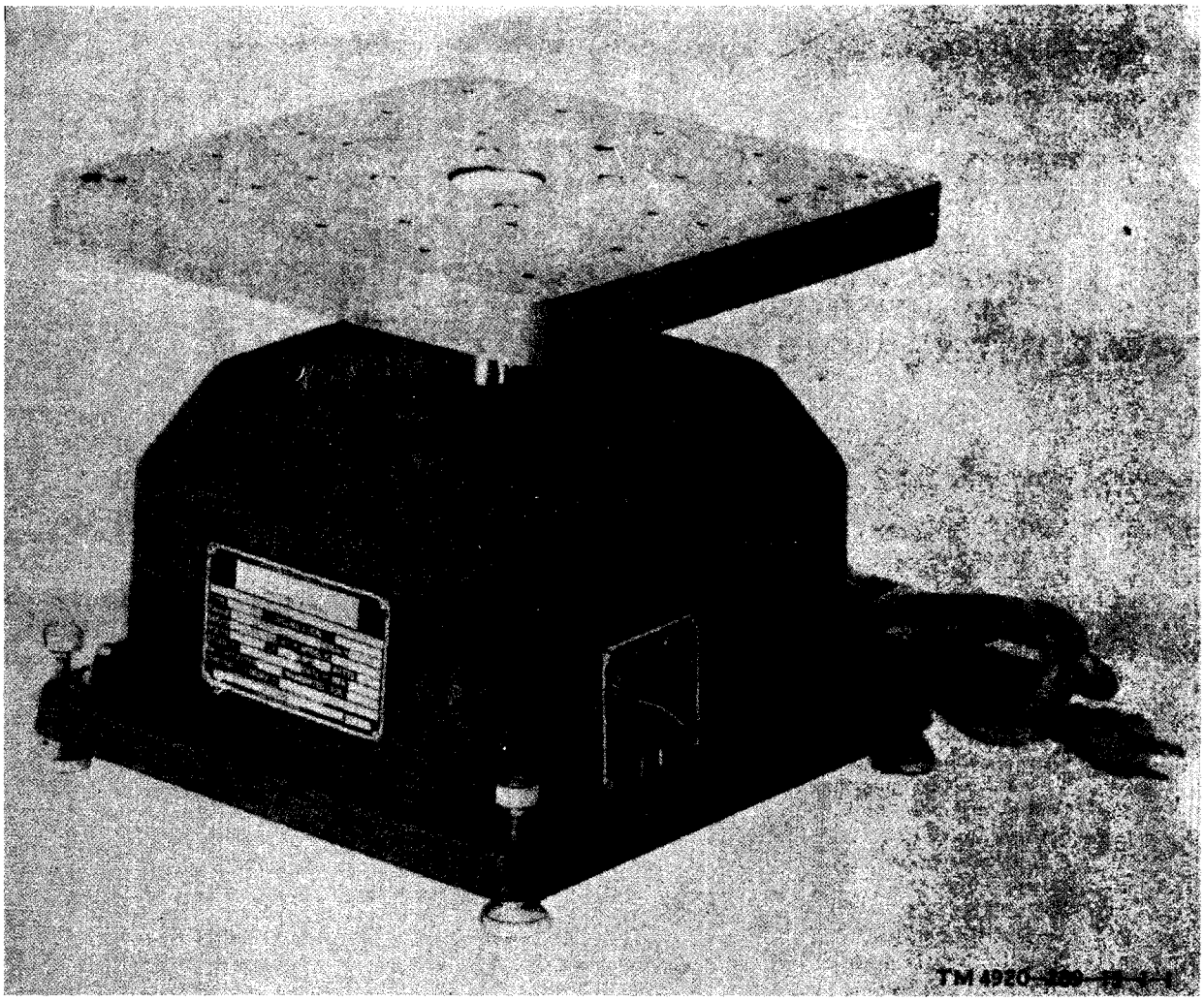

Figure 1-1. Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12.

CHAPTER 1
INTRODUCTION

1-1. Scope

This manual describes Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12 (fig. 1-1) and covers its operation and maintenance. It includes inspection and lubrication of the equipment, troubleshooting, and maintenance service and inspection procedures.

1-2. Indexes of Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO'S) pertaining to the equipment.

1-3. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750 (Army). Air Force personnel will use AFM 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/AFR 71-13, and DSAR 4145.8.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/AFR 75-18, and DSAR 4500.15.

1-3.1 Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-Q, Fort Monmouth, NJ 07703.

1-4. Purpose and Use

The Tilting Table MX-4042A/ASW-12 is an electrically driven table designed primarily for shop, production, and qualification testing of aircraft gyroscopic instruments. The motion of the table simulates a combination of roll, pitch, and yaw. The frequency of oscillation is six complete cycles per minute. The head and mounting table may be adjusted to any angle up to fifteen degrees from horizontal.

1-5. Technical Characteristics

Line voltage input . . . . . 115 volts, 60 cycles
Power consumption . . . . .20 watts
Temperature range . . . . .40 degrees to 125 degrees F
Weight 28pounds

1-6. Description of Equipment

The Tilting Table MX-4042A/ASW-12 is electrically operated. Automatic reversing of direction of rotation of the tilting head is provided. When set for automatic reversing (OSC), it will reverse once each minute at the required cycle. When not set in the automatic reversing position, it will operate in either direction (left or right), at the discretion of the operator. The case for the instrument is of ruggedized construction. Adjustable leveling jacks are provided under the base for leveling the machine in conjunction with the table level on the top of the unit.

1-7. Items Comprising an Operable Equipment

Table, Tilting, Gyro Instrument Testing (part No. 213250-3) (mfr code 30120) (NSN 4920-00-937-2554) comprises an operable equipment.

CHAPTER 2
INSTALLATION AND OPERATING INSTRUCTIONS

2-1. Unpacking

a. Packaging Data. When packed for shipment, the gyro testing table is placed in one shipping carton. A typical shipping box and its contents are shown in figure 2-1. The dimensions and volume of the shipping carton are 12 ¾ x 12¾ " x 12¾ ".

b. Removing Contents.

(1) Remove tape from top of cardboard box.

(2) Remove dunnage from box.

(3) Remove the two cardboard fillers and lift instrument out of box.

(4) Remove paper in which instrument is wrapped and remove technical manual.

2-2. Checking Unpacked Equipment

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (para 2).

b. See that the equipment is complete as listed on the packing slip. If a packing slip is not available, check the equipment against the items comprising an operable equipment list (para 1-7). Report all discrepancies in accordance with TM 38-750. Shortage of a minor assembly or part that does not affect proper functioning of the equipment should not prevent use of the equipment.

c. If the equipment has been used or reconditioned, see whether it has been changed by a modification work order (MWO). If the equipment has been modified, the MWO number will appear on the front panel near the nomenclature plate. If modified, see that any operational instruction changes resulting from the modification have been entered in the equipment manual.

NOTE

Current MWO'S applicable to the equipment are listed in DA Pam 310-7.

2-3. Tools and Test Equipment Required for Installation

No tools or test equipment are needed for installation of the tilting table.

2-4. Controls and Indicators

(fig. 2-2)

Control or indicator	*Function*
OFF-L-R-OSC switch	In the OFF position, turns off table. In the LEFT position, table rotates left. In the RIGHT position, table rotates right. In OSC position, table rotates one direction six times and then reverses.
Table level (on top of table).	Indicator for leveling table.
Angle tilt scale (under table).	Adjusts table from 0 to 15 degree angle.
Leveling Jacks	Adjusts table top to level position.

2-5. Starting Procedure

a. Preliminary.

(1) With the table top held firmly in its horizontal position, adjust the leveling jacks located on each corner of the base until the bubble in the table level is centered inside the inscribed circle.

(2) Set the table in desired tilted position by loosening the locking screw located on the side of the head assembly and adjusting to desired angle. The maximum angle of tilt is 15 degrees (30 degrees included angle) from horizontal, as indicated by the graduated scale. The stop screw may be adjusted to limit the tilt of the head to any angle between 0 and 15 degrees from horizontal. With the stop setscrew set to the desired tilt angle, it is not necessary to check the angle of the table during each operation. Push the table into its tilted position for making a test, and push it

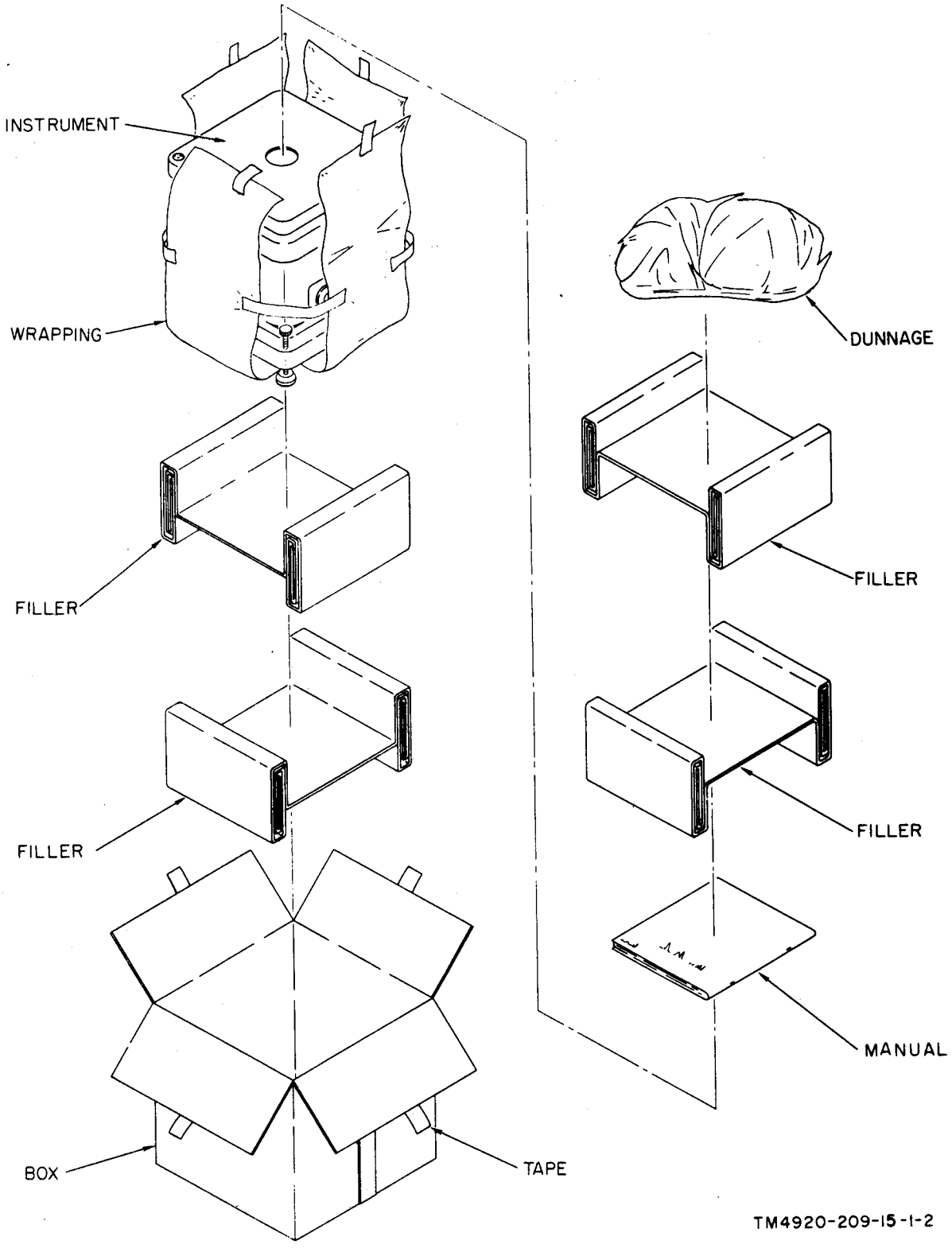

Figure 2-1. Packaging of Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12.

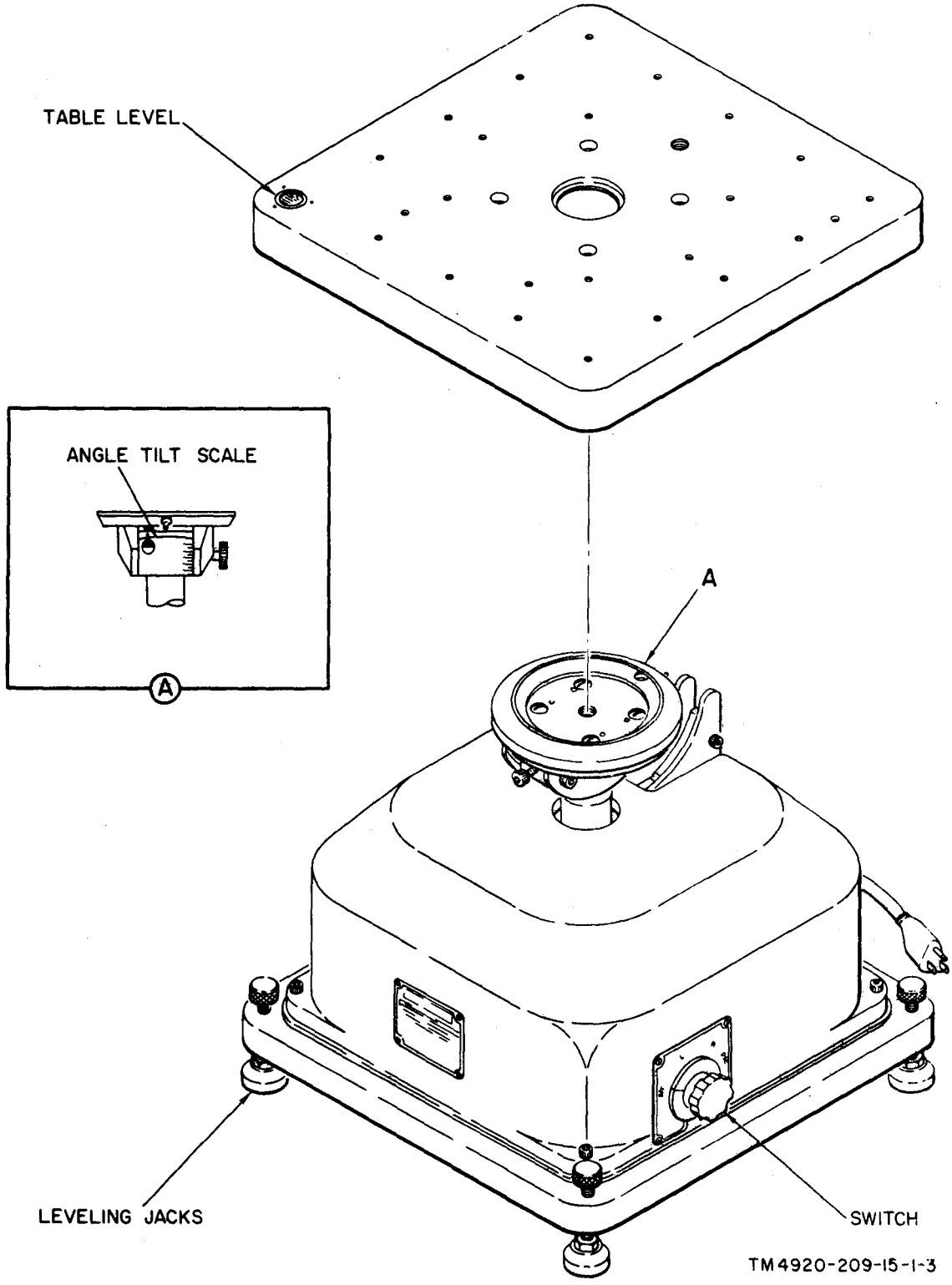

Figure 2-2. Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12 controls.

back to its horizontal position to take an instrument reading.

b. Starting. To start the table, set the OFF-L-R-OSC switch to the desired position.

2-6. Automatic Reversing

Automatic reversing is accomplished by setting the OFF-L-R-OSC switch to the 0SC position. This automatically reverses the direction of rotation every six cycles.

2-7. Stopping Procedure

To stop the table, set the OFF-L-R-OSC switch to the OFF position.

CHAPTER 3

MAINTENANCE

3-1. Scope of Maintenance

The maintenance duties assigned to the organizational repairman of Tilting Table MX-4042A/ASW-12 are listed below with a reference to the paragraph covering the specific maintenance function.

a. Daily preventive maintenance checks and services (para 3-5).

b. Weekly preventive maintenance checks and services (para 3-6).

c. Monthly preventive maintenance checks and services (para 3-7).

d. Cleaning (3-8).

e. Cleaning and touchup maintenance instructions (para 3-9).

f. Lubrication (para 3-10).

g. Troubleshooting (para 3-11).

3-2. Special Tools and Equipment Required for Maintenance

a. Tool Equipment. Tool Kit, Electronic Equipment TK–100/G or Tool Kit, Electronic Equipment TK-105/G, and Multimeter TS-352B/U are required for maintenance.

b. Materials.

(1) Cleaning compound (Federal stock No. 7930-395-9542).

***Warning:* Prolonged breathing of cleaning compound is dangerous; make certain that adequate ventilation is provided. Cleaning compound is flammable; do not use near a flame.**

(2) Cleaning cloth.

(3) Grease, aircraft and instrument (GL) (Federal stock No. 9150-257-5449).

(4) Fine sandpaper.

(5) Touchup paint.

3-3. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 3-4 through 3-13 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (paras 3-5, 3-6, and 3-7) outline functions to be performed at specific intervals. These checks and services are to maintain equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating condition. To assist operators in maintaining combat serviceability, the charts indicate what to check, how to check, and what the conditions are; the references column lists the illustrations or paragraphs, that contain additional information. If the defect cannot be remedied by performing the corrective action indicated, higher category of maintenance or repair is required. Records and reports of these checks and services must be made in accordance with the requirements set forth in TM 38-750.

3-4. Preventive Maintenance Checks and Services Periods

Preventive maintenance checks and service of the tilting table are required on a daily, weekly, and monthly basis. Paragraph 3-5 specifies checks and services that must be performed daily. Paragraph 3-6 specifies checks and services that must be performed weekly. If the equipment is maintained in a standby condition, the daily and weekly checks and services

should be accomplished at the same time. The maintenance checks and services that are accomplished on a monthly basis are specified in paragraph 3-7.

3-5. Daily Maintenance Checks and Services Chart

Sequence No.	*Item*	*Procedure*	*Reference*
1	Completeness	See that the equipment is complete.	
2	Cleanliness	Exterior of equipment must be clean and dry; free of dirt, dust, grease, and fungus.	Para 3-8
3	Level (top of table)	Glass on level should not be broken, the level should not be leaking, and the level should indicate LEVEL POSITION.	Fig. 3-1
4	Front panel switch	Set to L. Check for continuous left rotation.	Para 3-12
5	Front panel switch	Set to R. Check for continuous right rotation.	Para 3-12
6	Front panel switch	Set to OSC. Check that table rotation reverses direction every six cycles. Check that table rotates smooth without chatter.	Para 3-12

3-6. Weekly Maintenance Checks and Services Chart

Sequence No.	*Item*	*Procedure*	Reference
1	Cables	Inspect cords and wires for chafed, cracked, or frayed insulation.	Fig. 3–1①
2	Metal surfaces	Inspect exposed metal for rust and corrosion. Clean and touch up paint as required.	Para 3-9

3-7. Monthly Maintenance Checks and Services Chart

Sequence No.	*Item*	*Procedure*	Reference
1	Lubrication	Lubricate the equipment	Para 3-10
2	Terminal strip	Inspect terminal blocks for loose connections and cracked or broken insulation.	Fig. 3–1①
3	Publications	See that all publications are complete, serviceable, and current.	DA Pam 310–4
4	Modifications	Check DA Pam 310–7 to determine if new applicable MWO's have been published. All URGENT MWO's must be applied immediately. All NORMAL MWO's must be scheduled.	TM 38-750 and DA Pam 310–7
5	Spare parts	Check all spare parts for general condition and method of storage. No overstock should be evident and all storages must be valid requisitions.	App. C

3-8. Cleaning

Inspect the exterior surfaces of the tilting table. The exterior surfaces must be clean, free of dust, dirt, grease, and fungus.

a. Remove dust and loose dirt with a clean soft cloth.

Warning: **Cleaning compound is flammable and its fumes are toxic. Provide adequate ventilation. Do not use near a flame.**

b. Remove grease, fungus, and ground-in dirt from the exterior of the tilting table. Use a cloth dampened (not wet) with cleaning

compound. If dirt is difficult to remove, use mild soap if necessary.

3-9. Touchup Painting Instructions

Remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two thin coats of paint on the bare metal to protect it from further corrosion. Refer to applicable cleaning and refinishing practices specified in TM 9-213.

3-10. lubrication

a. Lubrication of the tilt head trunnions must be performed each month and the table bearing every six months. A month consists of 30 days of normal 8-hour operation. When the equipment is operated more than 8 hours a day, adjust the lubrication intervals accordingly. *For example,* when the equipment is operated 16 hours a day instead of 8, lubricate the equipment every 15 days instead of every month.

b. To apply grease to the tilt head trunnions, dip a piece of wire into the grease and apply it around the stud (29, fig. 3-1) and to sides of the trunnions (19 and 20, fig. 3-1) where the stud rides.

c. To grease the table bearing, apply grease with a grease gun through the grease fitting (35, fig. 3-1).

3-11. General Troubleshooting Information

Troubleshooting this equipment is based upon the operational check contained in the daily preventive maintenance checks and services chart. To troubleshoot this equipment, perform all functions starting with item number 4 in the daily preventive maintenance checks and services chart (para 3-5) and proceed through the items until an abnormal condition or result is observed. When an abnormal condition or result is observed, note the item number and turn to the corresponding, item number in the troubleshooting chart (para 3-12). Perform the checks and corrective actions indicated in the troubleshooting chart.

3-12. Troubleshooting Chart

Item No.	*Trouble symptom*	*Probable trouble*	*Check and corrective measures*
4	Motor fails to run	*a.* Break in wiring	*a.* Repair break.
		b. Defective switch	*b.* Replace switch.
5 and 6	Table fails to reverse	*a.* Defective switch	*a.* Replace switch.
		b. Clutch worn or bent	*b.* Remove head and cover assemblies. If clutch plates are not engaging, remove and straighten or replace.
6	Table chatters	Heads binding	Lubricate table bearing. If chattering continues, add shim to trunnion assembly.
6	Side play in head	Trunnion wear	Remove shim (s) as required from trunnion assembly, until no excessive side play exists.
6	Loose head assembly	Reduction or main gear worn.	Replace gear if play cannot be taken up by adding shim to trunnion assembly

3-13. Repair

When repair of the equipment is necessary, refer to figure 3-1. If an electrical component is replaced, refer to the schematic diagram (fig. 3-2).

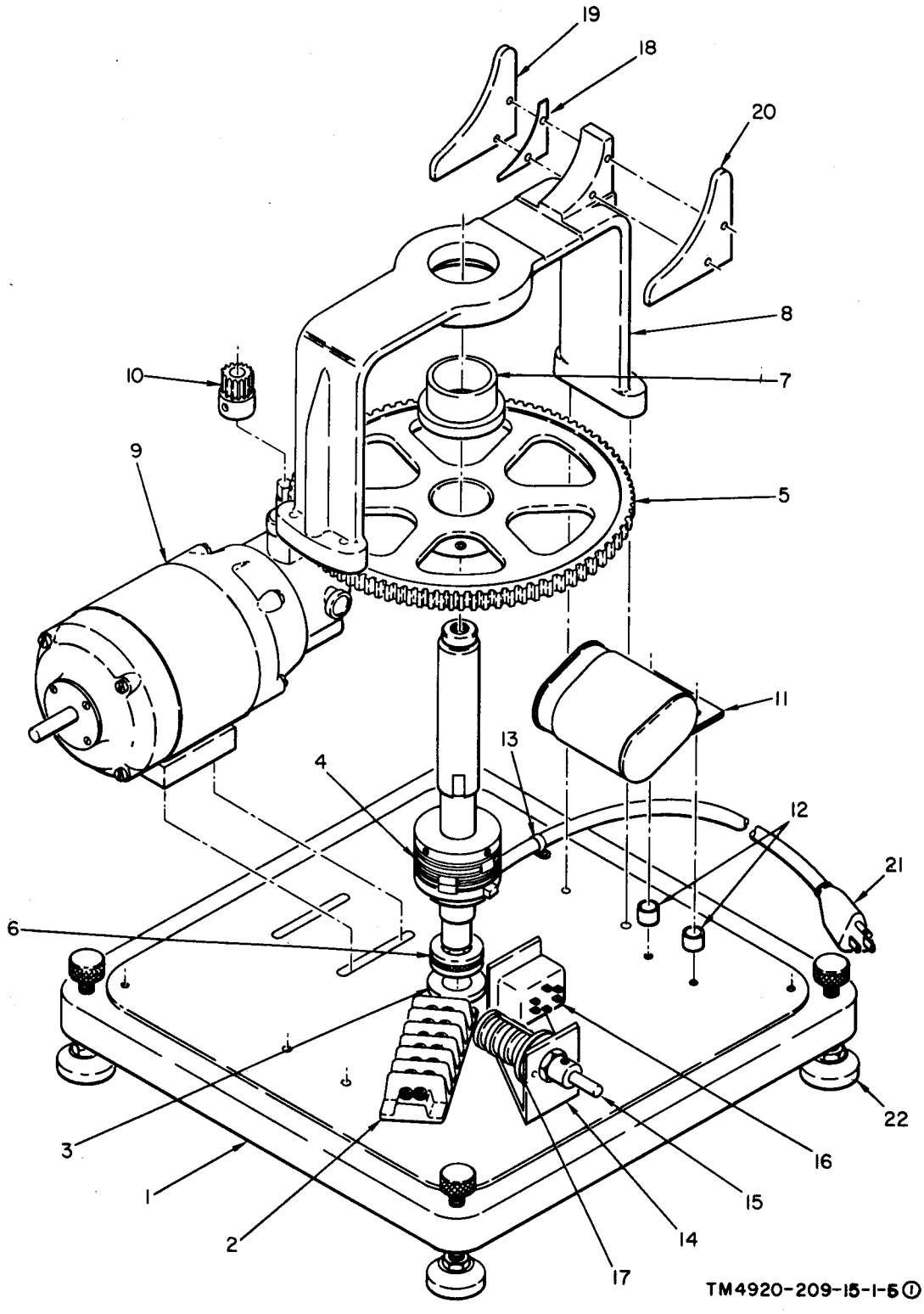

Figure 3-1①. Table, Tilting, Gyro Instrument Testing MX-4O42A/ASW-12, exploded view (sheet 1 of 2).

1 Base assembly
2 Terminal strip
3 Bushing
4 Clutch assembly
5 Gear
6 Bearing
7 Bushing
8 Yoke
9 Motor
10 Gear
11 Capacitor
12 Spacer
13 C lamp
14 Bracket
15 Extension
16 Toggle switch
17 Rotary switch
18 Shim
19 Trunnion
20 Trunnion
21 Line cord
22 Feet

Figure 3-1 ①—Continued.

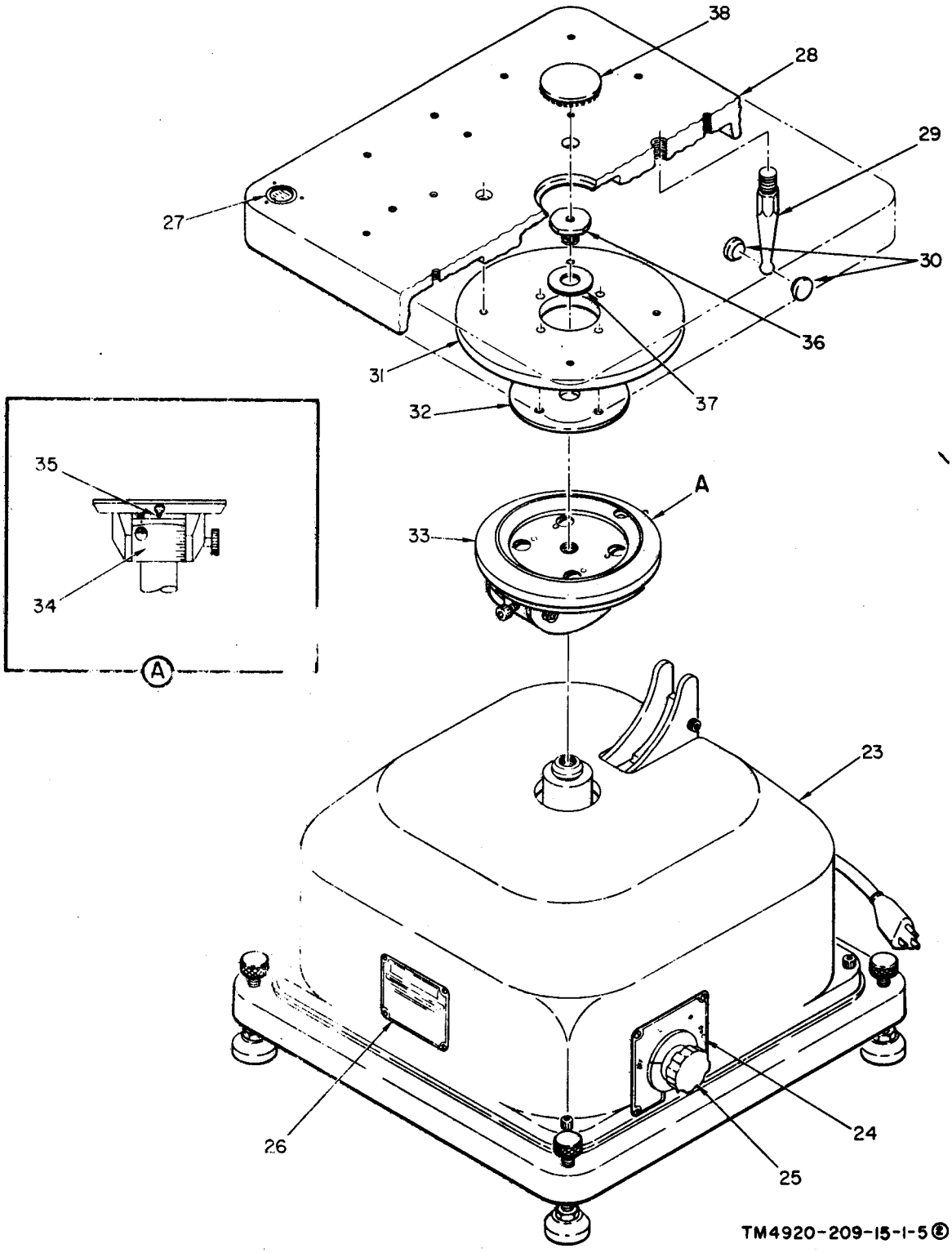

Figure 3-1② . Table, Tilting, Gyro Instrument Testing MX-4042A/12, exploded view (sheet 2 of 2).

23 Case
24 Placard
25 Knob
26 Identification plate
27 Level
28 Table
29 Stud
30 Bearing cup
31 Mounting plate
32 Table centering washer
33 Head assembly
34 Tilt scale
35 Grease fitting
36 Table retaining screw
37 Washer
38 Plug

Figure 3-1 @-Continued.

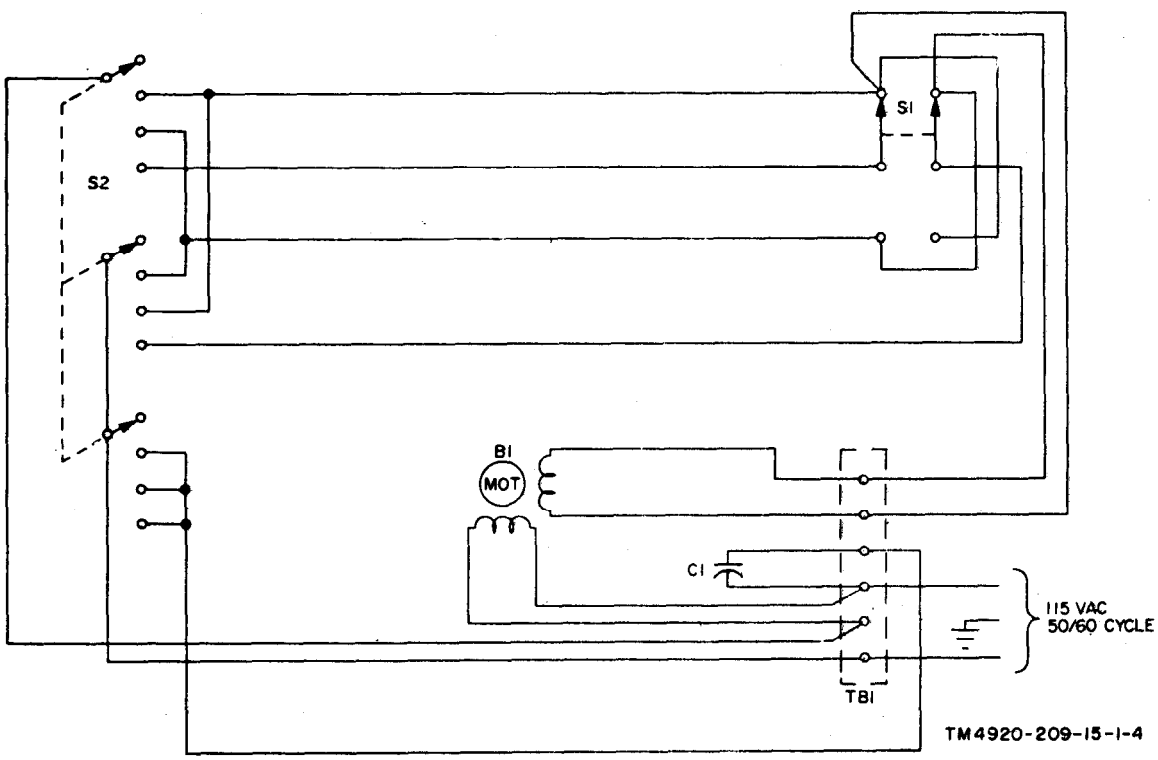

Figure 3-2. Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-l2, schematic diagram.

CHAPTER 4

SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO PREVENT ENEMY USE

4-1. Repackaging for Shipment or limited Storage

The exact procedure for repackaging depends on the material available and the conditions under which the equipment is to be shipped or stored. Adapt the procedures outlined below whenever circumstances permit. The information concerning the original packaging (para 2-1) will also be helpful.

a. Material Requirements. The following materials are required for packaging Tilting Table MX-4042A/ASW-12. For stock numbers of materials, refer to SB 38-100.

Barrier material, waterproof.
Tape, cloth backing, waterproof.
Twine cotton.
Fiberboard, corrugated.
Tape, gummed paper.
Cushioning material.

b. Packaging. Package the tilting table as outlined below.

(1) Cushion the tilting table on all surfaces with pads of cushioning material.

(2) Place the cushioned unit within a wrap of corrugated fiberboard.

(3) Secure the wrap with gummed tape.

(4) Place in waterproof barrier material.

(5) Secure with waterproof tape and cotton twine.

4-2. Authority for Demolition

The demolition procedures given in paragraph 4-3 will be used to prevent the enemy from using or salvaging this equipment. Demolition of the equipment will be accomplished only under the order of the commander.

4-3. Methods of Destruction

The tactical situation and time available will determine the method to be used when destruction of equipment is ordered.

a. Smash. Use sledges, axes, hammers, crowbars, and other heavy took available to smash the unit.

b. Dispose. Bury or scatter destroyed parts or throw them into nearby waterways. This is particularly important if a number of parts have not been completely destroyed.

APPENDIX B

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. General

This appendix provides a summary of the maintenance operations covered in the equipment literature for Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

B-2. Explanation of Format for Maintenance Allocation Chart

a. Group Number. Group numbers correspond to the references designation prefix assigned in accordance with ASY Y32.16, Electrical and Electronics Reference Designations. They indicate the relation of listed items to the next higher assembly.

b. Component Assembly Nomenclature. This column lists the item names of component units, assemblies, subassemblies, and modules on which maintenance is authorized.

c. Maintenance Function. This column indicates the maintenance category at which performance of the specific maintenance function is authorized. Authorization to perform a function at any category also includes authorization to perform that function at higher categories. The codes used, represent the various maintenance categories as follows:

Code	*Maintenance category*
C	Operator/crew
O	Organizational maintenance
F	Direct support maintenance
H	General support maintenance
D	Depot maintenance

d. Tools and Equipment. The numbers appearing in this column refer to specific tools and equipment which are identified by these numbers in section III.

e. Remarks. Self-explanatory.

B-3. Explanation of Format for Tool and Test Equipment Requirements

The columns in the tool and test equipment requirements chart are as follows:

a. Tools *and Equipment.* The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool for the maintenance function.

b. Maintenance Category. The codes in this column indicate the maintenance category normally allocated the facility.

c. Nomenclature. This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

d. Federal Stock Number. This column lists the Federal stock number.

e. Tool Number. Not used.

SECTION II. MAINTENANCE ALLOCATION CHART

GROUP NUMBER	COMPONENT ASSEMBLY NOMENCLATURE	MAINTENANCE FUNCTIONS											TOOLS AND EQUIPMENT	REMARKS
		INSPECT	TEST	SERVICE	ADJUST	ALIGN	CALIBRATE	INSTALL	REPLACE	REPAIR	OVERHAUL	REBUILD		
1	TABLE, TILTING, GYRO INSTRUMENT TESTING MX-4042A/ASW-12	C												Perform visual inspection
			H										1,2	Test for faulty wiring switch, or motor
				C										
								O					3	
									O				3	
										H			1,2	Repair by replacement of motor or repair of faulty switch or wiring
											H		1,2	
												D	1,2	

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOLS AND EQUIPMENT	MAINTENANCE CATEGORY	NOMENCLATURE	FEDERAL STOCK NUMBER	TOOL NUMBER
		MX-4042A/ASW-12 (continued)		
1	F,H,D	MULTIMETER TS-352B/U	6625-242-5023	
2	F,H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-505-0079	
3	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-610-8177	

APPENDIX C

GS AND DEPOT REPAIR PARTS

Section I. INTRODUCTION

C-1. Scope

This appendix contains a list of repair parts required for the performance of general and depot maintenance for Table, Tilting, Gyro Instrument Testing MX-4042A/ASW-12.

Note. No special tools, test, and support equipment are required.

C-2. General

The repair parts list is divided into the following sections:

a. Repair Parts for Direct Support, General Support, and Depot Maintenance, Section II. Repair parts authorized for general support and depot maintenance are included in this section. No parts authorized for stockage at direct support.

Note. All indexes noted below are cross-referenced to index numbers. The index numbers appear in ascending sequence in column 1 of the repair parts list (para C-3a). The index number for the particular item will be the same for the item in all sections of this appendix.

b. Federal Stock Number Cross-Reference to Index Number, Section III. This is a cross-reference index of Federal stock numbers and manufacturer's part numbers to index numbers.

c. Reference Designation Cross-Reference to Index Number, Section IV. This is a cross-reference index of reference designations and/or item numbers to index numbers.

C-3. Explanation of Columns

An explanation of the columns is given below.

a. Source, Maintenance, and Recoverability Codes (SMR) and Index Numbers Column. The first line in this column lists the applicable SMR codes for the part. Listed in ascending order directly below the SMR codes is the index number assigned to the repair part.

(1) *Source code (S).* The selection status and source for the listed item is noted here. Source codes and their explanations are as follows:

Code	*Explanation*
P	Applies to repair parts that are stocked in or supplied from the GSA/DSA, or Army supply system, and authorized for use at indicated maintenance categories.
A	Applies to assemblies that are not procured or stocked as such but are made up of two or more units, each of which carries an individual stock number and description and is procured and stocked and can be assembled by units at indicated maintenance categories.
X1	Applies to repair parts that are not procured or stocked, the requirement for which will be supplied by the use of next higher assembly or component.
X2	Applies to repair parts that are not stocked. The indicated maintenance category requiring such repair parts will attempt to obtain them through cannibalization; if not obtainable through cannibalization, such repair parts will be requisitioned with supporting justification through normal supply channels.

(2) *Maintenance code (M).* The lowest category of maintenance authorized to install the listed item is noted here.

Code	*Explanation*
H	---------- General support maintenance

(3) *Recoverability code (R).* The information in this column indicates whether unserviceable items should be returned for recovery or salvage. Recoverability code and its explanation is as follows:

Note. When no code is indicated in the recoverability column, the part will be considered expendable.

Code	*Explanation*
R	Applies to repair parts and assemblies which are economically repairable at DSU and GSU activities and normally furnished by supply on an exchange basis.

b. Federal Stock Number Column. The Federal stock number for the item is listed in this column.

c. Description Column. This column includes the Federal item name and any additional description of the item required, the manufacturer's part number (reference number), and the applicable five-digit Federal supply code for manufacturers (para C-6). For subsequent appearances of the same item, the manufacturer's code and part number (reference number) are omitted. The words "same as" followed by the index number assigned to the item when it first appeared in the list will follow the item name, e.g., "RESISTOR, FIXED, COMPOSITION: SAME AS A298." Usable on code column is not used.

d. Unit of Issue Column. The unit used as a basis of issue (e.g., ea, pr, ft, yd, etc.) is indicated in this column.

e. Quantity Incorporated in Unit Pack Column. Not used.

f. Quantity Incorporated in Unit Column. The quantity of repair parts in an assembly is given in this column.

g. Maintenance Allowances Column.

(1) The maintenance allowance columns are divided into subcolumns. Indicated in each subcolumn opposite the first appearance of the item is the total quantity of items authorized for the number of equipments supported. Subsequent appearances of the same item will have no entry, in the allowance columns, but will have a reference in the description column to the first appearance of the item. Items authorized for use as required, but not for initial stockage, are identified with an asterisk in the allowance column.

(2) The quantitative allowances for G category of maintenance will represent initi stockage for a 30-day period for the number of equipments supported.

h. One-Year Allowances Per 100 Equipments. Contingency Planning Purposes Column. Opposite the first appearance of each item, the total quantity required for distribution and contingency planning purposes is indicated. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for 1 year.

i. Depot Maintenance Allowance Per 100 Equipments Column. This column indicates the total quantity of each item authorized depot maintenance for 100 equipments. Subsequent appearances of the same item will have no entry in this column, but will have a reference in the description column to the first appearance of the item.

j. Illustrations Column.

(1) *Figure number (a).* The number of the illustration in which the item is shown is indicated in this column.

(2) *Item No. or reference designation (b).* This column lists the reference designations that appear on the part in the equipment.

C-4. Stockage

No parts authorized for stockage at organizational category.

C-5. Location of Repair Parts

a. This appendix contains two cross-reference indexes (sees. III and IV), to be used to locate a repair part when either the Federal stock number, reference number (manufacturer's part number), or reference designation is known. The first column in each cross-reference index is prepared, as applicable, in numerical or alphanumerical sequence. Tl last column of each cross-reference index lis the index number assigned to the part.

b. Refer to the appropriate cross-reference

index (para C-2b and c), and note the index number in the last column; then refer to the repair parts list to locate the index number which is listed in ascending order in column 1 of the repair parts list.

C-6. Federal Supply Codes

This paragraph lists the Federal supply code and the associated manufacturer's name.

Code	*Manufacturer*
00481	Asco Sintering Corp.
07829	Bodine Electric Co.
15605	Cutler-Hammer, Inc.
30120	Ideal-Aerosmith
70270	Alemite Corp.
71002	Birnbach Radio Co., Inc.
71041	Boston Gear Works Division of Murray Co. of Texas
71785	Cinch Mfg. Co. and Howard B. Jones Div.
72512	Davies Harry Molding Co.
72653	G. C. Electronics Co.
72962	Elastic Stop Nut Corp of America
73734	Federal Screw Products, Inc.
80205	National Aerospace Standards Committee
81073	Grayhill, Inc.
82084	Geier and Bluhm, Inc.
88044	Aeronautical Standards Group
96906	Military Standards

SECTION II REPAIR PARTS FOR DIRECT GENERAL SUPPORT, AND DEPOT MAINTENANCE ANCE

(1) SMR CODE / INDEX NO.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF ISSUE	(5) QTY UNIT CK	(6) QTY INCL IN UNIT	(7) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-10	(8) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 50	(c) 1-100	(9) 1 YR MW PER EQUIP MTGCY	(10) DEPOT MAINT MW PER 100 EQUIP	(11) STRATIONS (b) EM NO. OR REFERENCE DESIGNATION
A001	920-937-2554	BLE, TILTING, GYRO INSTRUMENT STING MX-4042A/ASW-12 : 213250-3 ; 120 (This item is nonexpendable)												
A-H-R A002		ASE ASSEMBLY: 217879-1 ; 30120	ea											
X2-H A003		BASE, TABLE: 217876 ; 30120	ea		1									
X2-H A004		TERMINAL BOARD TB1: 6-541; 71785	ea		1									TB1
X2-H A005		SCREW, SOCKET HEAD CAP: NAS608-832-10P; 80205	ea		4									
X2-H A006		BUSHING, SLEEVE: 502-628-32-646; 00481	ea		1									
P-H A007	920-782-1378	CLUTCH ASSEMBLY: 213253-3; 30120	ea		1				*		*	4	1	
X2-H A008		SHAFT, SHOULDERED: 217853; 30120	ea		1									
X2-H A009	305-282-5980	SETSCREW: AN565A8H3 ; 88044	ea		5									
X1 A010		BODY, CLUTCH: 213177; 30120	ea		1									
X1 A011		SPRING, PRESSURE : 219887-48; 30120	ea		3									
X1 A012		PLATE, PRESSURE : 213178 ; 30120	ea		1									
X1 A013		PIN, HOLLOW : 52-012-062-0313 ; 72962	ea		1									
X1 A014		PLATE, CLUTCH: 213180; 30120	ea		1									
X1 A015		SPACER, CLUTCH: 213181; 30120	ea		2									
X1 A016		PLATE, CLUTCH RETAINING: 213179; 30120	ea		1									
X2-H A017	305-957-6265	SCREW, MACHINE : MS35190-210; 96906	ea		3									
X1 A018		SPACER, COUNTER: 213184; 30120	ea		7									
X1 A019		PLATE, COUNTER: 213183; 30120	ea		5									
X1 A020		ACTUATOR: 213254 ; 30120	ea		1									
X1 A021		COLLAR, COUNTER RETAINING: 213185; 30120	ea		1									
P-H A022	4920-880-0541	GEAR, SPUR: 217500 ; 30120	ea		1				*	*	*	4	3	
X2 A023	5 305-619-1120	SETSCREW: AN565A428H6 ; 88044	ea		1									
P-H A024	3110- 580-4220	BEARING, BALL, THRUST: A016; 71041	ea		1				*	*	*	4	4	
X1 A025	3120-555-4150	BEARING, SLEEVE : FB1620-6; 71041	ea		1									
P-H A026	4920-781-8900	YOKE: 217498-1; 30120	ea		1				*	*	*	4	1	
X1 A027		SCREW, SOCKET HEAD CAP: NAS608-3-12P; 80205	ea		4									
P-H A028	5105-688-5020	MOTOR, ALTERNATING CURRENT : B2270EX30 ; 07829	ea		1				*	*	*	4	3	B1

SECTION II REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE (CONTINUED)

	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT PACK	(6) QTY IN UNIT	(7) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) -10	(8) 30-DAY GS MAINT ALLOWANCE (a) -20	(b) 1-50	(c) 1-10	(9) 1 YR ALW PER EQUIP CNTGCY	(10) POI UNIT W PE OO UIP	(a) IG IO.	ILLUSTRATIONS (b) ITEM NO. OR REFERENCE DESIGNATION
	5305-680-3083	SCREW, SOCKET HEAD CAP: NAS608-3-10P; 80205	ea		4										
30		FLYWHEEL: 22122 ;30120	ea		1										
31		SETSCREW : AN565A1032H3 ; 88044	ea		3										
32		GEAR, SPUR : 213047-1 ; 30120	ea		1										
33		SETSCREW: SAME AS [illegible]-1	ea		3										
P-H 34		CAPACITOR, FIXED : M3203 ; 07829	ea		1				*	*	2	8	9		C1
35	5305-527-3746	SCREW, SOCKET HEAD CAP: NAS608-832-8P; 80205	ea		2										
36		SPACER, SLEEVE: 2121 11-5 ; 30120	ea		2										
-H 37	5340-613-9004	CLAMP, LOOP: AN742D5 ; 88044	ea		1										
X2-H 38		SCREW, HEAD CAP: NAS608-832-4P; 80205	ea		1										
-H-I 39		SWITCH ASSEMBLY : 217877-1; 30120	ea		1										
X2-H	5305-589-4942	SCREW, SOCKET HEAD CAP: NAS608-3-6P; 80205	ea		6										
-H 1		BRACKET, SWITCH: 217878; 30120	ea		1										
X2-H A042	5355-503-0018	EXTENSION SHAFT: 534 ; 71002	ea		1										
X1 A043	5305-543-5289	SETSCREW: AN565A6H2; 88044	ea		1										
-H A044	5930-296-9034	SWITCH, TOGGLE: 8363K7; 15605	ea		1				*	*	2	8	15		S1
	5930-236-1807	SWITCH, ROTARY: 5003-4; 81073	ea		1				*	*	2	8	15		S2
P-H A046	5310-283-0947	RING, LOCK: 29-761; 15605	ea		1				*	*	*	5	6		
P-H A047	5310-527-3257	RING, LOCK: 12C1087 ; 81073	ea		1				*	*	*	5	6		
X2-H A048		SHIM: 213024; 30120	ea		1										
X2-H A049		PLATE, SIDE : 213016-1; 30120	ea		1										
X2-H A050		PLATE, SIDE: 213016-2; 30120	ea		1										
X2-H A051	5305-150-9776	SCREW, MACHINE : AN505 -6-6; 88044	ea		4										W1
X2-H A052		CABLE ASSEMBLY, POWER W1: 221885-3-18-8G; 30120	ea		1										
X2-H A053		FOOT, RUBBER: 210103-1; 30120	ea		4										
X2-H A054		SCREW, LEVELING : 210102-1 ; 30120	ea		4										
X2-H A055		NUT, FOOT BEARING: 210104-1; 30120	ea		1										
X2-H A056	5310-043-0520	NUT, PLAIN, HEXAGON: MS35650-3252; 96906	ea		4										

SECTION II REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE (CONTINUED)

(1) SMR CODE / INDEX NO.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF ISSUE	(5) QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 1-5	(c) -10	(8) 30-DAY GS MAINT ALLOWANCE (a) -20	(b) -5	(c) 61-100	(9) 1 YR W PER QUIP TGCY	(10) SPOT LINT W PER OO UIP	(11) USTRATIONS (a) FIG NO.	(b) TEM NO. OR REFERENCE DESIGNATION
X2-H A057		CASE: 213120-1 ; 30120	ea		1										
X2-H A058	5305-579-0838	SCREW, SOCKET HEAD CAP: NAS60 8-832-12P; 80205	ea		4										
X2-H A059		PLATE, INSTRUCTION : 213244; 30120	ea		1										
X2-H A060	5305- 175-3227	SCREW, DRIVE: AN535 -0-3;88044	ea		8										
P-H A061	5355-056-0460	KNOB : 1919-2 ; 72512	ea		1				*	*	*	5	7		
X2-H A062	5305-282-5980	SETSCREW : SAME AS A009	ea		1										
X2-H A063		PLATE, IDENTIFICATION: 222331; 30120	ea		1										
X2-H A064	5305-175-3027	SCREW, DRIVE: SAME AS A060	ea		4										
P-H A065	5210-880 -7891	LEVEL, CYLINDRICAL, CIRCULAR VAI : 2-1 0026; 82084	ea		1				*	*	*	5	2		
X1 A066		SCREW, MACHINE: 2-56X3-8 FILHD ; 73734	ea		3										
A-H-R A067	4920 -860- 4480	TABLE, INSTRUMENT, TEST : 217851 ; 30120	ea		1										
X2-H A068	5305-688-2 113	SCREW, SOCKET HEAD CAP: NAS608-3-8P; 80205	ea		4										
X2-H A069		STUD, SWIVEL: 213020 ; 30120	ea		1										
P-H A070	4920-782-1317	CUP, BEARING: 213018; 30120	ea		2				*	*	*	5	5		
X2-H A071		PLATE, MOUNTING : 217852 ; 30120	ea		1										
X2-H A072	531 0-670 -9759	WASHER, TABLE CENTERING : 210149; 30120	ea		1										
X2-H A073	5305- 589-4942	SCREW, SOCKET HEAD CAP: SAME AS A040	ea		4										
X2-H A074		WASHER, LOCK: AN936A10 ; 88044	ea		4										
P-H A075	4920-676-5750	HEAD ASSEMBLY TABLE : 210113-1; 30120	ea		1				*	*	*	4	1		
X1 A076		HEAD ASSEMBLY : 210112-1 ; 30120	ea		1										
X1 A077		SCREW, SOCKET HEAD CAP: NAS608-5-12P; 80205	ea		1										
X1 A078		PLATE, TOP: 210135-1; 30120	ea		1										
X1 A079		SCREW, MACHINE : 210121 ; 30120	ea		4										
X1 A080		SCREW, SOCKET HEAD CAP: NAS608- 4-6P; 80205	ea		1										
X1 A081		POST, STOP: 210114; 30120	ea		1										
X1 A082	5305-754-2008	SCREW, SOCKET HEAD CAP: NAS608 -4-16P; 80205	ea		1										
X1 A083	4730-05 0-4203	FITTING, LUBRICATION: 1641 ; 70270	ea		1										
X1 A084		SCREW, HEAD LOCK: 213043 30120	ea		1										

SECTION II REPAIR PARTS FOR DIRECT SUPPORT, GENERAL SUPPORT, AND DEPOT MAINTENANCE (CONTINUED)

(1) SMR CODE / INDEX NO.	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION / REFERENCE NUMBER & MFR. CODE / USABLE ON CODE	(4) UNIT OF ISSUE	5 QTY INC IN UNIT PACK	(6) QTY INC IN UNIT	(7) 30-DAY DS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(8) 30-DAY GS MAINT ALLOWANCE (a) 1-20	(b) 21-50	(c) 51-100	(9) 1 YR ALW PER EQUIP CNTGCY	(10) DEPOT MAINT ALW PER 100 EQUIP	a) IG O.	ILLUSTRATIONS (b) ITEM NO. OR REFERENCE DESIGNATION
XC1 A085		PIN, GROVE: Type 21-80DX1-2LG; 73734	ea		4										
XC1 A086		PAD, LEATHER, ROUND BELTING : 7-32DIAX5-16LG ; 30120	ea		1										
XC1 A087		SCREW, LOCK: 222060 ; 30120	ea		1										
X1 A088	310-176-8138	NUT, PLAIN, HEXAGON: AN345-10; 88044	ea		1										
P-H A089	306-880-9402	SCREW, TABLE RETAINING: 210142-2 ; 30120	ea		1				*	*	*	5	2		
XC1 A090	935-799-8738	DISK, CLUTCH : 211614 ; 30120	ea		1										
X2-H A091	340-816-3425	BUTTON, PLUG : 1715C ; 72653	ea		1										

SECTION III INDEX-FEDERAL STOCK NUMBER CROSS REFERENCE TO INDEX NUMBER

FEDERAL STOCK NUMBER	INDEX NO.
3020-880-0548	A022
3110-580-4220	A024
3120-555-4153	A025
4730-050-4203	A083
4920-676-5750	A075
4920-781-8900	A026
4920-782-1317	A070
4920-782-1378	A007
4920-860-4480	A067
4920-937-2554	A001
4935-799-8738	A090
5210-880-7891	A065
5305-150-9776	A051
5305-175-3227	A060
5305-282-5980	A009
5305-527-3746	A035
5305-543-5289	A043
5305-579-0838	A058
5305-589-4942	A040
5305-619-1126	A023
5305-680-3083	A029
5305-688-2113	A068
5305-754-2008	A082
5305-957-6263	A017
5306-880-9402	A089
5310-043-0520	A056
5310-176-8138	A088
5310-283-0947	A046
5310-527-3257	A047
5310-670-9759	A072
5340-613-9004	A037
5340-816-3425	A091
5355-056-0460	A061
5355-503-0018	A042
5930-236-1807	A045
5930-296-9034	A044
6105-688-5029	A028

REF NUMBER	INDEX NUMBER
AN565A1032H3	A031
AN936A10	A074
NAS608-3-12P	A027
NAS608-4-6P	A080
NAS608-5-12P	A077
NAS608-832-4P	A038
NAS608-832-10P	A005
N3203	A034
TYPE 21-80DX1-2LG	A085
210102-1	A054
210103-1	A053
210104-1	A055
210112-1	A076
210114	A081
210121	A079
210135-1	A078
212111-5	A036
213016-1	A049
213016-2	A050
213020	A069
213024	A048
213043	A084
213047-1	A032
213120-1	A057
213177	A010
213178	A012
213179	A016
213180	A014
213181	A015
213183	A019
213184	A018

REF NUMBER	INDEX NO.
213185	A021
213244	A059
213254	A020
217852	A071
217853	A008
217876	A003
217877-1	A039
217878	A041
217879-1	A002
219887-48	A011
22122	A030
221885-3-18-8G	A052
222060	A087
222331	A063
2-56X3-8 FILHD	A066
502-628-32-646	A006
52-012-062-0313	A013
6-541	A004
7-32DIAX5-16LG	A086

SECTION IV INDEX-REFERENCE DESIGNATION CROSS REFERENCE TO INDEX NUMBER

REFERENCE DESIGNATION	INDEX NO.	REFERENCE DESIGNATION	INDEX NO.	REFERENCE DESIGNATION	INDEX NO.
B1	A028				
C1	A034				
S1	A044				
S2	A045				
TB1	A004				
W1	A051				

By Order of the Secretary of the Army:

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