TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

VOLUME I - TROUBLESHOOTING

VOLUME II - MAINTENANCE

INDICATOR, AZIMUTH, MECHANICAL: 10954720-1

(1290-00-370-3456)

NOTE

THE STYLE OF THIS TM IS EXPERIMENTAL. IT IS BEING TRIED BY THE ARMY ONLY ON A LIMITED BASIS

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HEADQUARTERS, DEPARTMENT OF THE ARMY
MARCH 1982

WARNING

Dial (gunner's aid) assembly is spring loaded. Be careful and lift off slowly when removing.

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*TM 9-1290-335-34&P
HEADQUARTERS,
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Washington, D.C., 31 March 1982

Technical Manual
No. 9-1290-335-34&P

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

INDICATOR, AZIMUTH, MECHANICAL: 10954720-1 (1290-00-370-3456)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know.

Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), of DA Form 2028-2 located in the back of this manual directly to:

Commander
U.S. Army Armament Materiel Readiness Command
ATTN: DRSAR-MAS
Rock Island, IL 61299

A reply will be furnished to you.

*This manual supersedes so much of TM 9-1290-335-35, 21 April 1966, as pertains to Direct Support and General Support Maintenance and Repair Parts and Special Tools List including all changes.

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HOW TO USE THIS MANUAL

This manual has two volumes of maintenance information you will need to repair and service the 10954720-1 Mechanical Azimuth Indicator.

- Volume I - Troubleshooting
- Volume II - Maintenance

The organization paragraph in each volume tells you what information you can find in each chapter and appendix.
There are four ways to find any maintenance information you need:

- Index on the front cover which tells what information is contained in each chapter
- Table of contents located at the front of the manual which has a complete listing by paragraph number and page number
- Fault Symptom Index (Vol I, Chap 3) which lists the fault symptoms and shows where to look to fix them
- Maintenance task index (Vol II, App B) which lists major assemblies, subassemblies and paragraph numbers of all maintenance procedures

Before doing any maintenance, you should read and understand HOW TO TROUBLESHOOT on page 1-2. If you do not know the equipment well, you should read the section on description and data (Vol II, Chap 1).

Throughout the manual reference is made to a Job Performance Guide 113-091-9000R (JPG 41C) which helps you to develop skills in doing the maintenance tasks.

TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

VOLUME I - TROUBLESHOOTING

INDICATOR, AZIMUTH, MECHANICAL: 10954720-1

Vol I

CHAPTER 1
INTRODUCTION

1-1. SCOPE

This volume contains troubleshooting requirements and procedures for direct support and general support (DS/GS) maintenance of the 10954720-1 Mechanical Azimuth Indicator. See Volume II for maintenance procedures.

1-2. ORGANIZATION

a. Chapter 2, Checkout Procedure, gives you flow charts to follow to check that the azimuth indicator is working right.

b. Chapter 3, Fault Symptom Index, lists the fault symptoms and where to look in this manual to fix each one.

c. Chapter 4, Fault Isolation Procedure, shows you step-by-step how to troubleshoot fault symptoms found in Chapter 3.

d. Appendix A, Wiring Diagram, may be used to help you find the cause of a fault. Appendix A can be used to trace signal flow or to find out what a voltage should be.

1-3. HOW TO TROUBLESHOOT

The following steps tell you how to troubleshoot. A diagram of these steps is on page 1-3.

(A) Do a visual check and list any faults on DA Form 2404 before making repairs. See Vol II, Chap 3 for what to check for.

(B) If you see any faults that may affect the checkout procedure, fix them now. This does not mean small things like painting scratches.

(C) Do the checkout procedure in Vol I, Chap 2 from the beginning until you find a fault symptom.

(D) When a fault symptom is found, go to the chapter noted and follow the maintenance procedure given there. If you already know the fault symptom, look at the fault symptom index in Chapter 3 of this volume. This will also tell you what to do.

(E) After the fault symptom has been corrected, do the checkout procedure in Chapter 2 again. This is to make sure that all fault symptoms have been corrected.

(F) If all fault symptoms are now corrected, do the maintenance tasks on DA Form 2404.

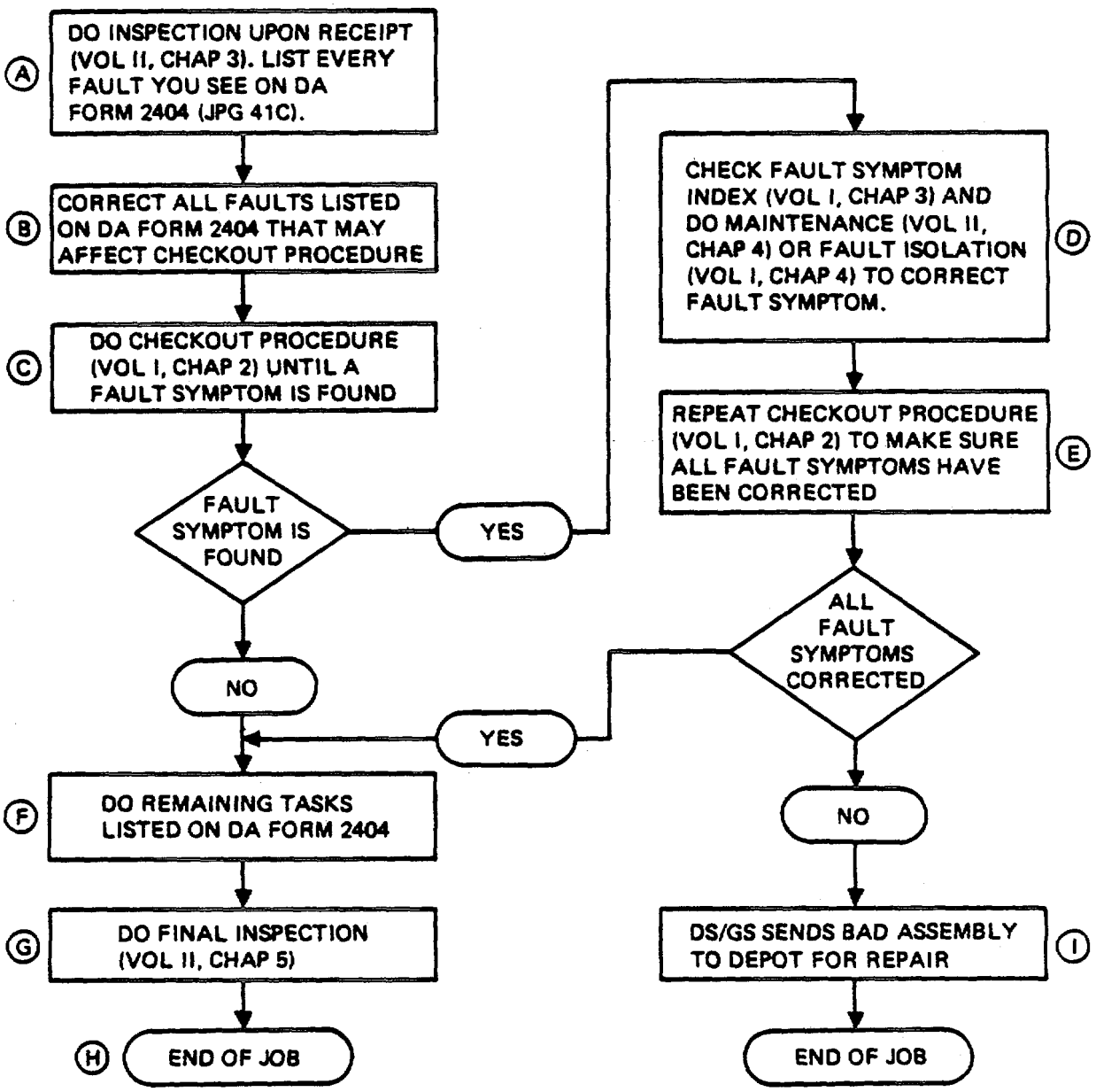
(G) Do the final inspection given in Vol II, Chap 5.

(H) The job is over and the good assembly is sent back to service.

(I) If all fault symptoms were not corrected after step E, the bad assembly is sent back to the depot for repair.

The sample fault isolation procedure (para 1-5) shows you how to use the flow charts in this volume.

1-3. HOW TO TROUBLESHOOT (CONT)



1-4. TEST EQUIPMENT

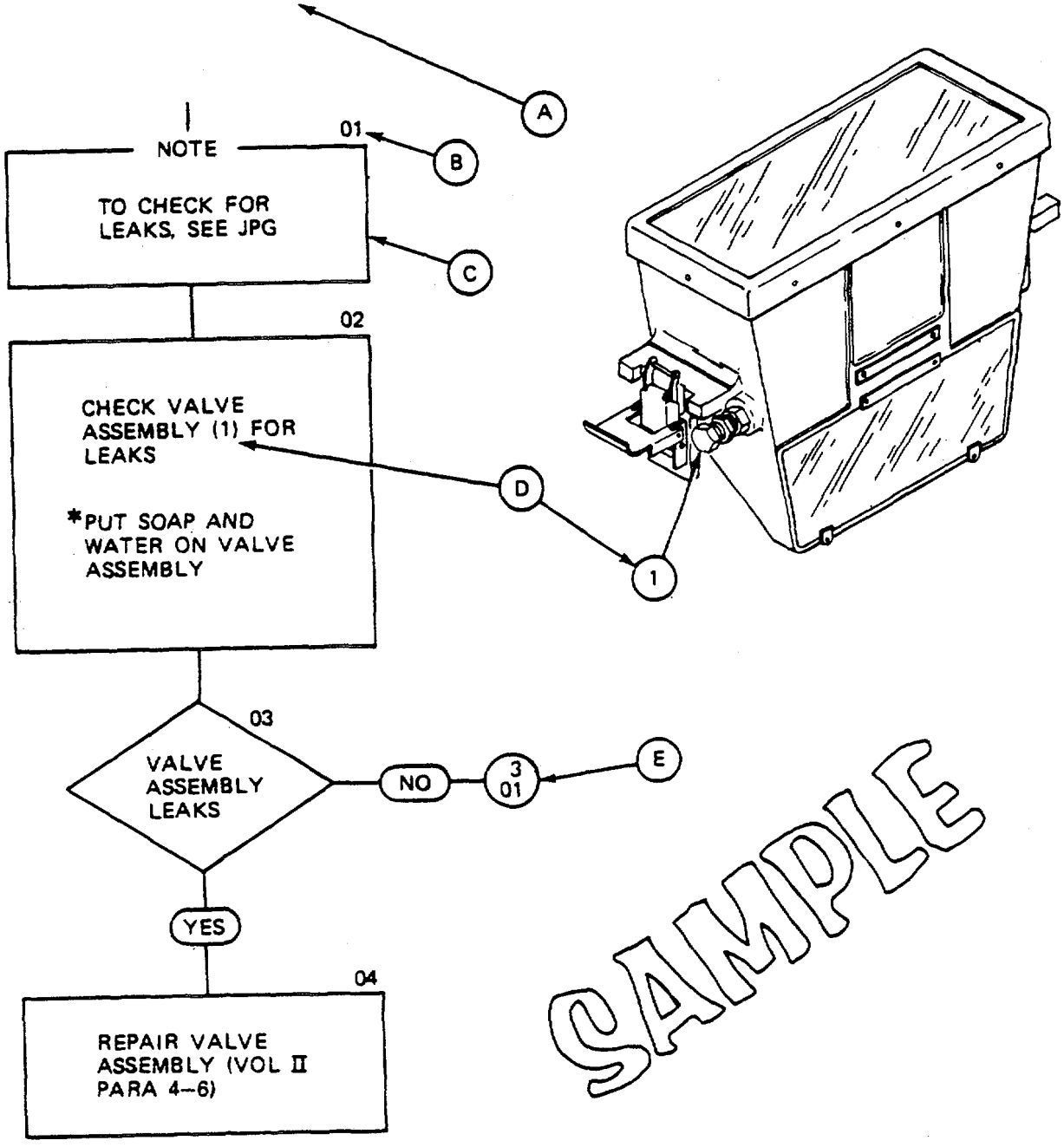
Test Equipment	National Stock Number (NSN)	Test	Reference
0-36 VDC power supply	6130-00-435-1116	Checkout of azimuth indicator	JPG 41C

1-5. SAMPLE FAULT ISOLATION PROCEDURE

The sample fault isolating procedure tells you how to use the flow charts in Chapters 2 and 4.

CALLOUT	DESCRIPTION
(A)	This is the symptom shown in the Fault Symptom Index in Chapter 3.
(B)	Block Number. Tells you the number of the block on the page. Block numbers start over at every page.
(C)	This is a note. It gives useful information that can help you in doing the procedure. A note will always come just before the step of the procedure that it is about. A warning will be labeled at top of block. Always follow the instruction in this kind of block carefully: If you don't, you may be injured or injure someone else. A caution will also be labeled at top of block. The instructions in this kind of block tell you what to do so you will not damage equipment. Be sure you always follow caution instructions carefully.
(D)	Index numbers are found in the procedures and the illustration to help you find the connector, switch, knob, etc. The illustration will always be on the same or an opposite page. Remember you will never have to turn the page to find the illustration.
(E)	The circle is used to send you to another sheet of procedure to keep on troubleshooting. The top number in the circle tells you what sheet to go to. The bottom number tells you what block on that sheet to start with. For example: means that you should go to sheet 3 block 01 to keep on the procedure.

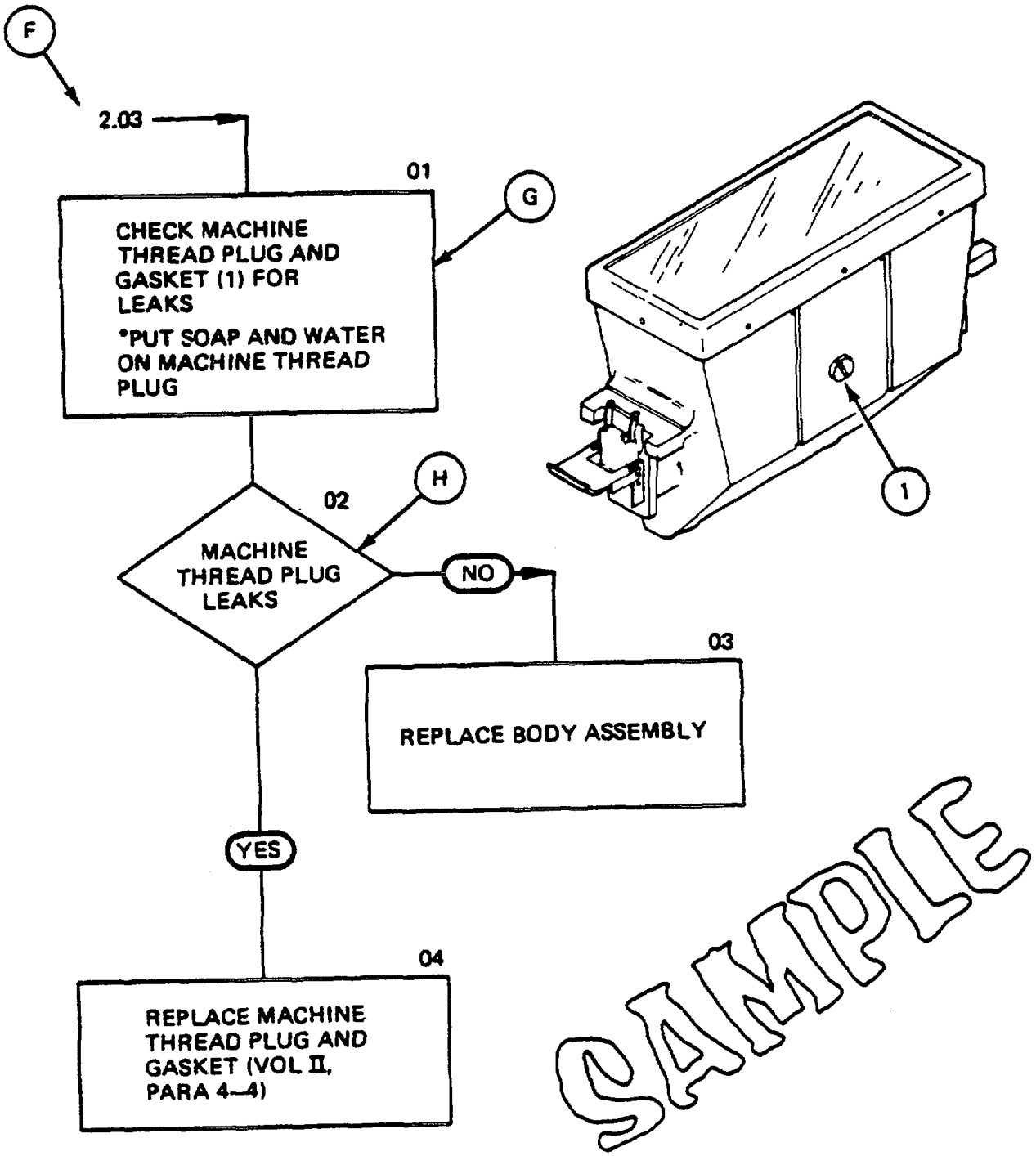
4-3. VIEW IS NOT CLEAR (SHEET 2 OF 3)



1-5. SAMPLE FAULT ISOLATION PROCEDURE (CONT)

CALLOUT	DESCRIPTION
(F)	This tells you where you came from. For example 2.03 means you came from sheet 2, block 03.
(G)	The top part of the box tells you what to do. The bottom part tells you how to do it. After you become more skilled at troubleshooting and know more about the equipment, you may find that you only need to read the top part of the box.
(H)	This diamond shaped box is called a decision point. It asks you to answer a YES or NO question after doing the what-to-do statement. If the answer is YES, you should go down the YES branch. If the answer is NO, you should go down the NO branch.

1-5. SAMPLE FAULT ISOLATION PROCEDURE (CONT)



CHAPTER 2
CHECKOUT PROCEDURE

2-1. SCOPE

Checkout of the Mechanical Azimuth Indicator is done by using the flow chart procedures in this chapter. You must do the checkout procedure from the beginning until a fault symptom is found. When it is, go to the fault symptom index in Chapter 3. After you have corrected the fault, start at the beginning again and do the checkout procedure until the azimuth indicator is working correctly.

2-2. CHECKOUT (SHEET 1 OF 10)

TEST EQUIPMENT: 0-36 VDC power supply

PERSONNEL: One

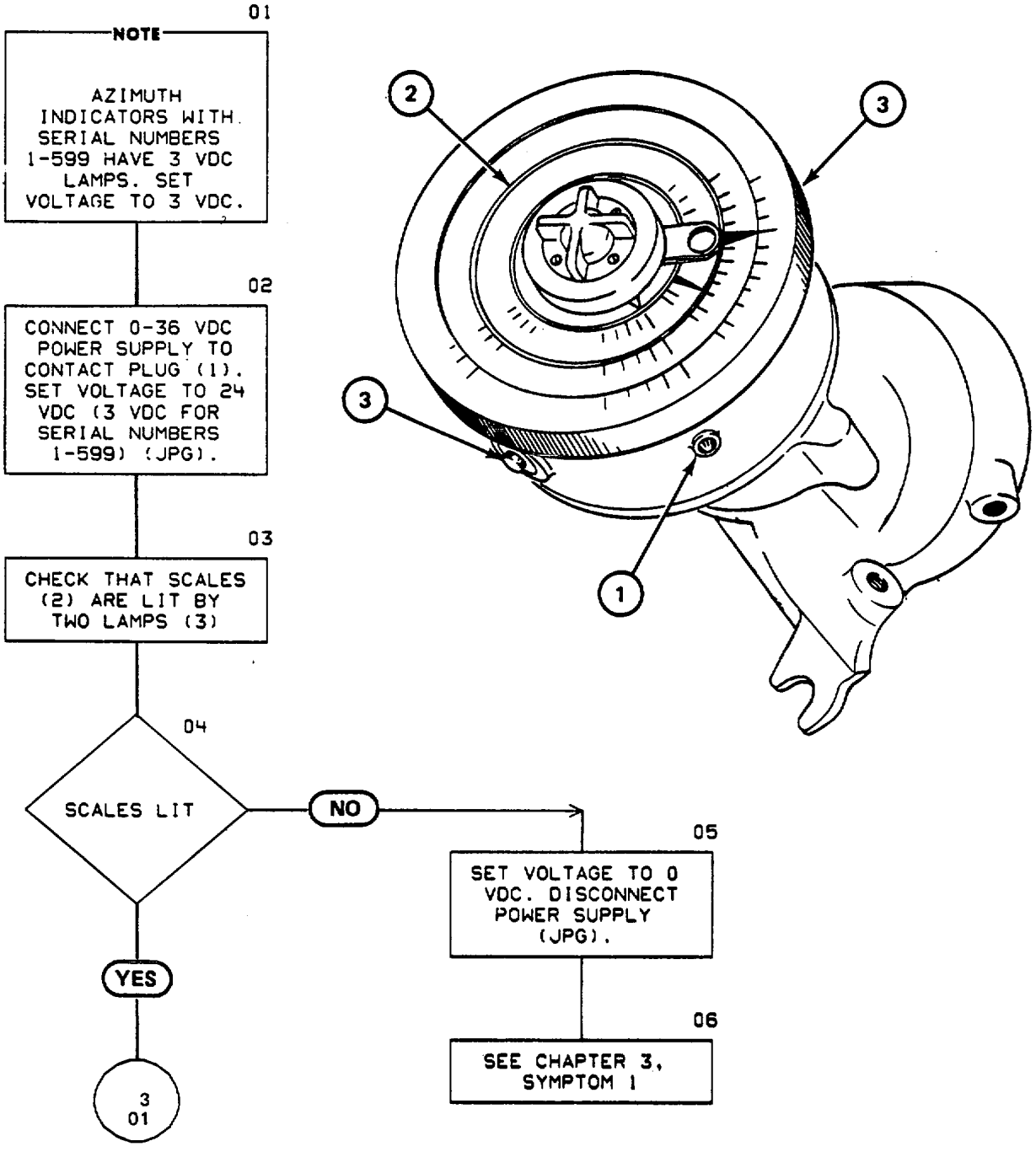
REFERENCES: JPG 41C for using power supply

EQUIPMENT CONDITION: Azimuth indicator on work bench

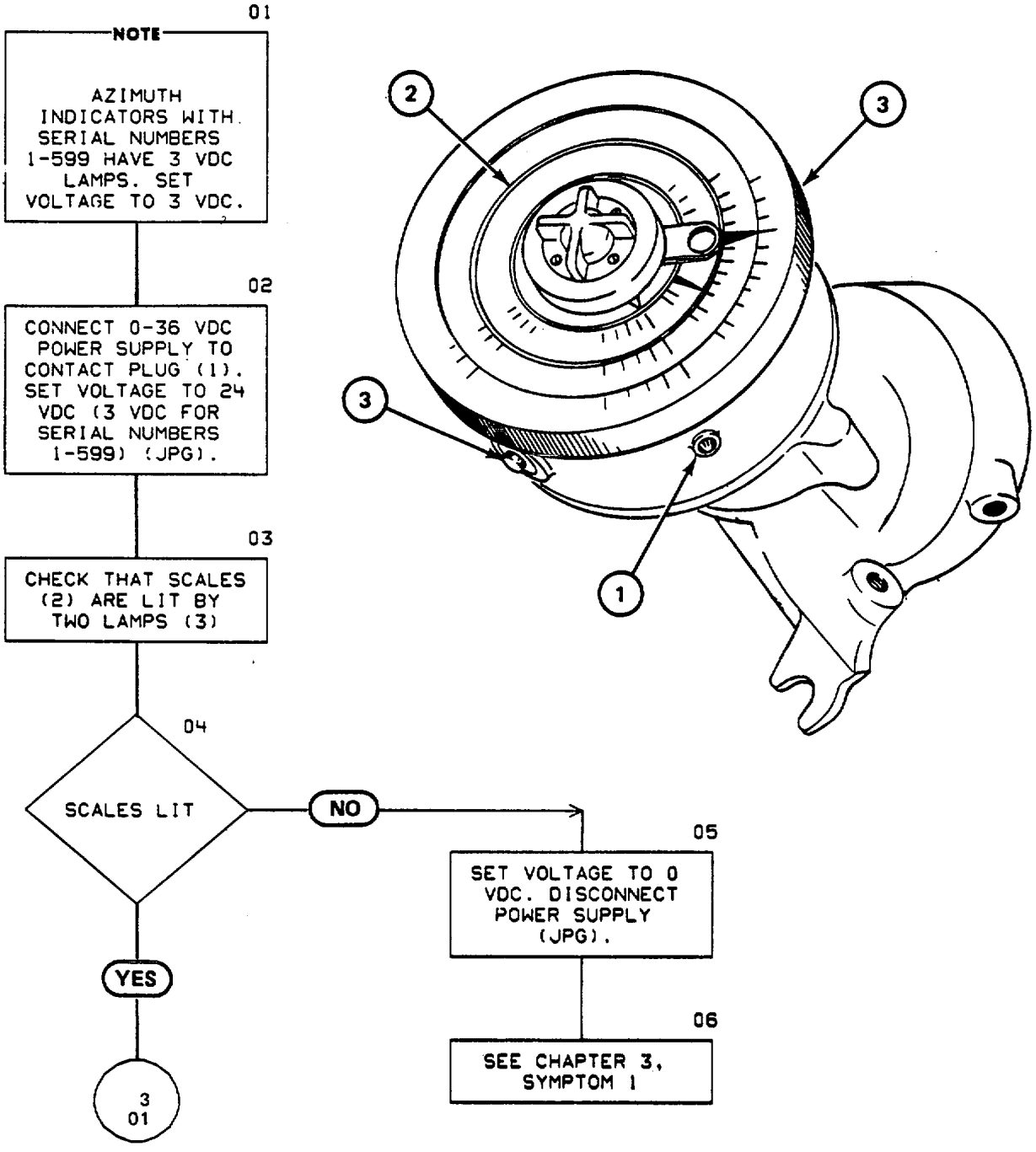
PRELIMINARY PROCEDURES: Do inspection upon receipt (Vol II, para 3-2)

-

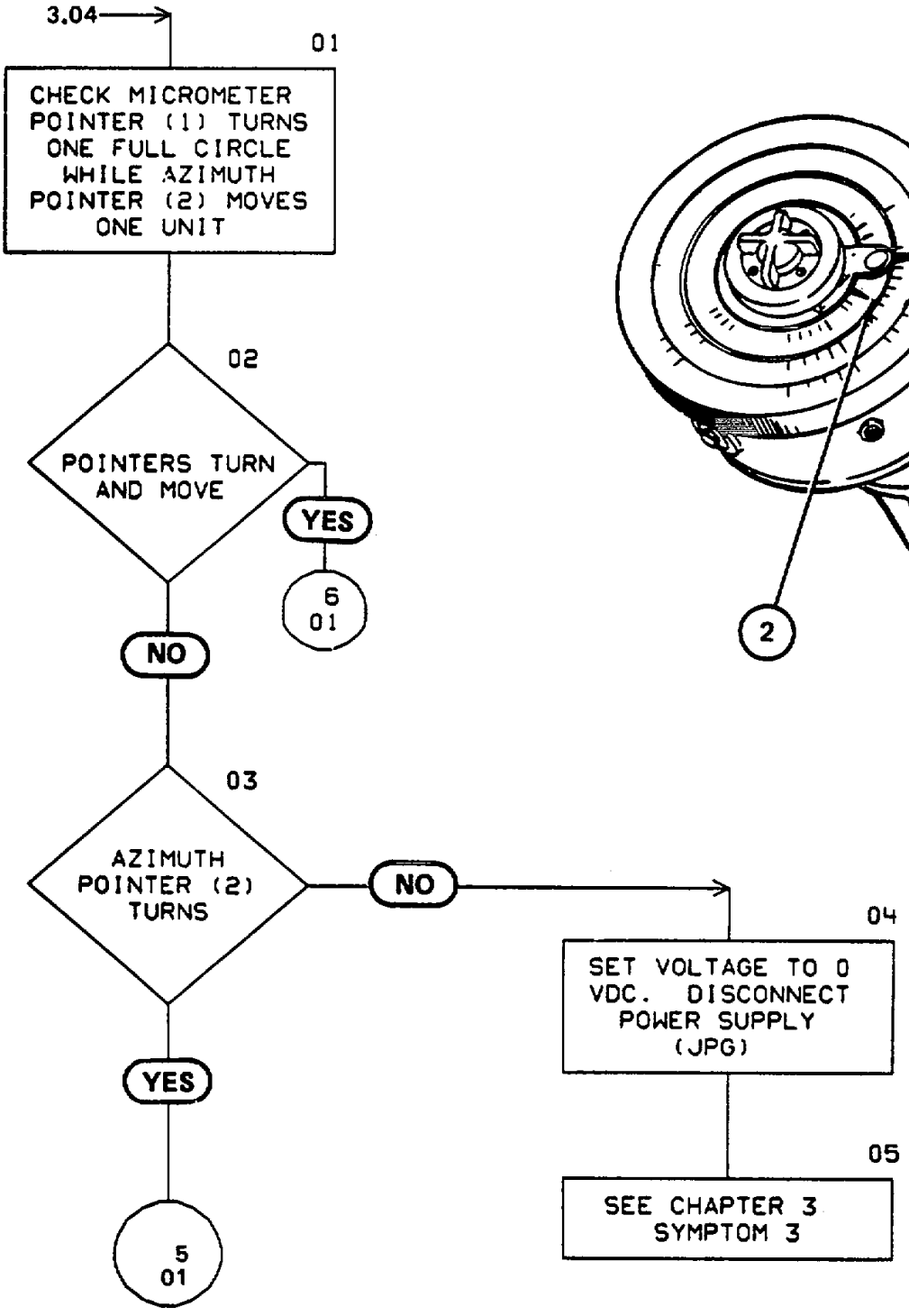
2-2. CHECKOUT (SHEET 2 OF 10)



2-2. CHECKOUT (SHEET 3 OF 10)



2-2. CHECKOUT (SHEET 4 OF 10)



2-2. CHECKOUT (SHEET 5 OF 10)

4.03 →

01

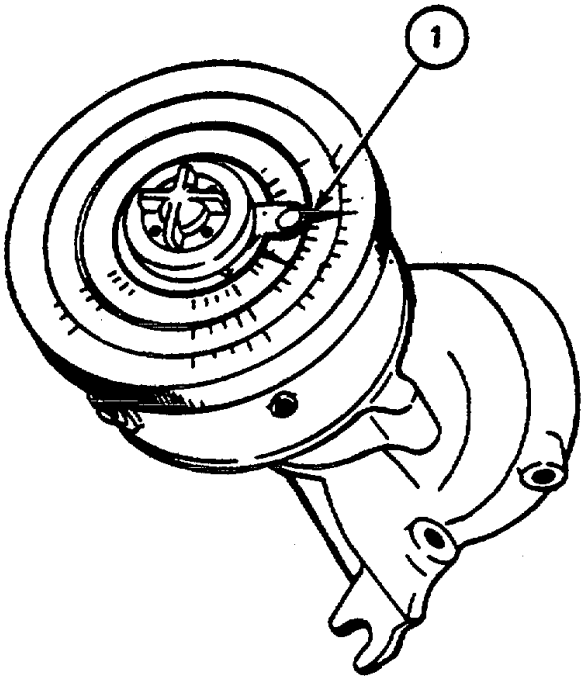
MICROMETER POINTER (1) DOES NOT TURN

02

SET VOLTAGE TO 0 VDC. DISCONNECT POWER SUPPLY (JPG).

03

SEE CHAPTER 3 SYMPTOM 4



2-2. CHECKOUT (SHEET 6 OF 10)

4.03 →

01

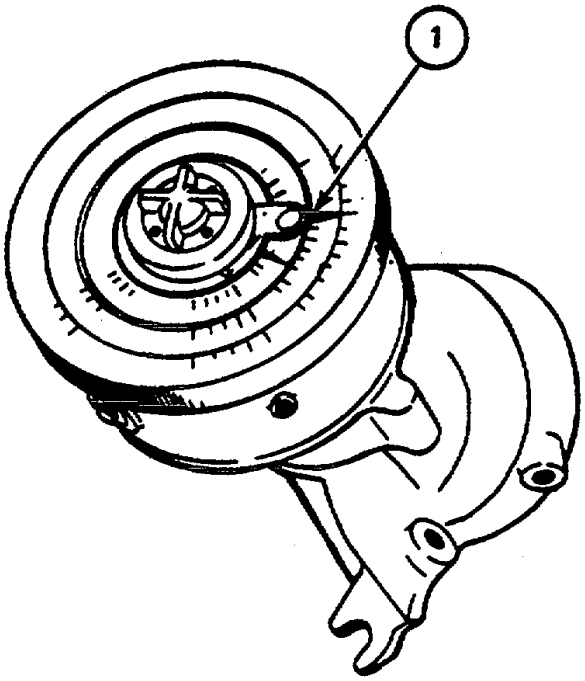
MICROMETER POINTER (1) DOES NOT TURN

02

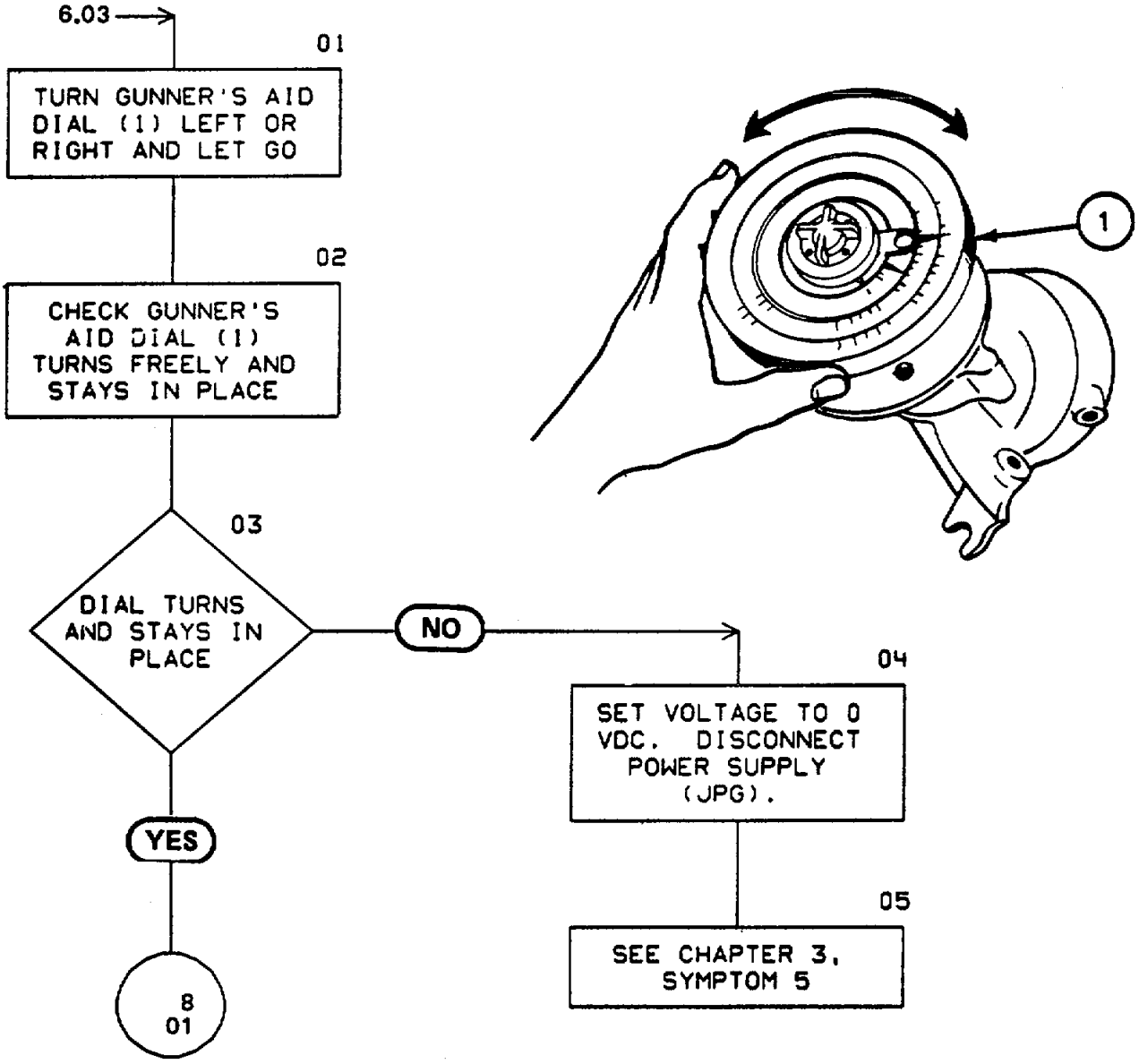
SET VOLTAGE TO 0 VDC. DISCONNECT POWER SUPPLY (JPG).

03

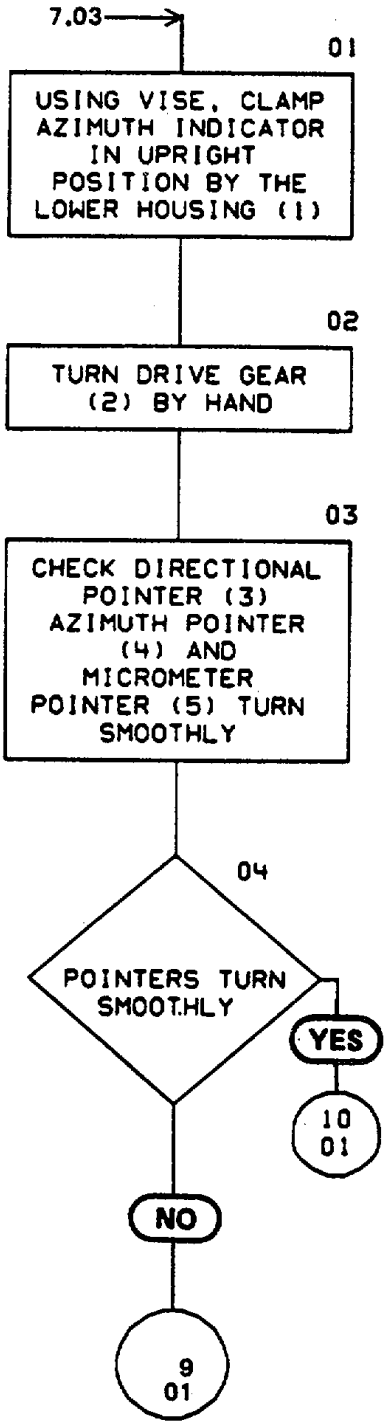
SEE CHAPTER 3 SYMPTOM 4

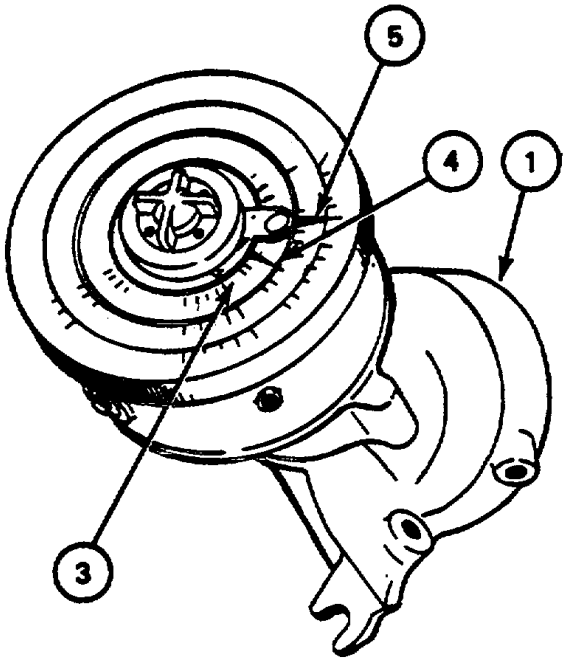


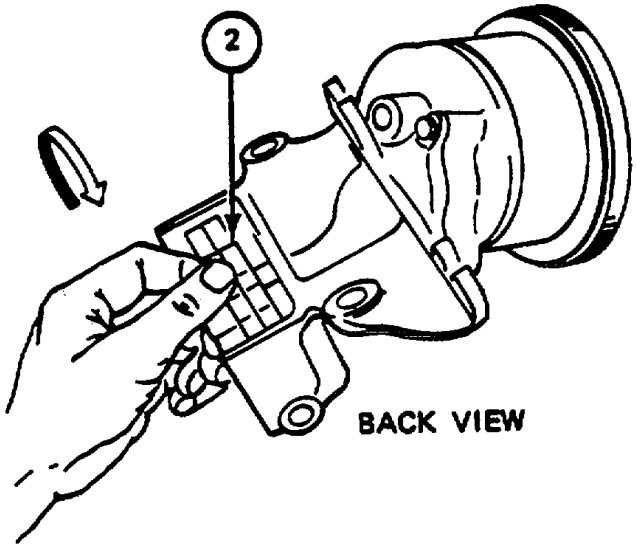
2-2. CHECKOUT (SHEET 7 OF 10)



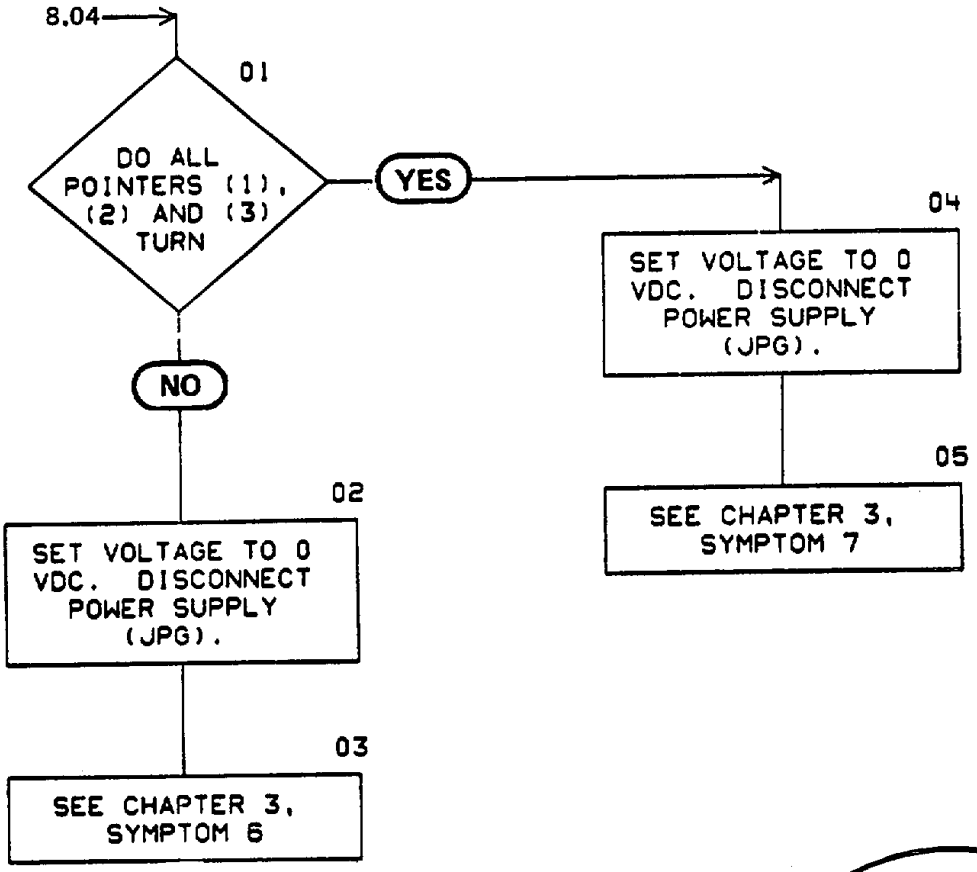
2-2. CHECKOUT (SHEET 8 OF 10)

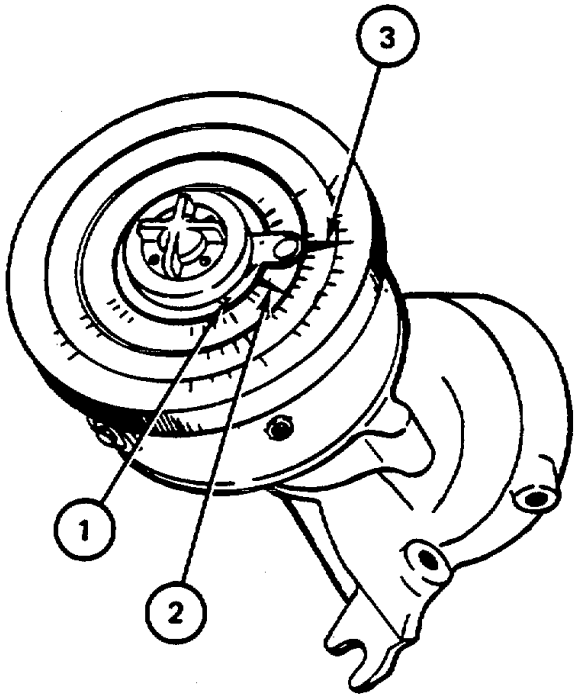




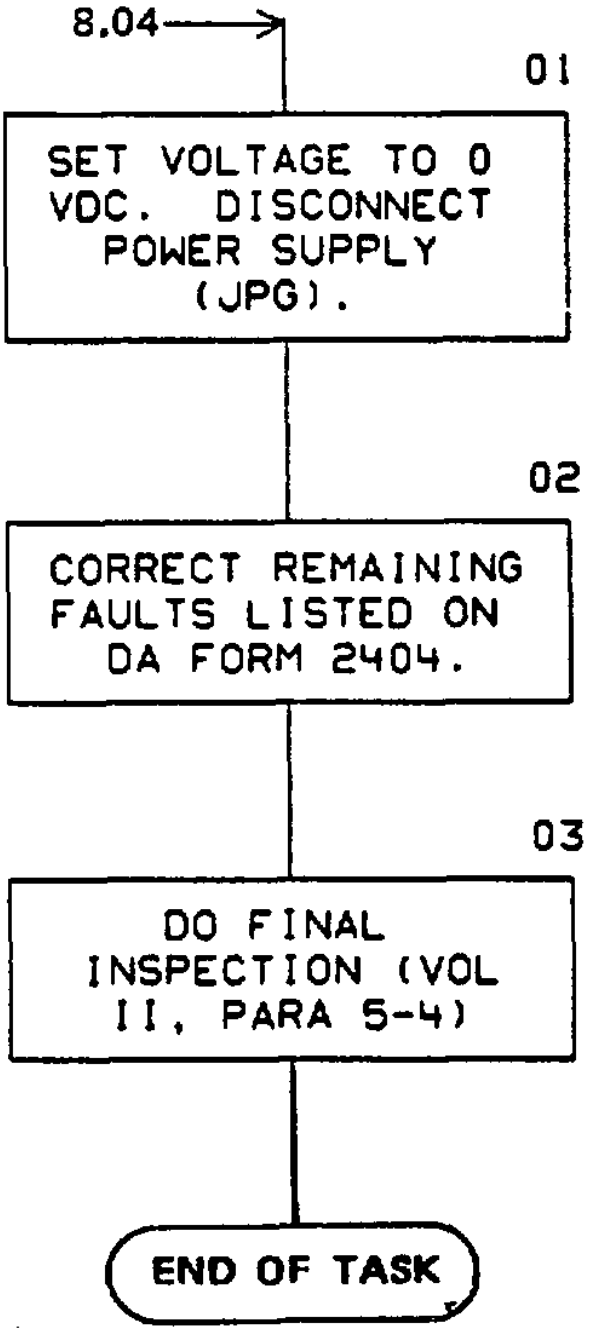


2-2. CHECKOUT (SHEET 9 OF 10)





2-2. CHECKOUT (SHEET 10 OF 10)



CHAPTER 3
FAULT SYMPTOM INDEX

Symptom	Fault Isolation Procedure or Maintenance Procedure
1. Lamp(s) do not light	Paragraph 4-2
2. Resetter knob does not stay in normal (up) position	Replace spring or bad resetter knob part (Vol II, para 4-6)
3. Azimuth pointer does not move when unpressed resetter knob is turned	Replace flange or bad part (Vol II, para 4-9)
4. Micrometer pointer does not turn when unpressed resetter knob is	Replace flange or bad part (Vol II, para 4-9)
5. Gunner's aid dial does not turn smoothly or does not stay in place	Replace damaged spring or clamp (Vol II, para 4-3)
6. Not all pointers turn when gear drive is turned	Replace bad gear (Vol II, para 4-20, 4-25)
7. Pointers do not turn smoothly when drive gear is turned	a. Do backlash adjustment (Vol II, para 5-3) b. Replace worn or broken gear (Vol II, para 4-25)
8. Azimuth pointer and micrometer pointer do not turn together	a. Replace weak spring (Vol II, para 4-12) b. Replace flange (Vol II, para 4-9)

CHAPTER 4
FAULT ISOLATION PROCEDURE

4-1. SCOPE

This chapter gives step-by-step procedures to troubleshoot the azimuth indicator for fault symptoms found during checkout. After the fault has been corrected, do the checkout procedure in Chapter 2 again. This is to make sure that all faults have been corrected.

4-2. LAMP(S) DO NOT LIGHT (SHEET 1 OF 4)

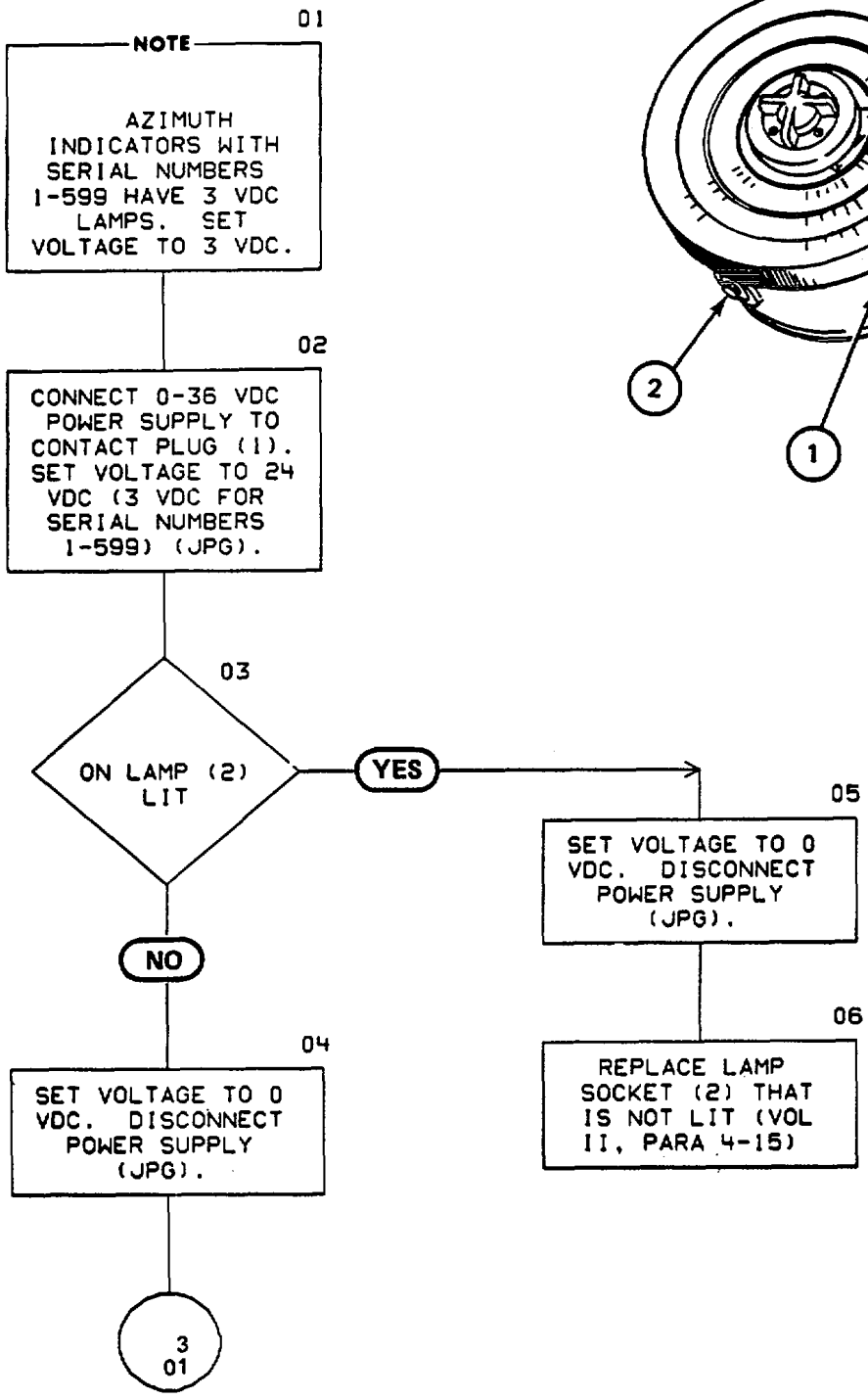
TOOLS: #2 cross tip screwdriver (Phillips type)

TEST EQUIPMENT: 0-36 VDC power supply

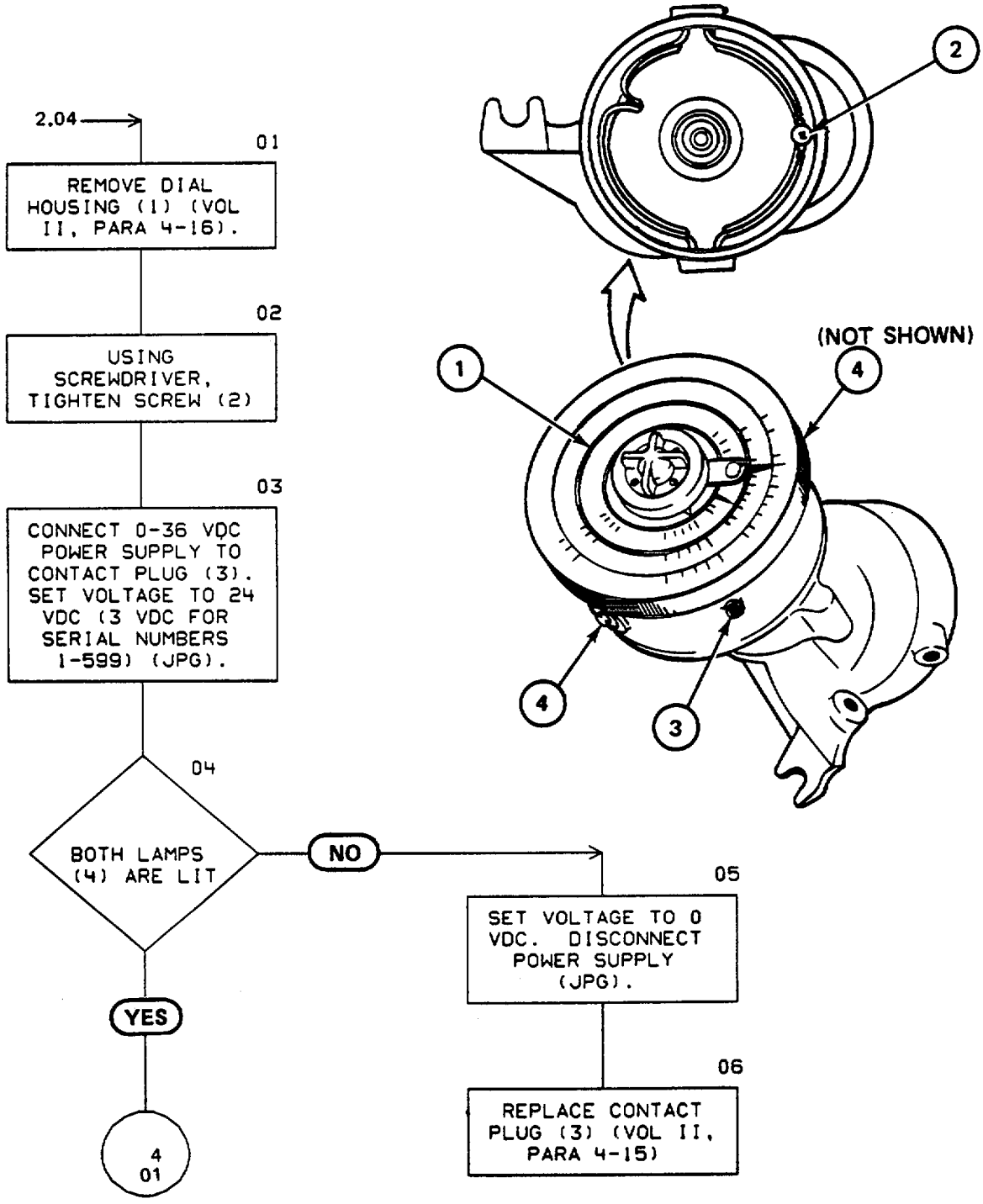
PERSONNEL: One

REFERENCES: JPG 41C for using power supply

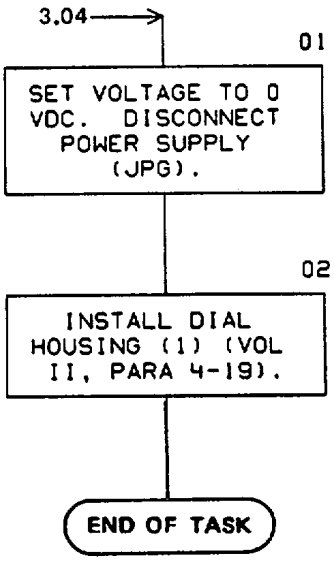
EQUIPMENT CONDITION: Azimuth Indicator on work bench

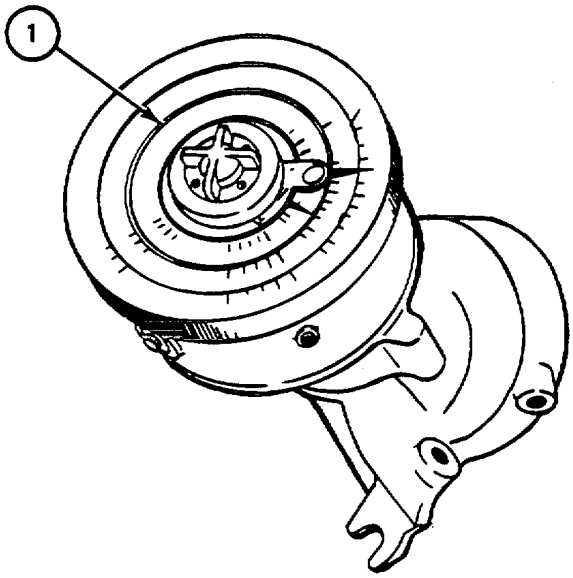

01
NOTE
AZIMUTH INDICATORS WITH SERIAL NUMBERS 1-599 HAVE 3 VDC LAMPS. SET VOLTAGE TO 3 VDC.
02
CONNECT 0-36 VDC POWER SUPPLY TO CONTACT PLUG (1). SET VOLTAGE TO 24 VDC (3 VDC FOR SERIAL NUMBERS 1-599) (JPG).
03
ON LAMP (2) LIT
YES
NO
05
SET VOLTAGE TO 0 VDC. DISCONNECT POWER SUPPLY (JPG).
06
REPLACE LAMP SOCKET (2) THAT IS NOT LIT (VOL II, PARA 4-15)
04
SET VOLTAGE TO 0 VDC. DISCONNECT POWER SUPPLY (JPG).
3
01
2
2
1

4-2. LAMP(S) DO NOT LIGHT (SHEET 3 OF4)



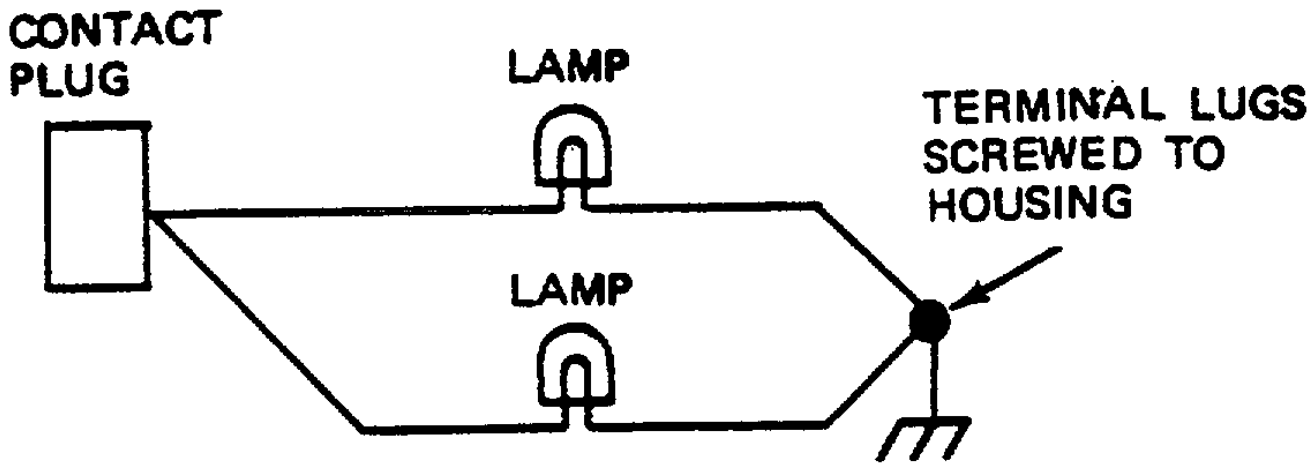
4-2. LAMP(S) DO NOT LIGHT (SHEET 4 OF4)





APPENDIX A
WIRING DIAGRAM

HOUSING (TOP) SCHEMATIC DIAGRAM



TECHNICAL MANUAL

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS)

VOLUME II - MAINTENANCE

INDICATOR, AZIMUTH, MECHANICAL: 10954720-1

Vol II

CHAPTER 1
INTRODUCTION

Section 1. GENERAL

1-1. SCOPE
This volume contains the maintenance requirements and procedures for direct support and general support (DS/GS) maintenance for the 10954720-1 Mechanical Azimuth Indicator. See Volume I for troubleshooting procedures.

1-2. ORGANIZATION
a. Chapter 2, General Maintenance Information, lists the maintenance items and references general procedures that are necessary to do the maintenance in this manual.

b. Chapter 3, Inspection Upon Receipt, gives the kind of defects to look for when the azimuth indicator is returned to DS/GS. A complete inspection should be made and faults listed on DA Form 2404 before any repairs are made.

c. Chapter 4, Maintenance Procedures, give step-by-step procedures to repair faults found during inspection or troubleshooting.

d. Chapter 5, Final Inspection, gives procedures to be done after repair to make sure that the azimuth indicator works and is ready for packaging or installation.

e. Chapter 6, Packaging, gives procedures for packaging the azimuth indicator for storage or shipment.

f. Appendix A, Expendable Supplies and Materials List, lists the supplies and materials needed to repair the azimuth indicator.

g. Appendix B, Maintenance Task Index, helps you find the necessary maintenance tasks for the azimuth indicator.

h. Appendix C, Repair Parts and Special Tools List, gives a listing of repair parts, special tools, and support equipment required for the performance of direct support, general support, and depot maintenance of the azimuth indicator.

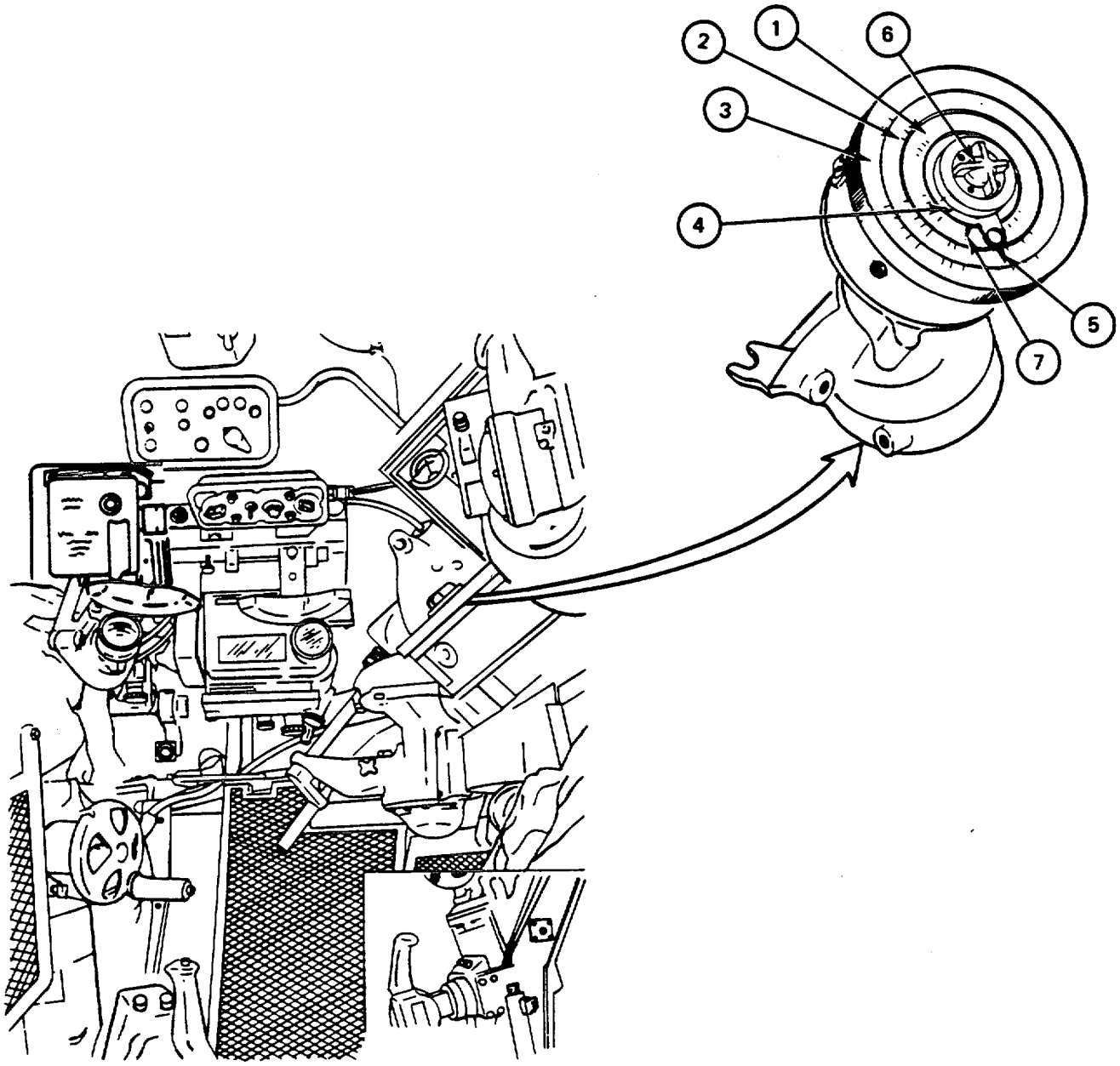
Section 2. DESCRIPTION AND DATA

1-3. DESCRIPTION

The azimuth indicator 10954720-1 has three housing assemblies. The gears, dials, and pointers are arranged so that the turret ring gear drives the pointers. The pointers show the position of the main gun in relation to a given point. The scales are marked in mils.

The indicator has three scales and pointers. The azimuth (1) and micrometer (2) scales are fixed. The scale dial (3) may be turned to any position. The azimuth pointer (4) and micrometer pointer assembly (5) can be turned with the resetter knob (6). The directional pointer (7) is zeroed in relation to the longitudinal axis of the vehicle at installation.

1-3. DESCRIPTION (CONT)



1-4. TABULATED DATA

Dial graduation (100 mil) azimuth scale.	0-3200 0-3200 numbered every 200 mils
Dial graduation (1 mil) micrometer scale.	0-100 mils numbered every 5 mils
Gunner's aid dial graduation (1 mil).	-SO, 0-50 mils numbered every 5 mils
Weight	24 lb (approx)
Height	12 in. (approx.)
Diameter	7 in. (approx)

CHAPTER 2
GENERAL MAINTENANCE INFORMATION

Section 1. GENERAL

2-1. SCOPE
This chapter tells you what special tools and test equipment are needed and where to find general information for the maintenance procedures in this volume.

Section 2. REFERENCE DOCUMENTS

2-2. GENERAL MAINTENANCE
General maintenance procedure for fire control materiel are in TM 9-254 and Job Performance Guide 113-091-9000R (JPG 41C).

2-3. CLEANING
General cleaning procedures are in JPG 41C.

2-4. PAINTING
General painting procedures are in TM 43-0139.

2-5. LUBRICATION
General instructions for how to use lubricants are in JPG 41C.

Section 3. SAFETY PROCEDURES

2-6. GENERAL PROCEDURE
General safety procedures are in AR 385-40 Safety: Accident Reporting and Records.

Safety procedures for using power supplies are in JPG 41C.

First aid procedures are in TB 43-0116 and TB MED522. Procedures for handling, storage and disposal of radioactive material are in AR 385-11.

Section 4. SPECIAL TOOLS AND TEST EQUIPMENT

2-7. TOOLS AND TEST EQUIPMENT

No special tools or test equipment are needed to maintain the mechanical azimuth indicator.

CHAPTER 3
INSPECTION UPON RECEIPT

3-1. SCOPE

This chapter gives procedures to check the Mechanical Azimuth Indicator for faults you can see when it is received in the DS/GS shop. It also tells you what' part of this volume to go to for various repairs. A complete inspection should be made and all faults listed on DA Form 2404 before taking any maintenance actions.

3-2. INSPECTION UPON RECEIPT

SUPPLIES: Paint (item 4, App A)
Paint (item 5, App A)
Paint (item 6, App A)
Primer (item 7, App A)

PERSONNEL: One

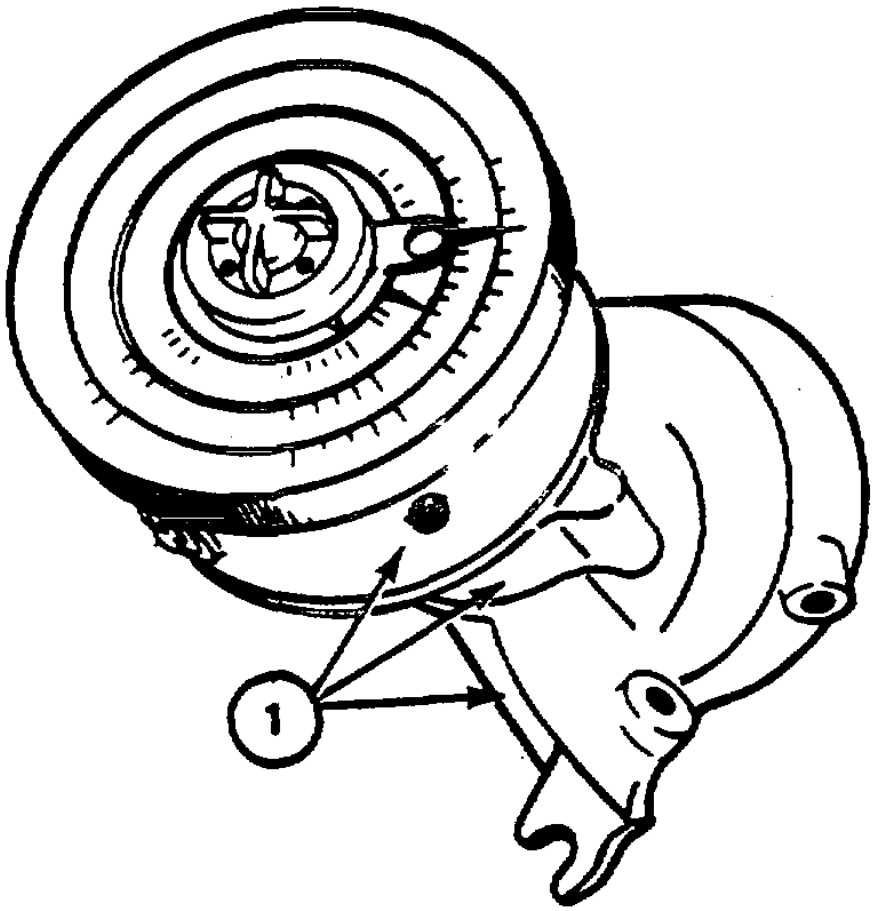
REFERENCES: JPG 41C for: Cleaning azimuth indicator
Completing DA form 2404
TM 43-0139 for painting

EQUIPMENT CONDITION: Azimuth Indicator on work bench

3-2. INSPECTION UPON RECEIPT (CONT)

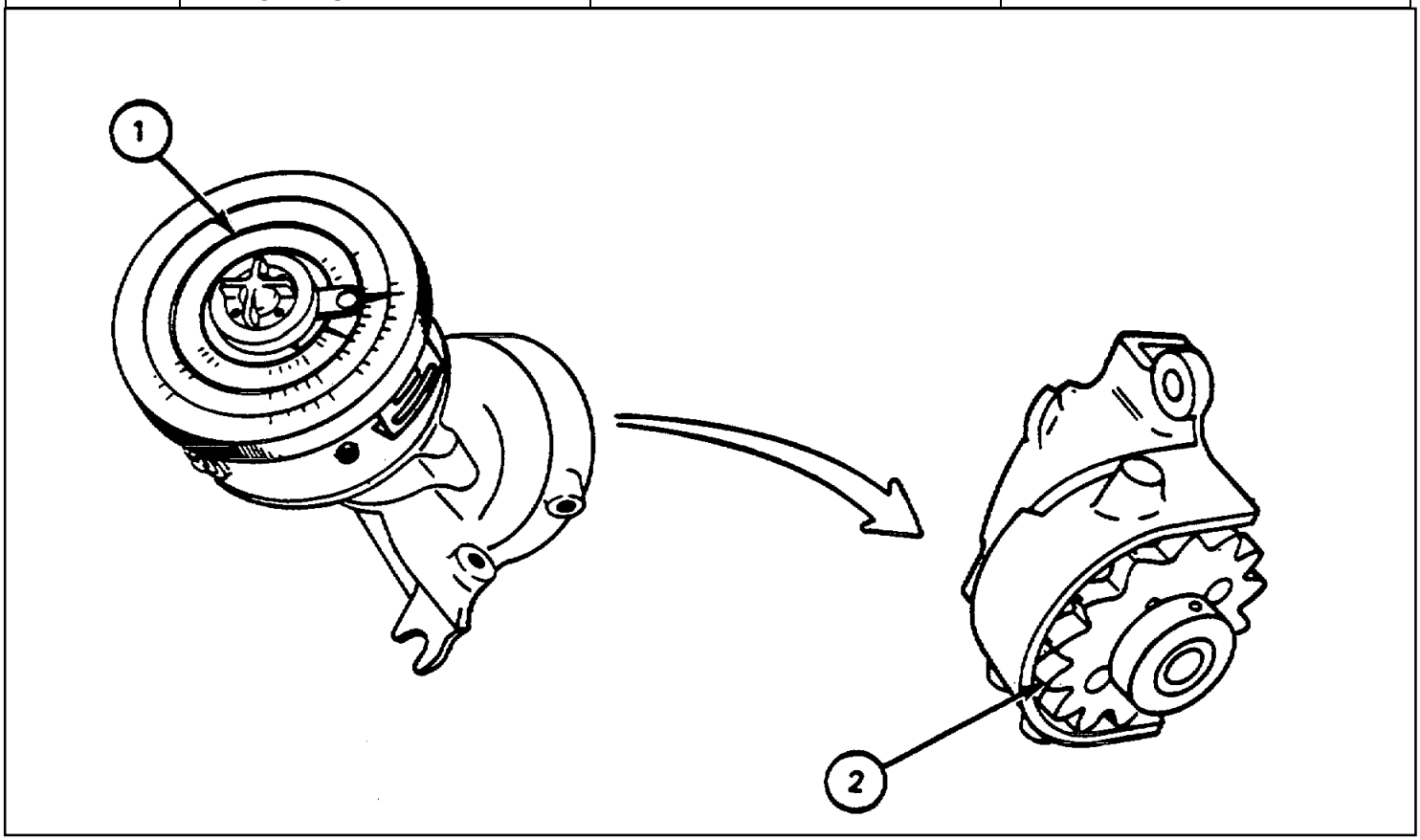
FRAME 1

Step	Procedure	Maintenance Action	Reference
1.	Check housings (1) for cracks or broken parts.	Send azimuth indicator to. depot for repair.	
2.	Check housings (1) for dents.	Report damage to supervisor.	
3.	Check azimuth indicator for missing or loose parts. GO TO FRAME 2	Tighten loose parts. Replace missing parts if parts are authorized or send to depot for repair.	Para 4-2



3-2. INSPECTION UPON RECEIPT (CONT)

FRAME 2			
Step	**Procedure**	**Maintenance Action**	**Reference**
1.	Check azimuth indicator for grit, dirt or corrosion.	Clean azimuth indicator.	JPG 41C
2.	Check window (1) for scratches, cracks or breaks.	Replace window	Para 4-9
3.	Check exterior of azimuth indicator for scratched or chipped paint.	Paint damaged surface	TM 43-0139
4.	Look at drive gear (2). **NOTE** **FOLLOW-ON MAINTENANCE** Correct faults listed on DA Form 2404 that may affect the checkout procedure. Do checkout procedure (Vol I, para 2-2). END OF TASK	If gear has missing or broken teeth, or gear is changed in shape, replace gear.	Para 4-27



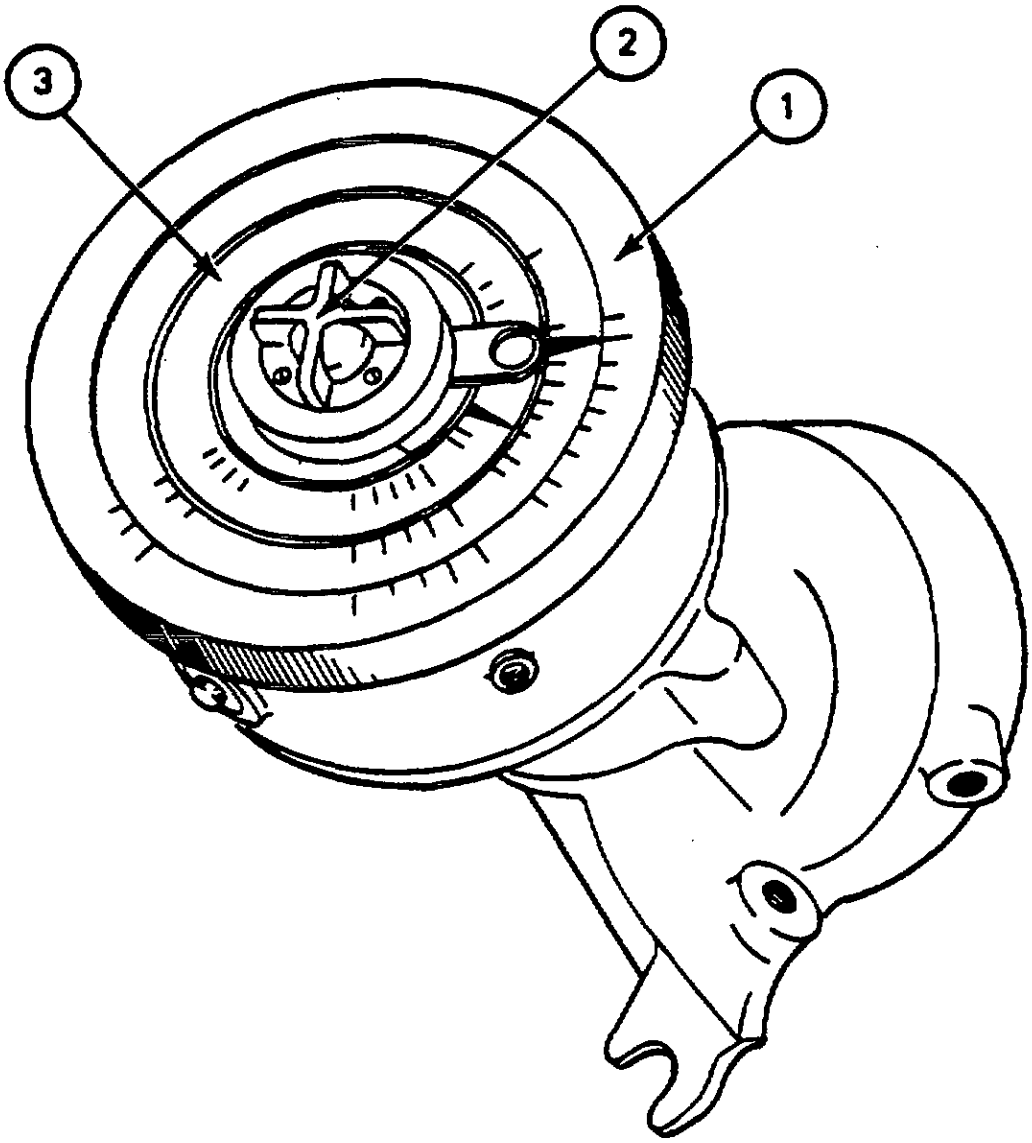
CHAPTER 4
MAINTENANCE PROCEDURES

Section 1. GENERAL

4-1. SCOPE
This chapter gives maintenance procedures for the Mechanical Azimuth Indicator.

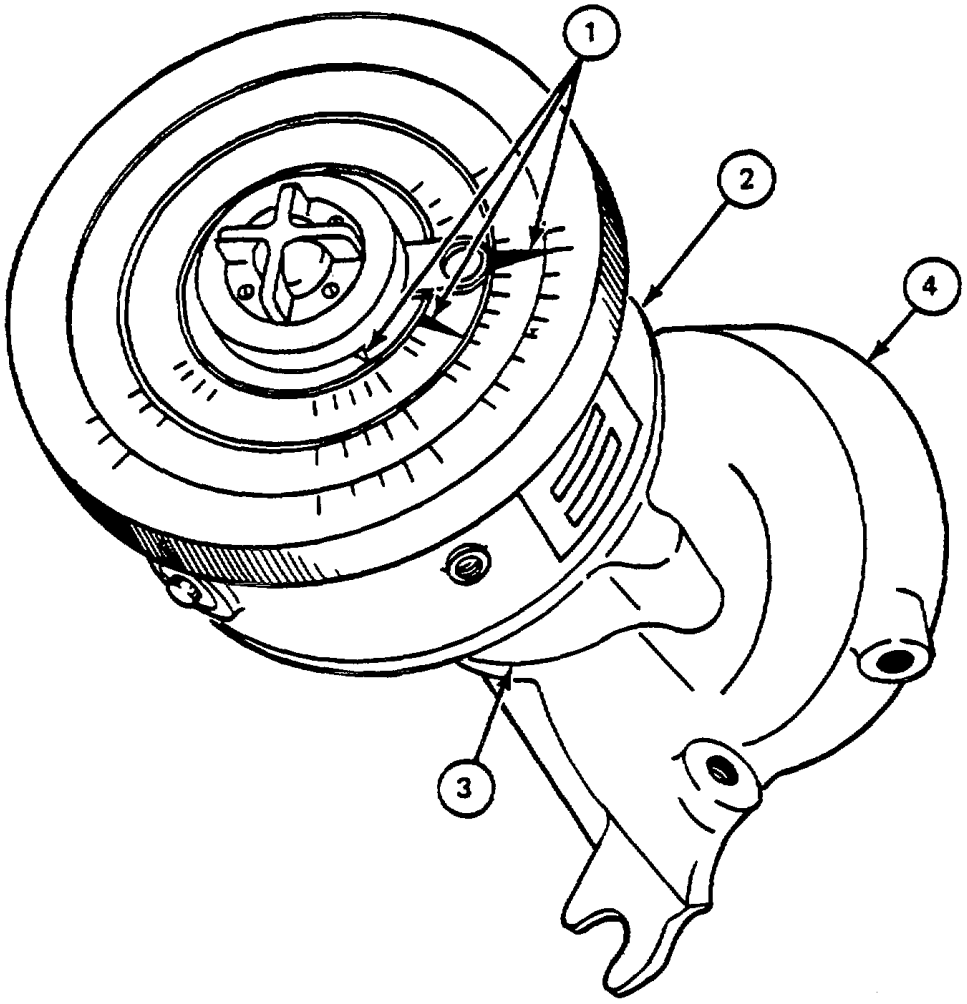
4-2. LIST OF AZIMUTH INDICATOR ITEMS CONTAINED IN THIS CHAPTER

Item	Figure Index No.	Reference (para)
Scale Dial	1	4-3
Knob (Resetter)	2	4-6
Flange and Window	3	4-9



4-2 .LIST OF AZIMUTH INDICATOR ITEMS CONTAINED IN THIS CHAPTER (CONT)

Item	Figure Index No.	Reference (para)
Pointers	1	4-12
Dial Housing Assembly and ¨ Related Parts	2	4-15
Middle Housing Assembly and Bottom Parts	3	4-20
Bottom Housing Assembly and Related Parts	4	4-25



Section 2. SCALE DIAL (GUNNER'S AID)

4-3. SCALE DIAL (GUNNER'S AID) MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-4
Installation	4-5

4-4. SCALE DIAL (GUNNER'S AID) REMOVAL

TOOLS: #2 cross tip screwdriver (Phillips type)
3/32" socket head screw key (Allen wrench or equivalent)

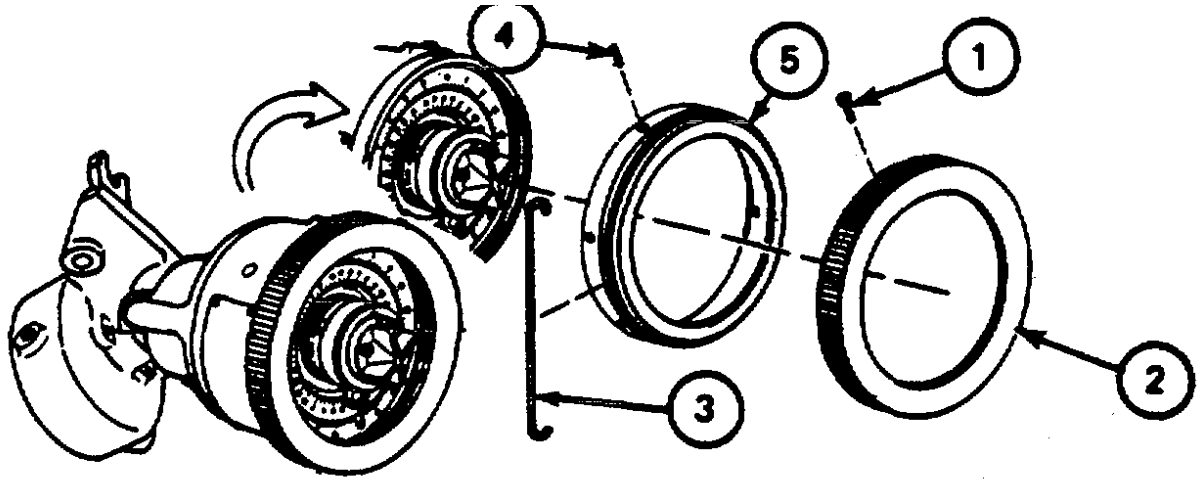
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

WARNING

Dial (Gunner's Aid) Assembly is spring loaded. Be careful and lift off slowly when removing.

FRAME 1

Step	Procedure
1.	Using screwdriver, remove three screws (1) from dial (2).
2.	Slowly lift off dial (2); spring tension clip (3) will be released.
3.	Using Allen wrench, remove six setscrews (4) and remove clamp (5).
	END OF TASK



4-5. SCALE DIAL (GUNNER'S AID) INSTALLATION

TOOLS: #2 cross tip screwdriver (Phillips type)
3/32" socket head screw key (Allen wrench or equivalent)

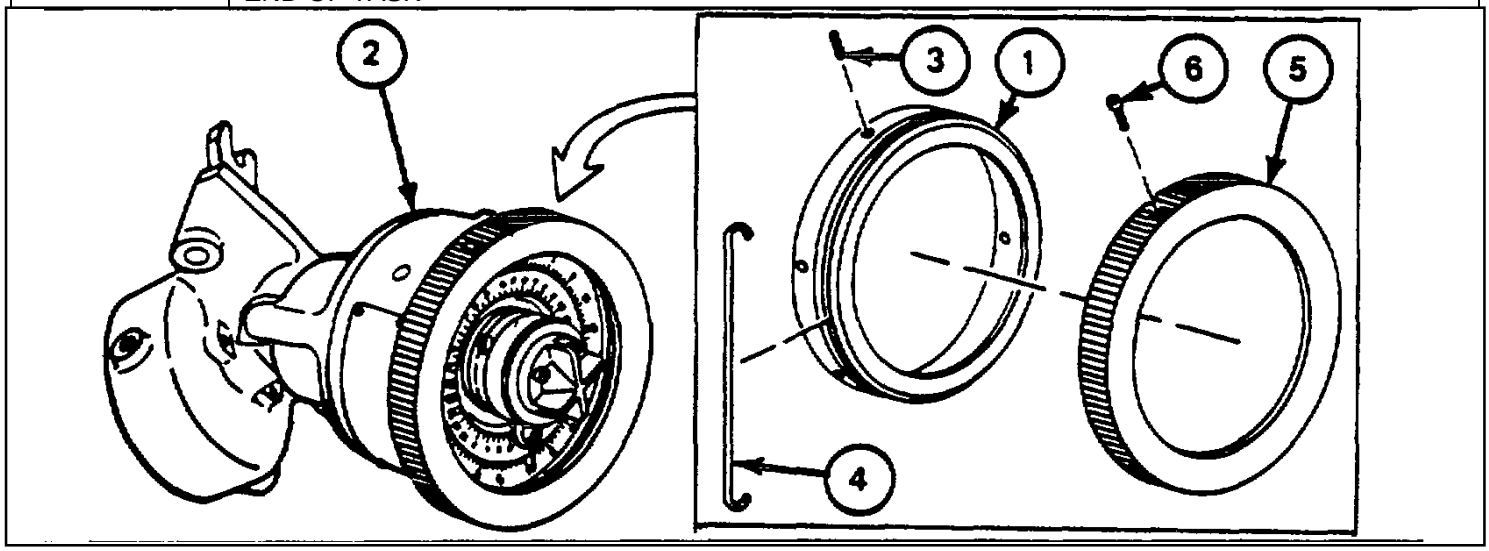
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

WARNING

Be careful when assembling to avoid personal injury with spring.

FRAME 1

Step	Procedure
1.	Install clamp (I) over housing assembly (2) and line up setscrew holes with slots in window.
2.	Using Allen wrench, install six setscrews (3).
3.	Place spring tension clip (4) in groove in-clamp (1) with bent ends in.
4.	Holding spring tension clip (4) on clamp (1), slip dial (5) over spring tension clip (4) and clamp (1).
5.	Using screwdriver, install three screws (6) to hold dial (5).
	NOTE FOLLOW-ON MAINTENANCE Do checkout procedure (Vol I, para 2-2). END OF TASK



Section 3. KNOB (RESETTER)

4-6. KNOB (RESETTER) MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-7
Installation	4-8

4-7. KNOB (RESETTER) REMOVAL

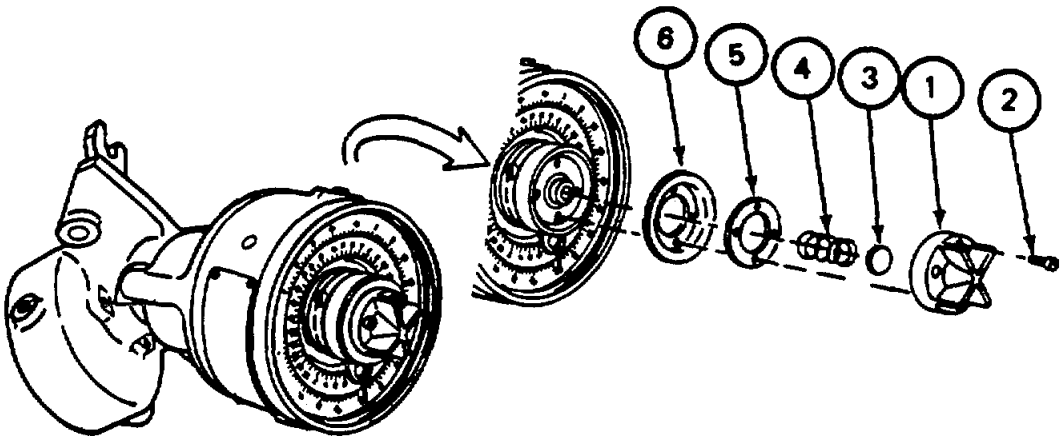
TOOLS: 3/16' flat tip screwdriver
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

CAUTION

Knob assembly is spring loaded. Be careful during removal.

FRAME 1

Step	Procedure
1.	Press knob (1) in and hold.
2.	Using screwdriver, remove four screws (2).
3.	Slowly remove knob (1).
4.	Remove retainer (3) and compression spring (4).
5.	Remove gasket (5) and cup (6) from azimuth indicator.
	END OF -TASK



4-8. KNOB (RESETTER) INSTALLATION

TOOLS: 3/16" flat tip screwdriver

PERSONNEL: One

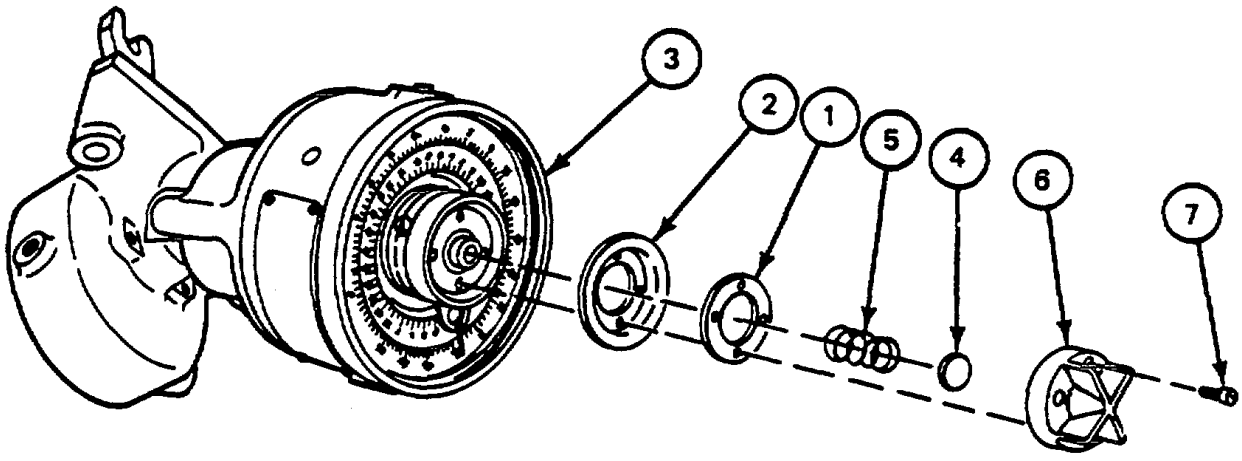
EQUIPMENT: CONDITION: Azimuth indicator on work bench

Caution

Knob assembly will be spring loaded. Use caution in its assembly.

FRAME 1

Step	Procedure
1.	Place gasket (1) in cup (2) and line up holes.
2.	Place gasket (1) and cup (2) on housing (3) and line up holes.
3.	Place retainer (4) and spring (5) on knob (6).
4.	Carefully press spring (5), retainer (4), and knob (6) on gasket (1) and cup (2) and line up holes.
5.	Using screwdriver, install four screws (7) in knob (6).
	NOTE
	FOLLOW-ON MAINTENANCE Do checkout procedure (Vol I, para 2-2). END OF TASK



Section 4. FLANGE AND WINDOW

4-9 .FLANGE AND WINDOW MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-10
Installation	4-11

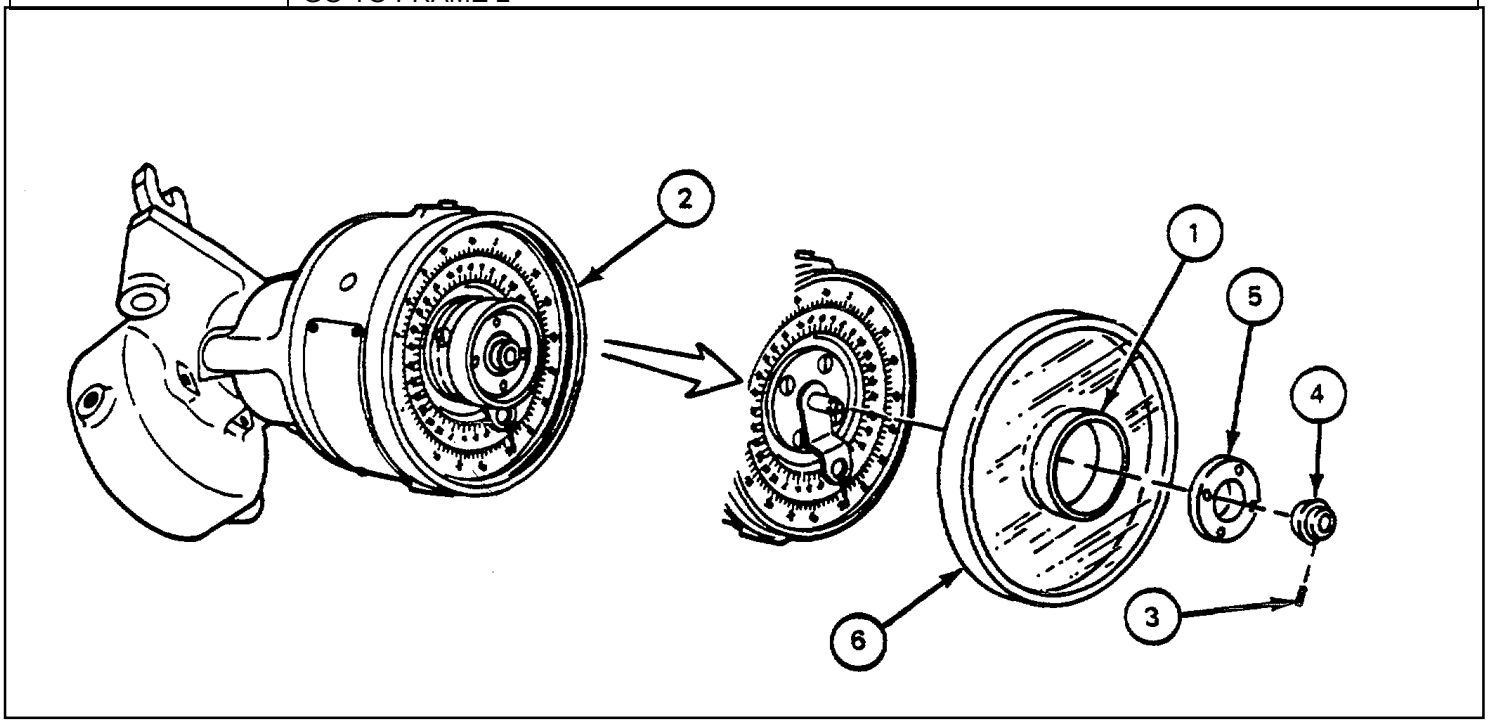
4-10. FLANGE AND WINDOW REMOVAL

TOOLS: 1/16" drive pin punch
4 oz. ball peen hammer
#0 cross tip screwdriver (Phillips type)

PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench
PRELIMINARY PROCEDURES: Remove dial (para 4-4)
Remove knob (para 4-7)

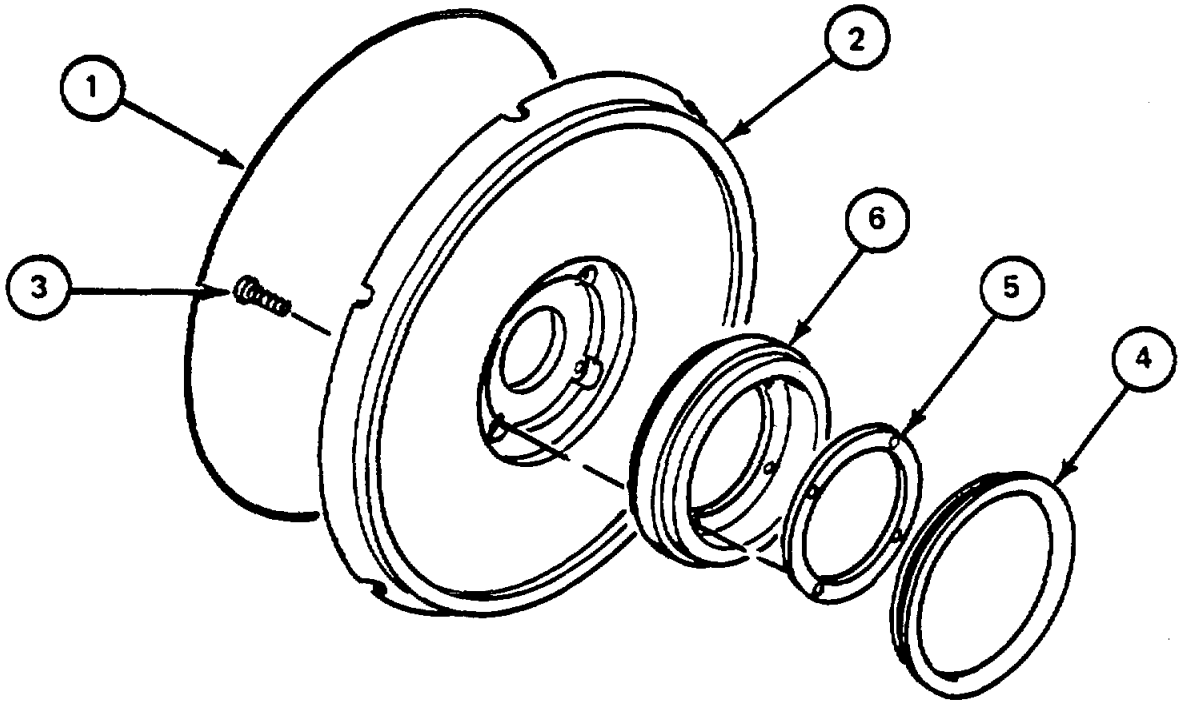
FRAME 1

Step	Procedure
1.	Press bellows (1) into housing (2), and using punch and hammer, drive out pin (3).
2.	Remove cone (4), flange assembly (5), and window assembly (6) from housing (2). GO TO FRAME 2



4-10. FLANGE AND WINDOW REMOVAL (CONT)

FRAME 2	
Step	**Procedure**
1.	Remove gasket (1) from window (2).
2.	Using screwdriver, remove four screws (3) from assembly, remove top ring (4), bottom ring (5), and bellows (6) from window (2).
	END OF TASK



4-11. FLANGE AND WINDOW INSTALLATION

TOOLS: 1/8" drive pin punch
#0 cross tip screwdriver (Phillips type)
4 oz. ball peen hammer

SUPPLIES: Rags, clean (item 1, App A)
Ethyl alcohol (item 2, App A)

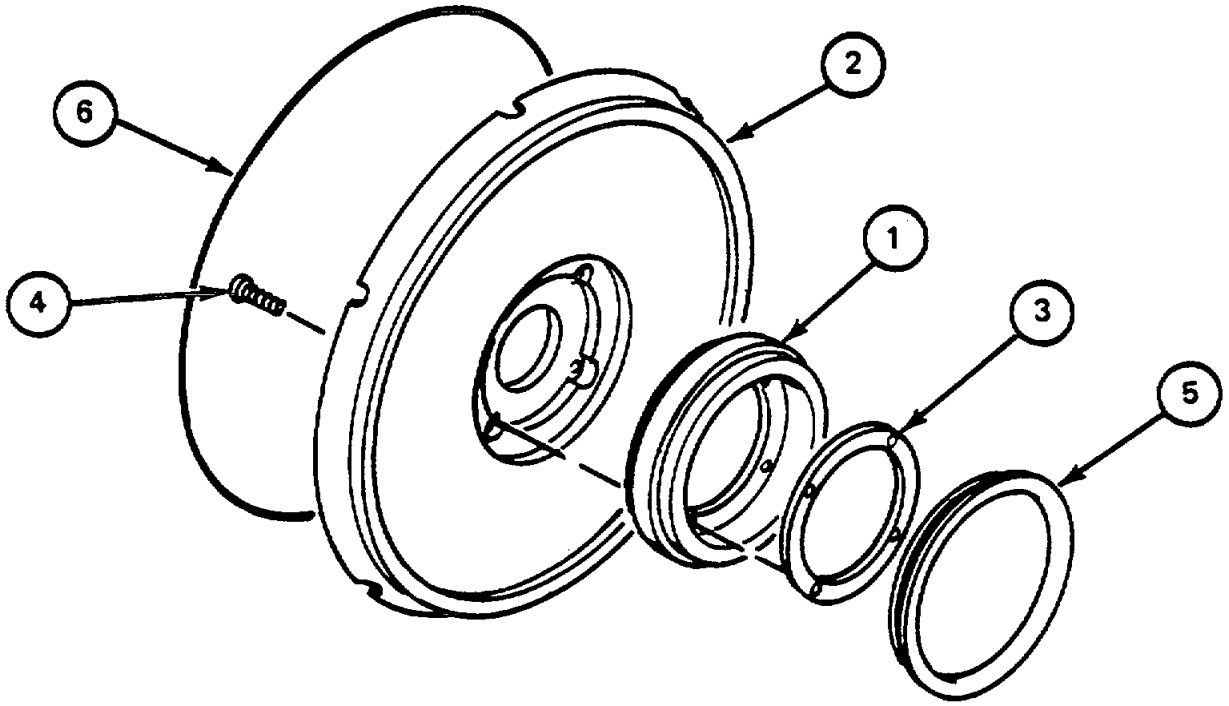
PERSONNEL: One

REFERENCES: JPG 41 C for cleaning

EQUIPMENT CONDITION: Azimuth indicator on work bench

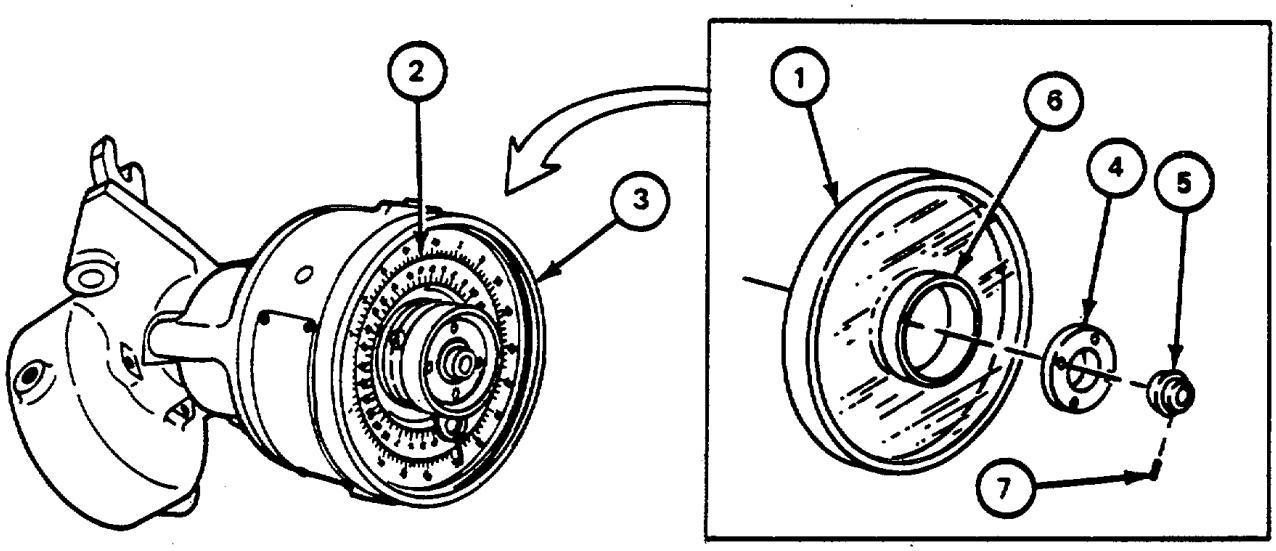
4-11. FLANGE AND WINDOW INSTALLATION (CONT)

FRAME 1	
Step	**Procedure**
1.	Place bellows (1) in window (2) and line up holes.
2.	Place ring (3) in bellows (1) and line up holes.
	CAUTION Use caution when tightening screws to avoid cracking window.
3.	Using screwdriver, install four screws (4) through window (2), bellows (1), and ring (3).
4.	Press ring (5) on bellows (1).
5.	Press gasket (6) on window (2). GO TO FRAME 2



4-11. FLANGE AND WINDOW INSTALLATION (CONT)

FRAME 2	
Step	**Procedure**
1.	Using clean rags, clean window assembly (1) and dials (2) (JPG).
2.	Place window assembly (1) on housing assembly (3).
	NOTE Make sure pin on flange assembly (4) lines up with hole in pointer (inside housing assembly) and hole in flange (inside housing assembly).
3.	Place flange assembly (4) on window assembly (1).
4.	Place cone (5) on flange assembly (4).
5.	Press bellows (6) in housing assembly (3) and line up pinhole of cone (5) with pinhole on drive shaft. Using punch and hammer, drive in pin (7) to hold cone (5).
	NOTE **FOLLOW-ON MAINTENANCE** Install knob (Para 4-8). Install dial (para 4-5). Do checkout procedure (Vol I, para 2-2).
END OF TASK	



Section 5. POINTERS

4-12. POINTERS MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-13
Installation	4-14

4-13. POINTERS REMOVAL

TOOLS: #2 cross tip screwdriver (Phillips type)

PERSONNEL: One

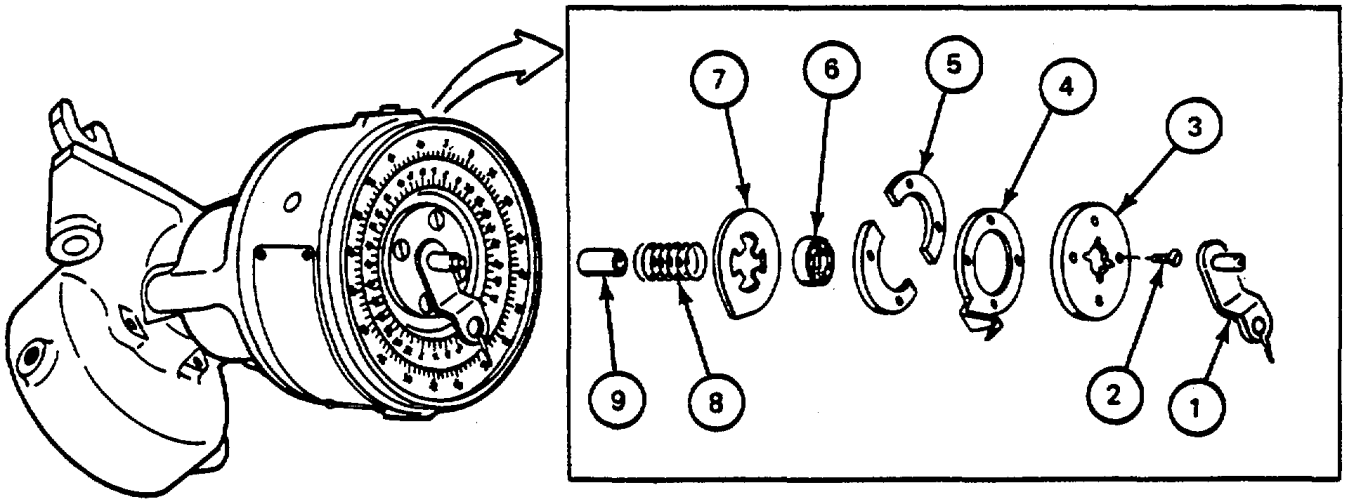
EQUIPMENT CONDITION: Azimuth indicator on work bench

PRELIMINARY PROCEDURES: Remove flange and window (para 4-10)

4-13. POINTERS REMOVAL (CONT)

FRAME 1

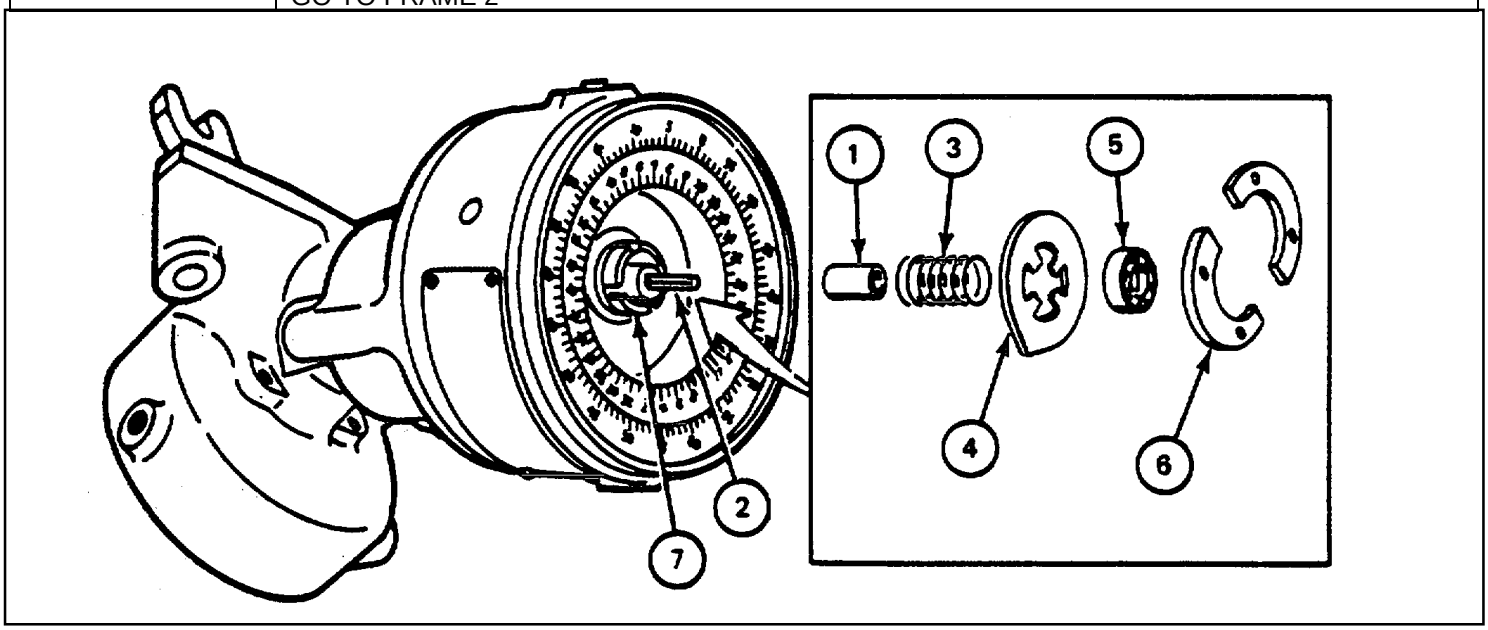
Step	Procedure
1.	Remove micrometer pointer assembly (1).
2.	Using screwdriver, remove four screws (2), flange (3), and azimuth pointer (4).
	CAUTION Use care in removing split washer to prevent loss of spring loaded parts.
3.	Press on bearing (6) and hold; remove split washer (5). Slowly release pressure on bearing (6) and remove bearing (6), dial pointer (7), spring (8) and spacer (9).
	END OF TASK



4-14. POINTERS INSTALLATION

TOOLS: #2 cross tip screwdriver (Phillips type)
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

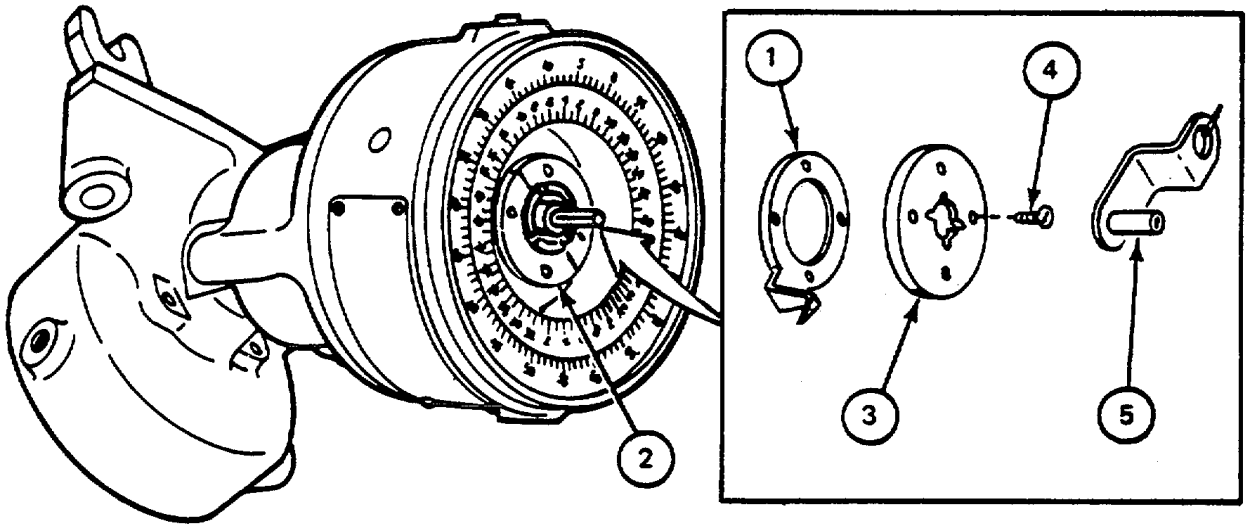
FRAME 1	
Step	**Procedure**
1.	Place spacer (1) over shaft (2) and slip spring (3) over spacer (1).
	CAUTION Use care in installing pointer and split washer to prevent loss of spring loaded parts.
2.	Place dial pointer (4) on spring (3); press down on pointer (4) and hold.
3.	Slip bearing (5) over shaft (2).
4.	Install split washer (6), with its undercut side down, and make sure it seats in its mating groove (7). Release pressure on pointer (4).
	GO TO FRAME 2



4-14. POINTERS INSTALLATION (CONT)

FRAME 2

Step	Procedure
1.	Place azimuth pointer (1) on split washer (2).
2.	Place flange (3), with undercut side down, on azimuth pointer (1) and line up screw holes.
3.	Using screwdriver, install four screws (4) evenly to hold flange (3).
4.	Place micrometer pointer assembly (5) on shaft.
	NOTE FOLLOW-ON MAINTENANCE Install flange and window (para 4-11). Install knob (para 4-8). Install dial (para 4-5). Do checkout procedure (Vol I, para 2-2).
	END OF TASK



Section 6. DIAL HOUSING ASSEMBLY AND RELATED PARTS

4-15. DIAL HOUSING ASSEMBLY AND RELATED PARTS MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-16
Disassembly	4-17
Assembly	4-18
Installation	4-19

4-16. DIAL HOUSING ASSEMBLY AND RELATED PARTS REMOVAL

TOOLS: 3/16" flat tip screwdriver
7/16" open end wrench
3/32" drive pin punch
Soft-face hammer
4 oz. ball peen hammer
Machinist scriber

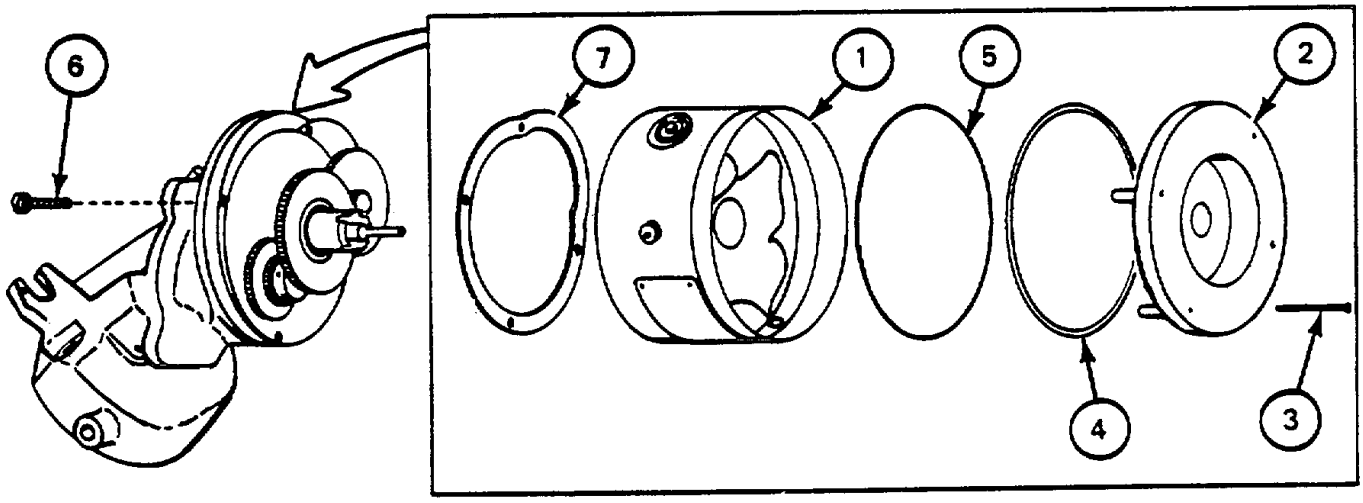
PERSONNEL: One

EQUIPMENT CONDITION: Azimuth indicator on work bench

PRELIMINARY PROCEDURES: Remove pointers (para 4-13)

4-16. DIAL HOUSING ASSEMBLY AND RELATED PARTS REMOVAL (CONT)

FRAME 1	
Step	**Procedure**
1.	Using scriber, make a mark on housing (1) where "0" on dial (2) is located.
2.	Using screwdriver, remove four screws (3).
3.	Remove dial (2), felt (4), and spacer (5) from housing assembly (1).
	NOTE It may be -necessary to tap housing with soft-face hammer to loosen housing during removal.
4.	Using wrench, remove four screws (6), housing assembly (1), and gasket (7).
	END OF TASK

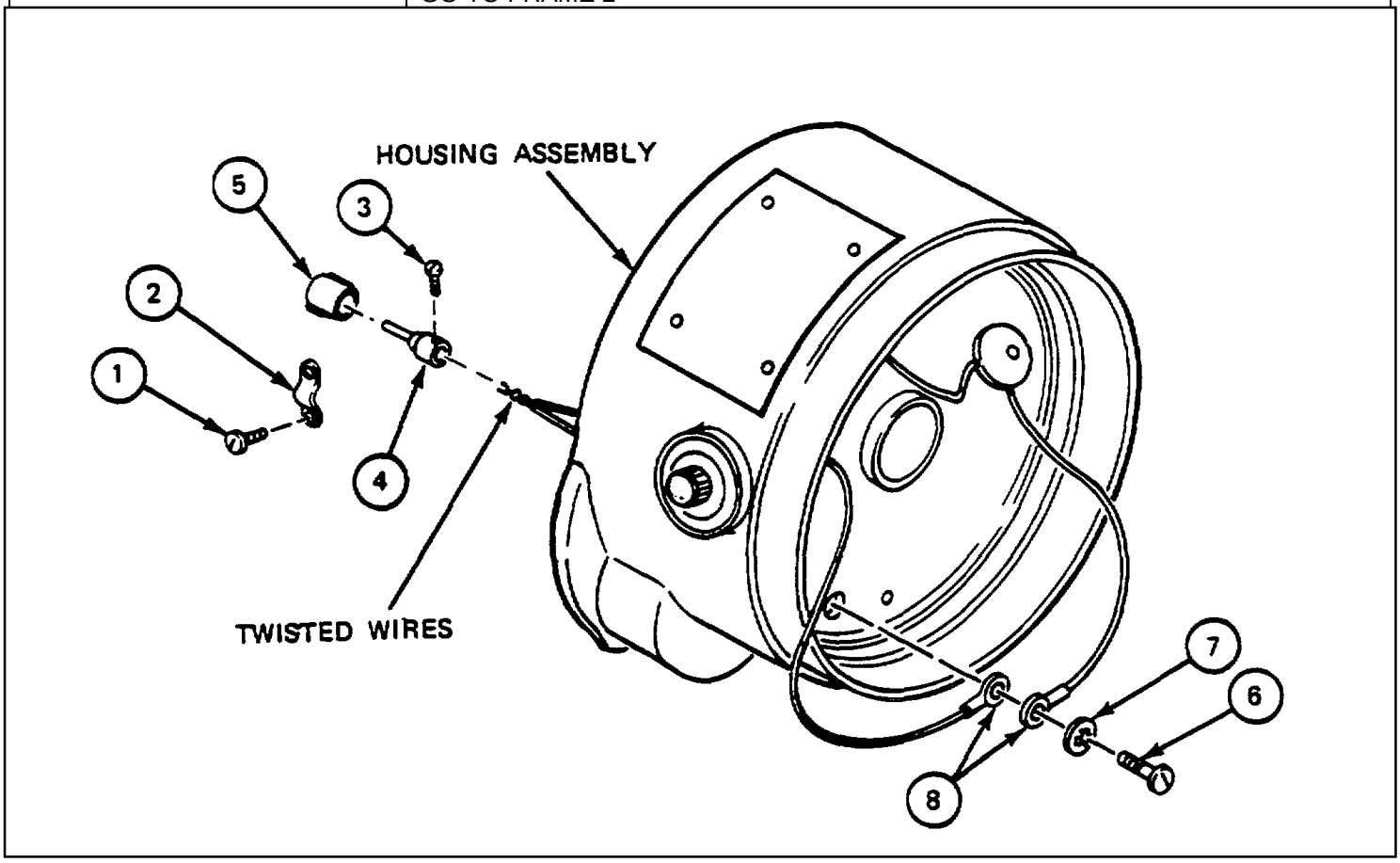


4-17. DIAL HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY

TOOLS: 3/16" and 1/8" flat tip screwdriver
#2 cross tip screwdriver (Phillips type)
3/16" drive pin punch
4 oz. ball peen hammer

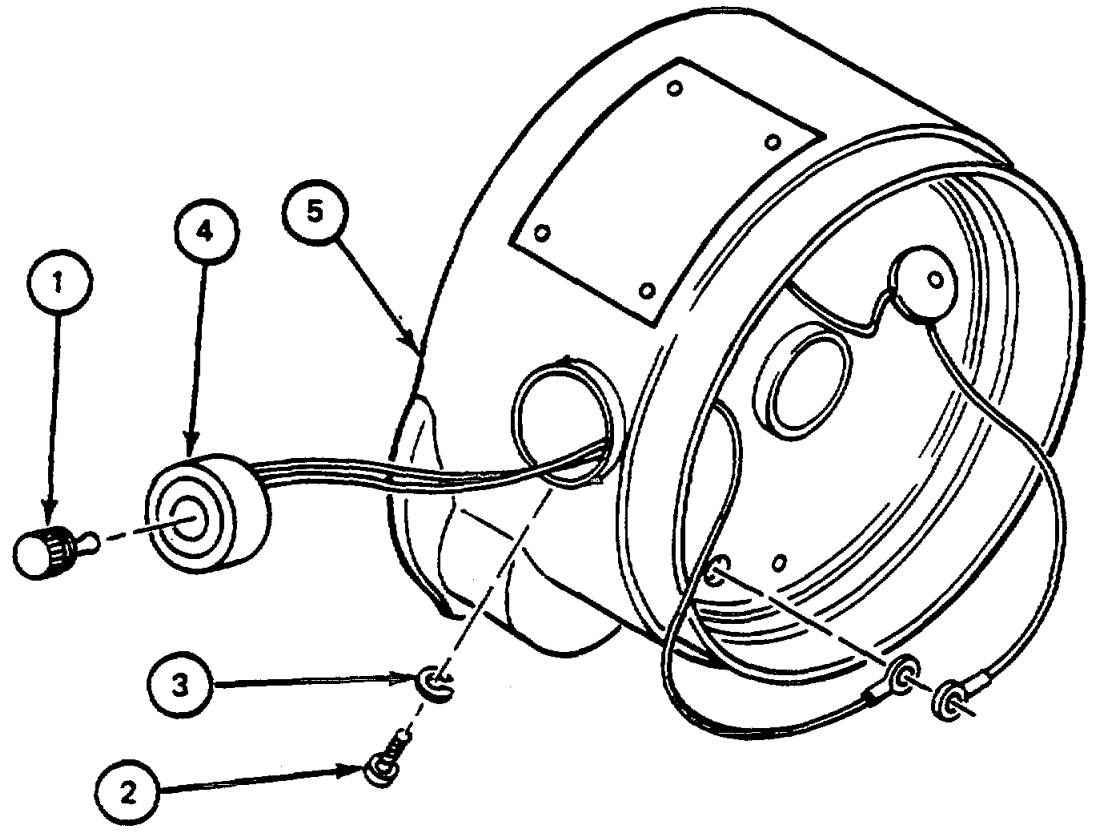
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Using Phillips screwdriver, remove two screws (1) and clip (2).
2.	Using 1/8" flat tip screwdriver, remove screw (3) from contact plug (4) and twisted wires. Untwist wires.
3.	Remove insulator (5) and contact plug (4) from housing assembly.
4.	Using Phillips screwdriver, remove screw (6) and lockwasher (7); lug terminals (8) are now loose. GO TO FRAME 2



4-17. DIAL HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY (CONT)

FRAME 2	
Step	**Procedure**
1.	Remove two lamps (1).
2.	Using 3/16" flat tip screwdriver, remove two screws (2) and two lockwashers (3).
3.	Using punch and hammer from inside housing assembly, tap and remove two socket assemblies (4) out of housing assembly (5).
	END OF TASK



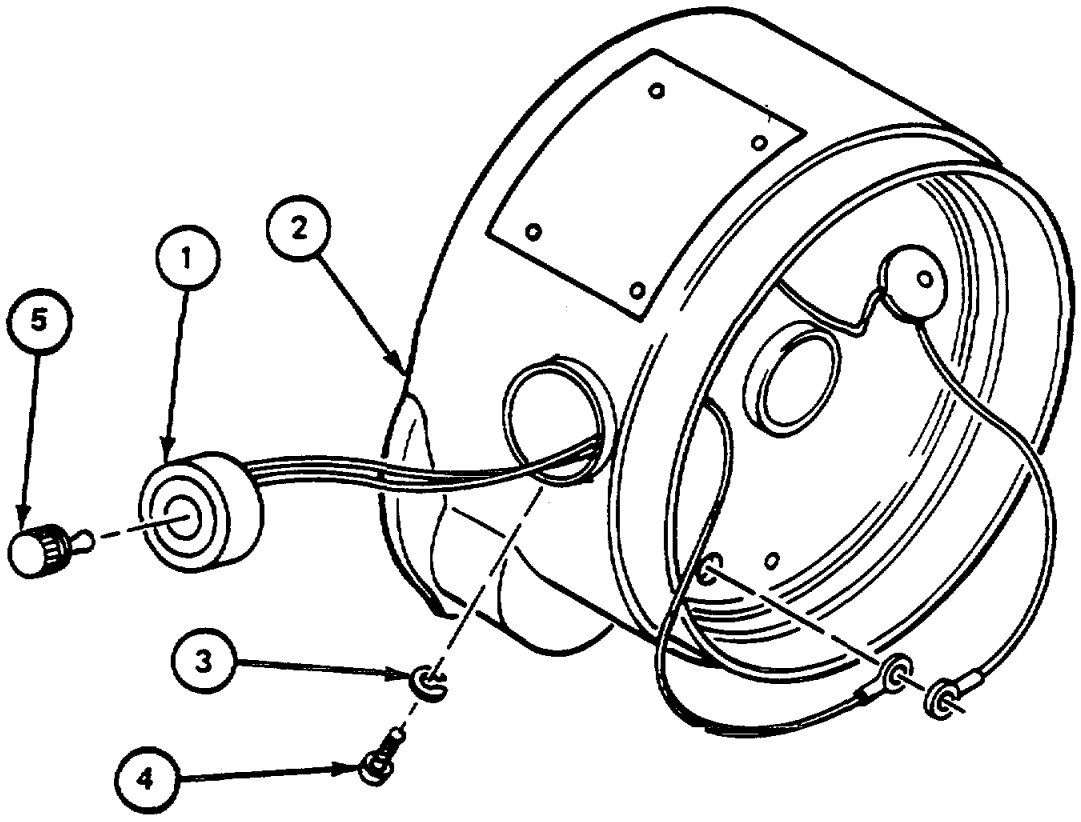
4-18. DIAL HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY

TOOLS: 3/16" and 1/8" flat tip screwdriver
Soft-face hammer
#2 cross tip screwdriver (Phillips type)

PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

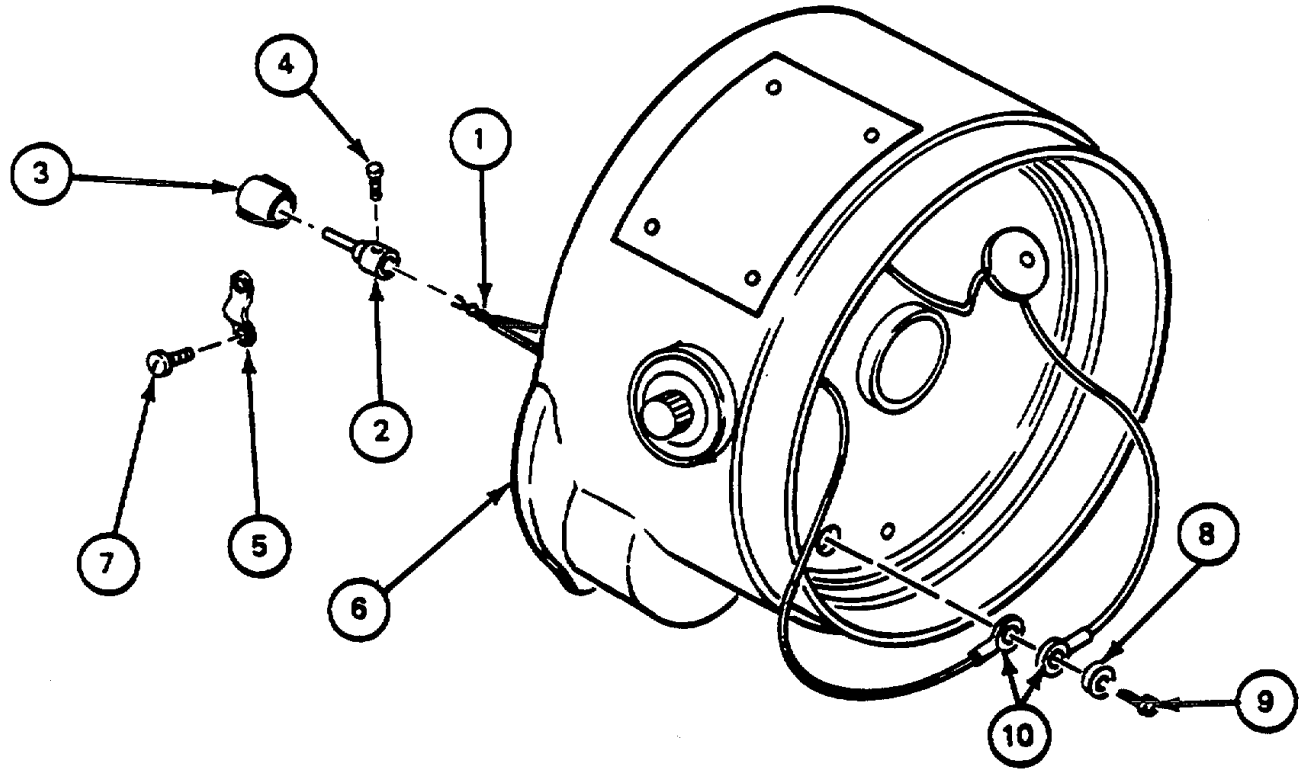
FRAME 1

Step	Procedure
1.	Line up holes in socket assemblies (1) with holes in housing assembly (2).
2.	Press one socket assembly (1) into housing assembly (2), tap with hammer until socket is even with housing.
3.	Using 3/16" flat tip screwdriver, install socket assembly (1) with lockwasher (3) and screw (4).
4.	Repeat steps 2 and 3 for other socket assembly.
5.	Place lamps (5) in socket assemblies (1).
	GO TO FRAME 2



4-18. DIAL HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY (CONT)

FRAME 2	
Step	**Procedure**
1.	Twist wires (1), slide through hole and place in contact plug (2).
2.	Install insulator (3) over contact plug (2).
3.	Using 1/8" flat tip screwdriver, install screw (4) to hold wires (1).
4.	Place contact plug (2) in plug mounting hole.
5.	Place clip (5) over plug (2) and position plug tip flush with outside of housing assembly
6.	Using Phillips screwdriver, install two screws (7) to hold plug (2).
7.	Using Phillips screwdriver, install screw (9), washer (8), and terminal lugs (10) to housing (6).
	END OF TASK



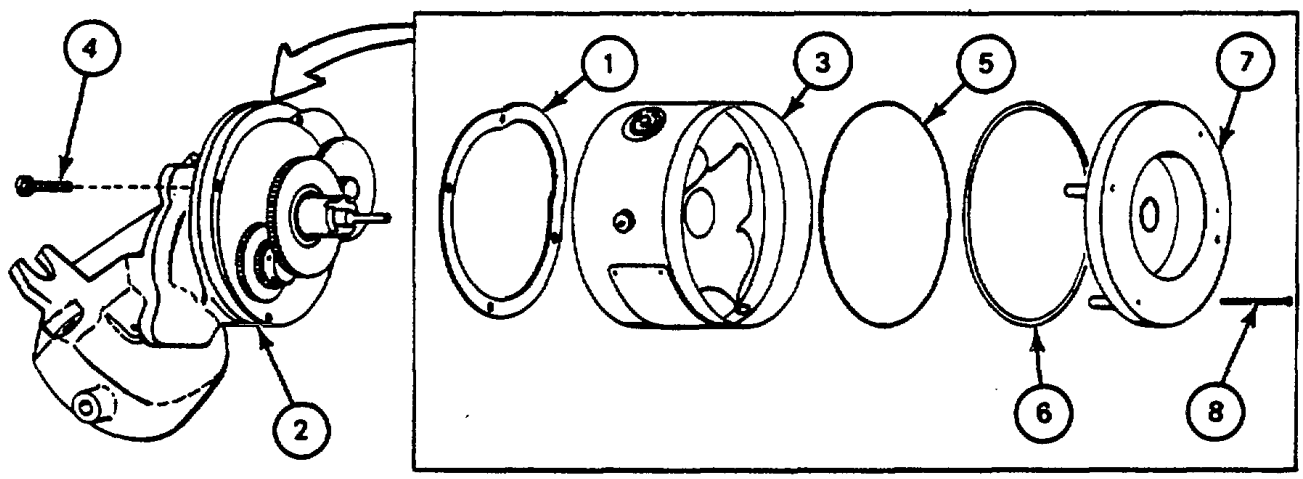
4-19. DIAL HOUSING ASSEMBLY AND RELATED PARTS INSTALLATION

TOOLS: 3/16" flat tip screwdriver
7/16" open end wrench
4 oz; ball peen hammer

PERSONNEL: One
REFERENCES: JPG 41C for stamping nameplate
EQUIPMENT CONDITION: Azimuth indicator on work bench

4-19. DIAL HOUSING ASSEMBLY AND RELATED PARTS INSTALLATION (CONT)

FRAME 1	
Step	**Procedure**
1.	Place gasket (1) on middle housing assembly (2) and line up holes.
2.	Place housing assembly (3) over gasket (1), line up holes, and using four screws (4), secure housing assembly (3) to middle housing assembly (2).
3.	Place spacer (5) in housing assembly (3).
4.	Place felt (6) on housing assembly (3).
5.	Place dial (7) with 0 at mark on housing assembly (3) and line up holes.
6.	Using screwdriver, install four screws (8) to hold dial (7) to housing assembly (3).
	NOTE FOLLOW-ON MAINTENANCE Install pointers (para 4-14). Do checkout procedure (Vol I, para 2 -2).
	END OF TASK



Section 7. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS

4-20. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Removal	4-21
Disassembly	4-22
Assembly	4-23
Installation	4-24

4-21. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS REMOVAL

TOOLS: 9/16" open end wrench
Machinist scriber

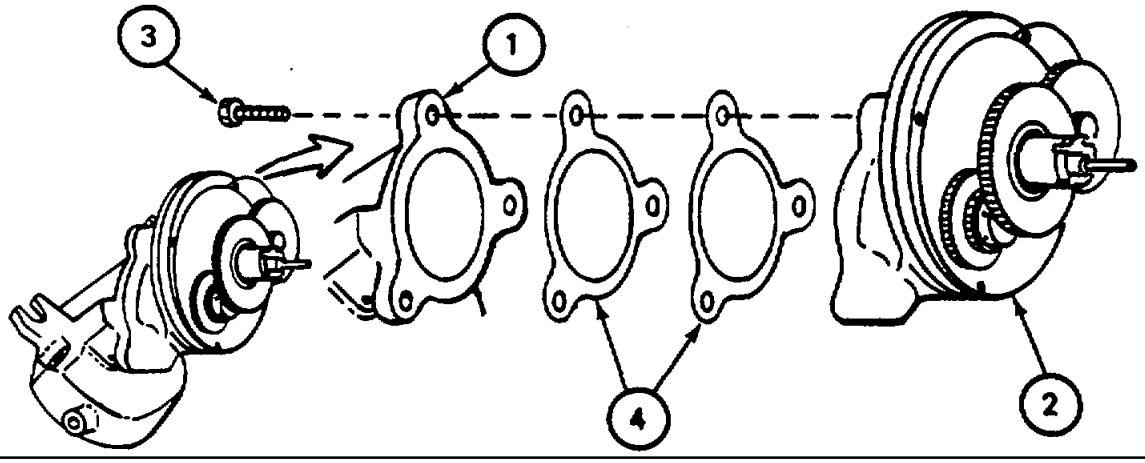
PERSONNEL: One

EQUIPMENT CONDITION: Azimuth indicator on work bench

PRELIMINARY PROCEDURES: Remove dial housing (para 4-15)

FRAME 1

Step	Procedure
1.	Using scriber, make a reference mark across the joint of the bottom housing (1) and the middle housing (2).
2.	Using wrench, remove three bolts (3) and lift middle housing (2) from bottom housing (1).
3.	Remove shim(s) (4).
	END OF TASK

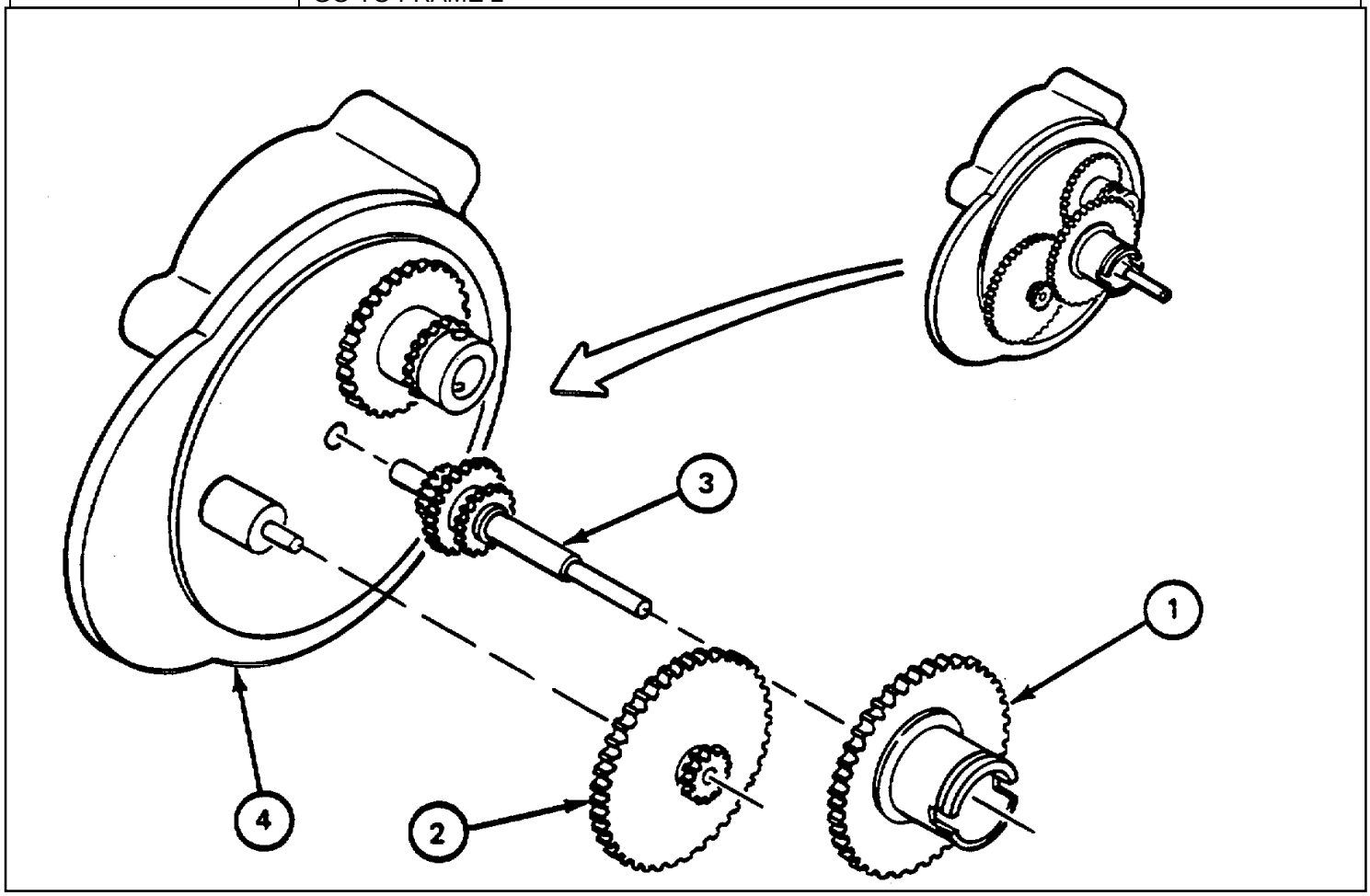


4-22. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY

TOOLS: 1/8" drive pin punch
1/8" socket head screw key (Allen wrench or equivalent)
4 oz. ball peen hammer

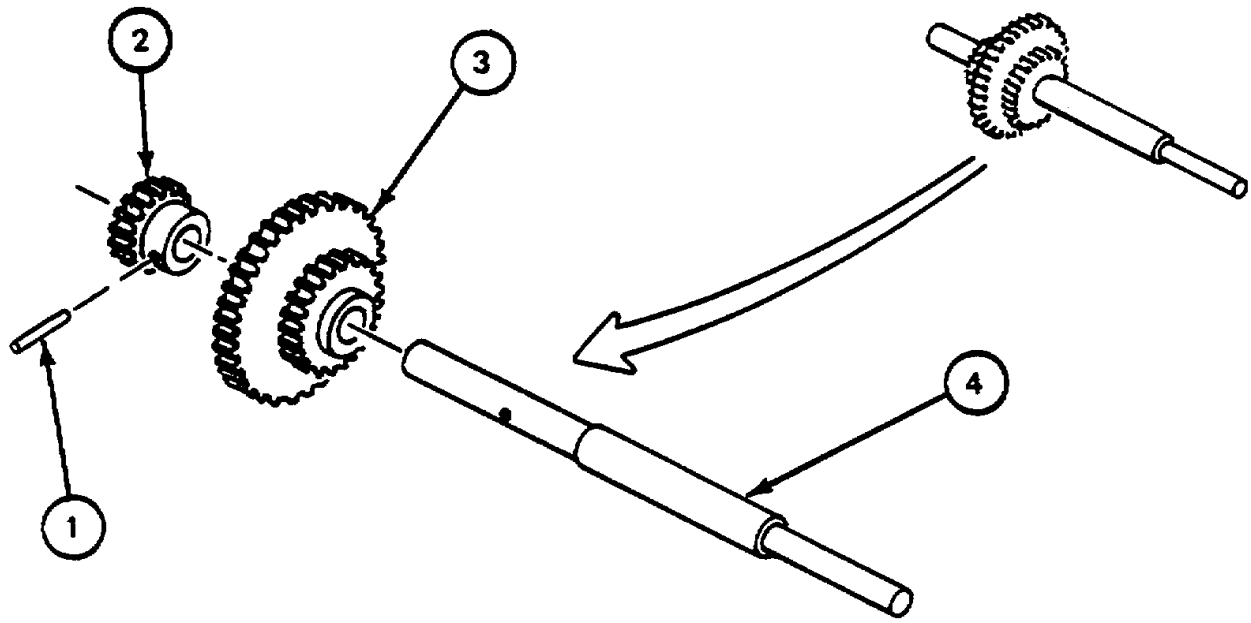
PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Lift off hub gear (1), idler 'gear assembly (2) and shaft (pointer) with related parts (3) from housing assembly (4).
2.	Look at gears (1) and (2). If gears are changed in shape, or have broken or missing teeth, replace gears. GO TO FRAME 2



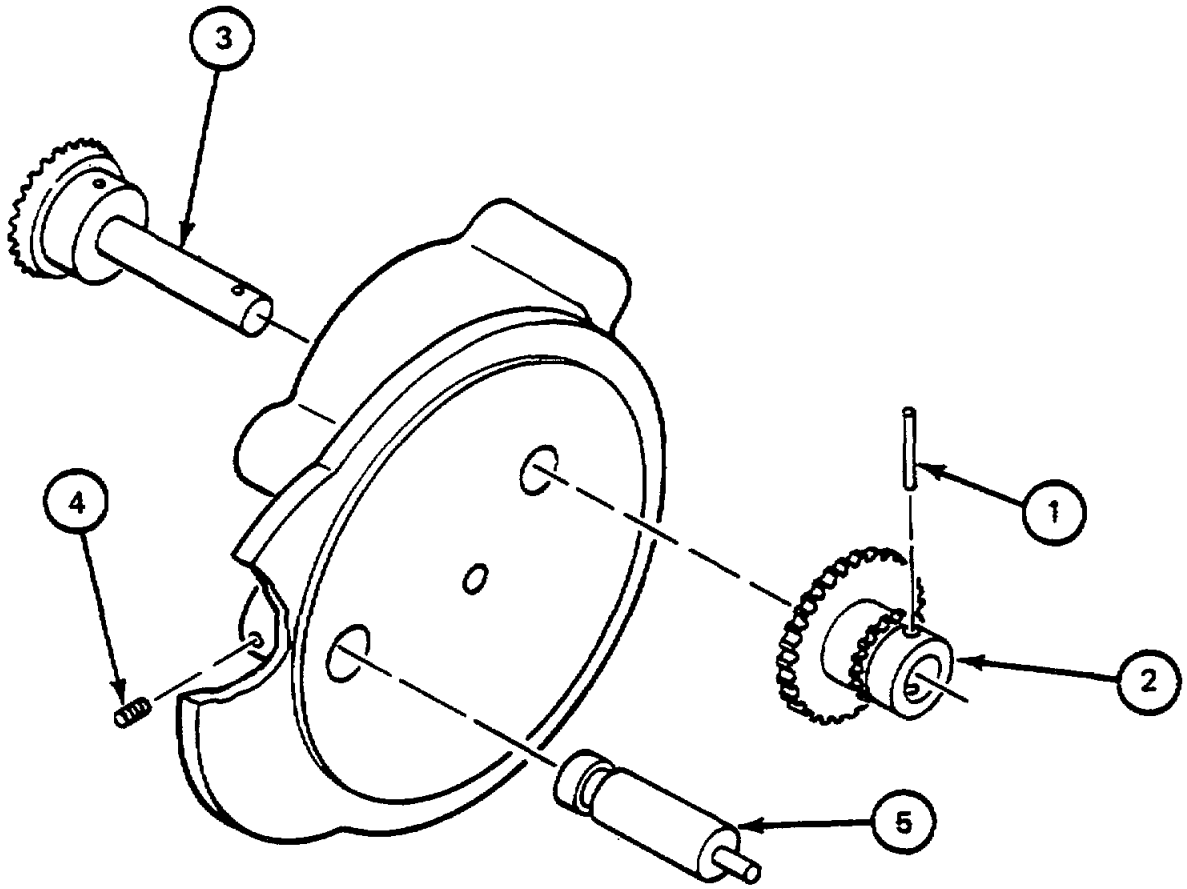
4-22. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY, (CONT)

FRAME 2	
Step	**Procedure**
1. 2. 3.	Using punch and hammer, remove pin (1) from gear (2). Remove gear (2) and intermediate gear (3) from shaft (4). Look at gears (2) and (3), pin (1), and shaft (4). If gear(s) (2) and (3) are changed in shape or have broken or missing teeth, replace gear(s). If shaft (4) or pin (1) has changed shape, replace shaft or pin. GO TO FRAME 3



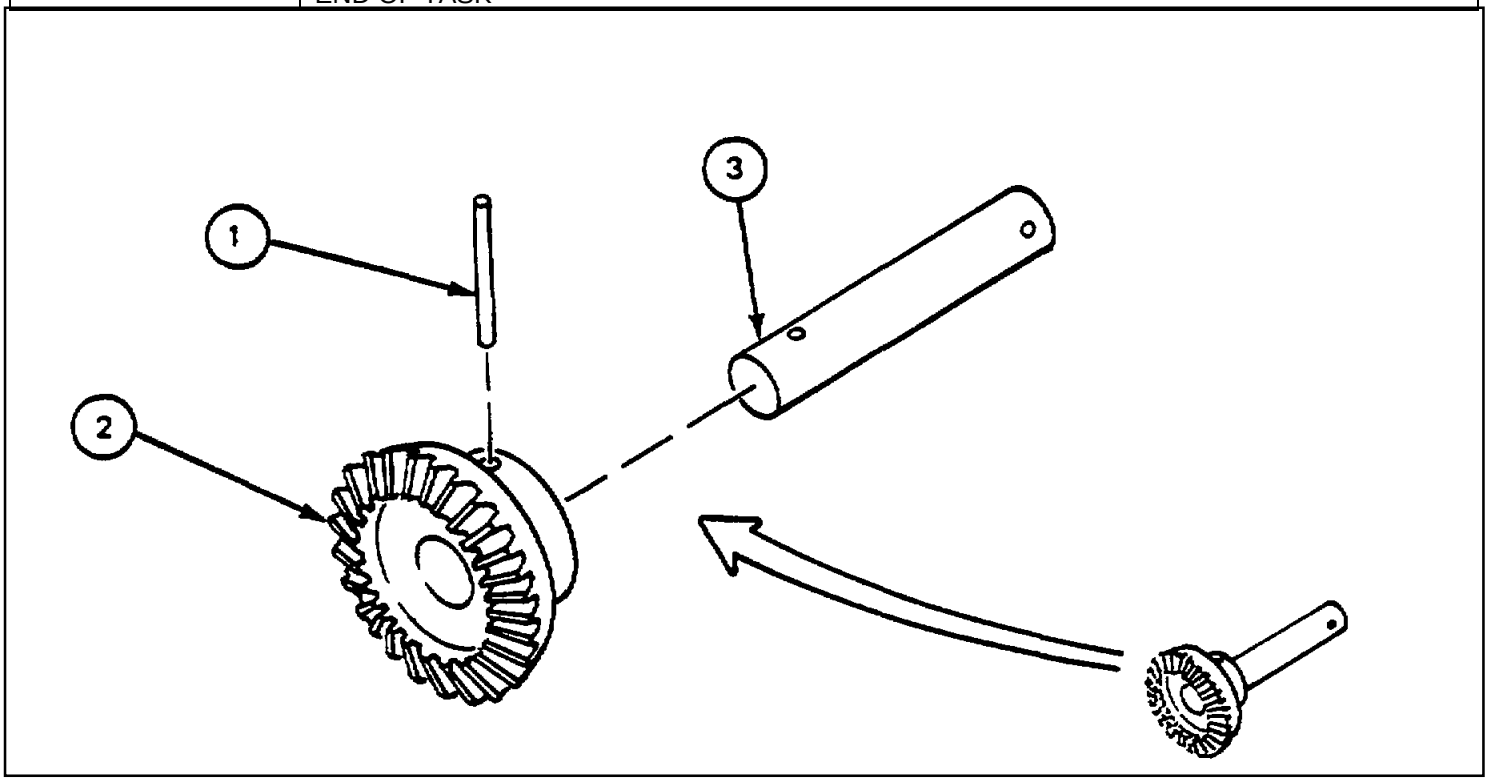
4-22. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY (CONT)

FRAME 3	
Step	**Procedure**
1.	Using punch and hammer, remove spring pin (l)and the lift off drive gear (2).
2.	Remove shaft (drive and related parts (3).
3.	Using Allen wrench, remove setscrew (4), and then lift off stud (5).
4.	Look at spring pin (I) and setscrew (4).If spring pin or setscrew are changed in shape, replace.
5.	Look at drive gear (2) and stud (5).If stud is changed in shape, or drive gear is changed in shape, or has broken or missing teeth, replace gear or stud if necessary.
	GO TO FRAME 4



4-22. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY (CONT)

FRAME 4	
Step	**Procedure**
1.	Using punch, remove spring pin (1) from gear (2).
2.	Remove gear (2) from shaft (3).
3.	Look at gear (2), pin (1), and shaft (3). If gear is changed in shape, or has missing or broken teeth, replace gear. If pin or shaft is changed in shape, replace.
	END OF TASK



4-23. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY

TOOLS: 1/8" drive pin punch
4 oz. ball peen hammer
1/8" socket head screw key (Allen wrench or equivalent)

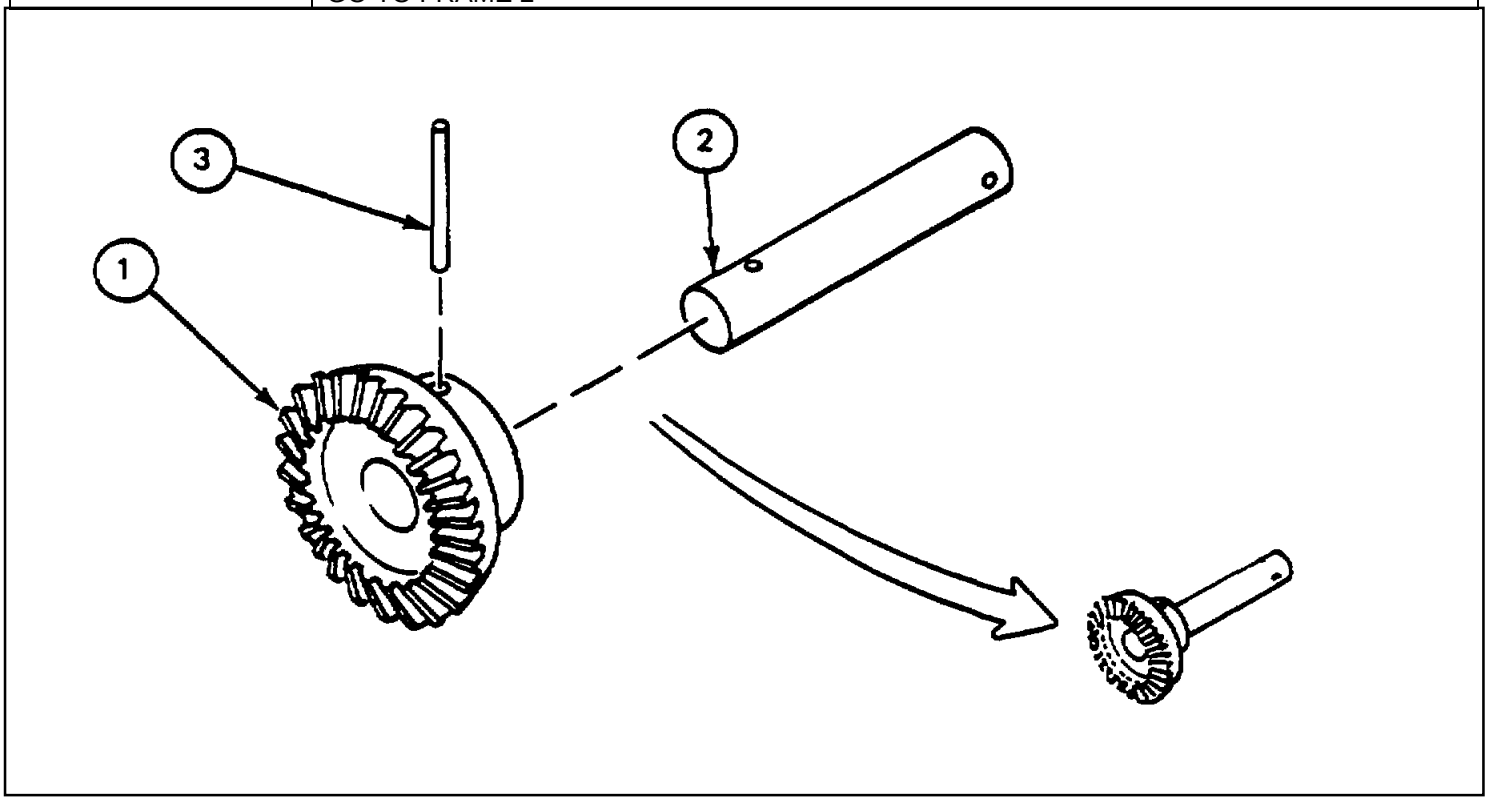
SUPPLIES: Grease (item 3, App A)
Rags, clean (item 1, App A)
Ethyl alcohol (item 2, App A)

PERSONNEL: One

REFERENCES: JPG 41C for: Cleaning
Lubricating

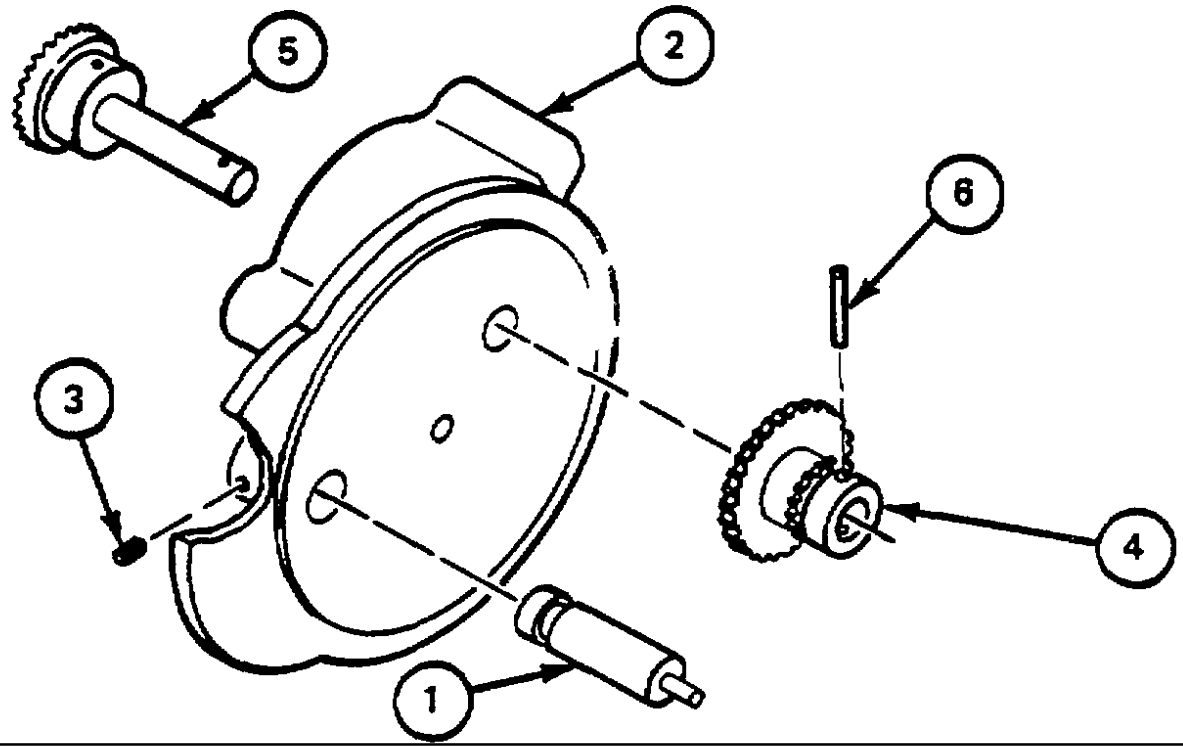
EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Using clean rags, clean all parts (JPG).
2.	Slide gear (1) over shaft (2) and line up holes.
3.	Using punch and hammer, drive spring pin (3) into gear (1) and shaft (2).
	GO TO FRAME 2



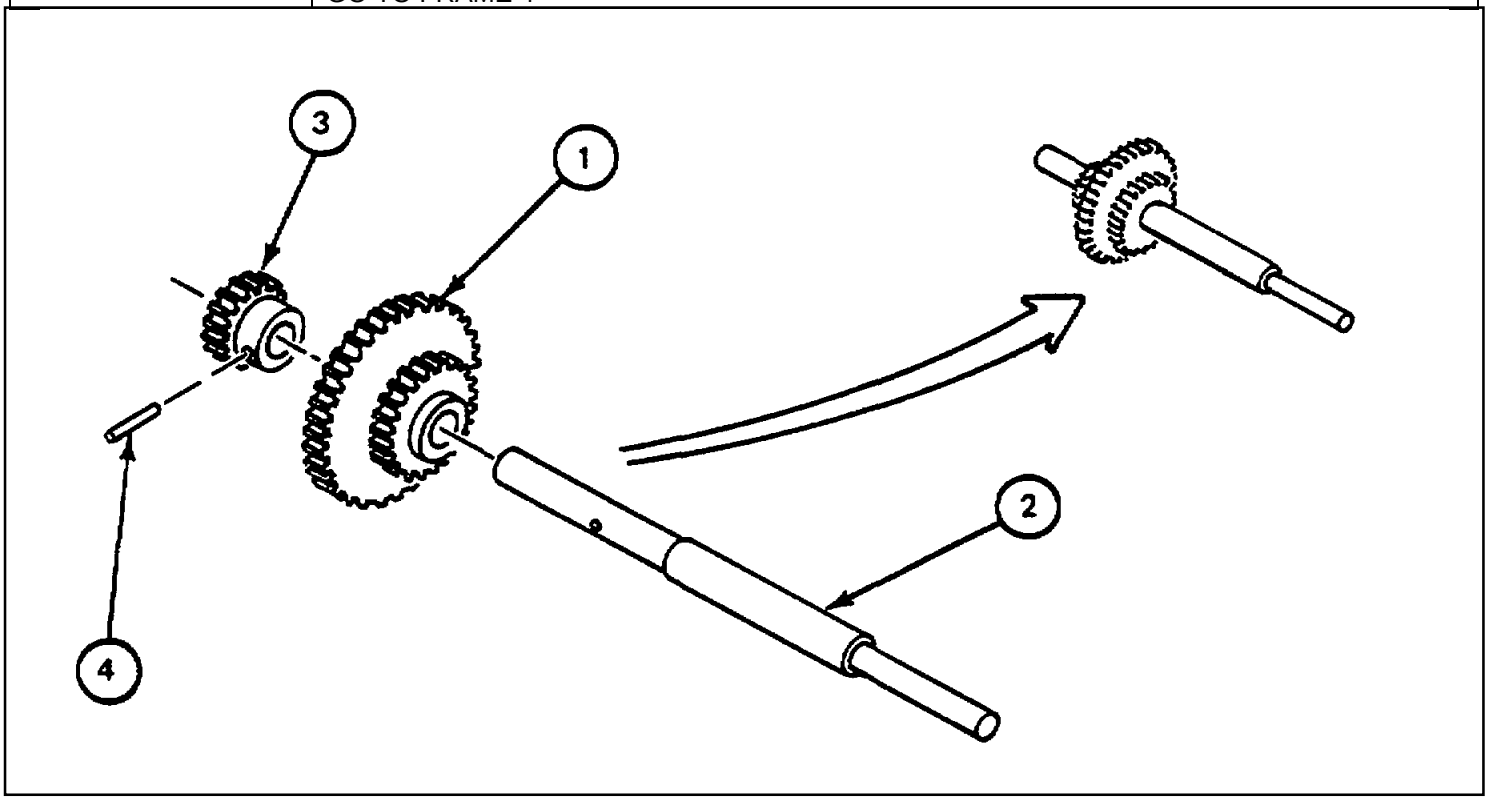
4-23. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY (CONT)

FRAME 2	
Step	**Procedure**
1.	Install stud (1) into housing assembly (2).
2.	Using Allen wrench, install setscrew (3) until stud (1) is held in place. Do not tighten.
3.	Using grease, lubricate drive gear (4) and shaft (drive) (5) (JPG).
4.	Install shaft (drive) (5) into housing assembly (2) and hold in place.
5.	Place drive gear (4) over shaft (drive) (5) and line up holes.
6.	Place pin (6) into drive gear (4) and shaft (5) holes.
7.	Using punch and hammer, drive pin (6) through shaft (5) to hold drive gear (4)
	GO TO FRAME 3



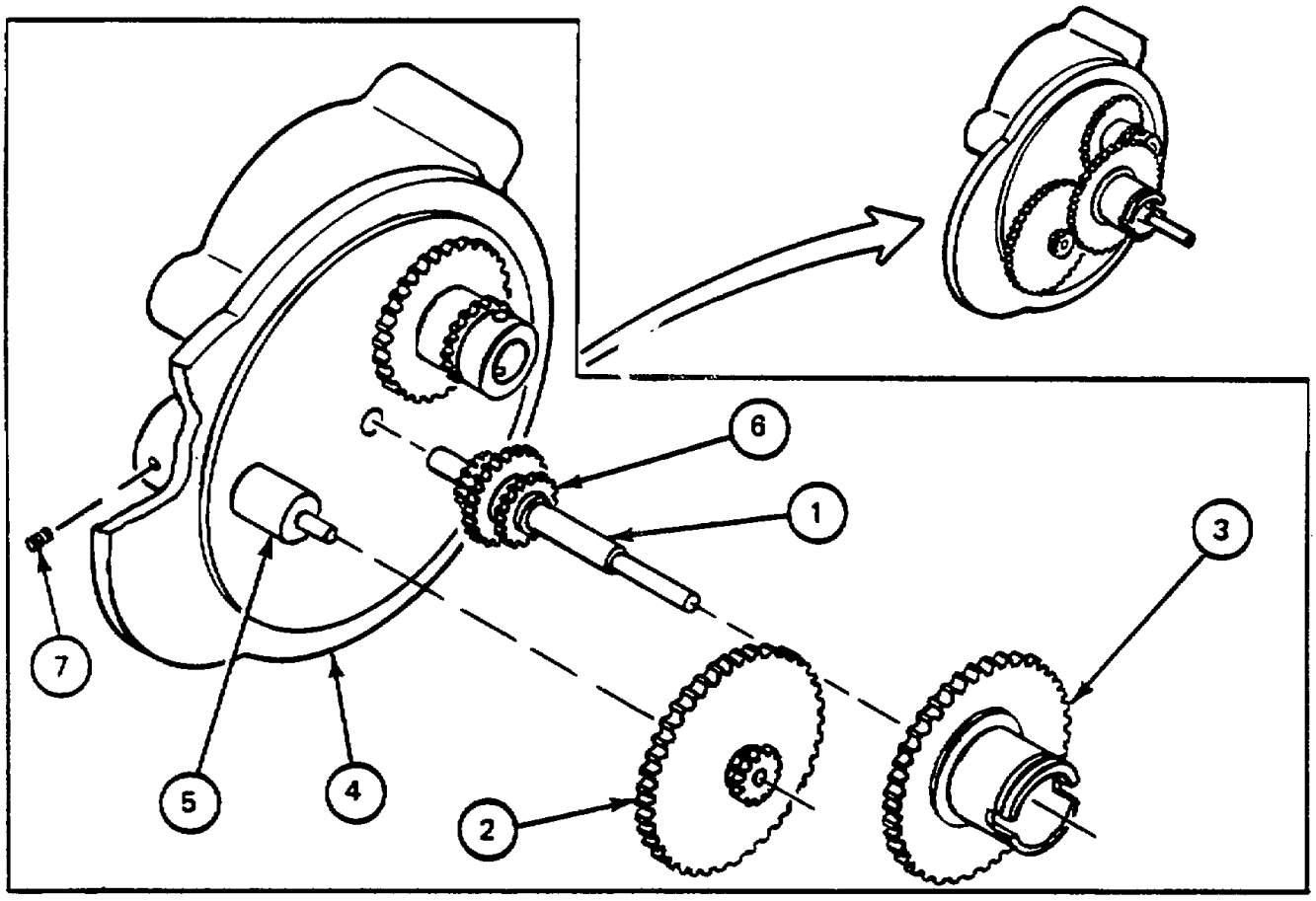
4-23. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY (CONT)

FRAME 3	
Step	**Procedure**
I.	Place intermediate gear (1) on shaft (2).
2.	Place gear (3) on shaft (2) and line up holes.
3.	Place pin (4) into gear (3) and shaft (2).
4.	Using punch and hammer, drive pin (4) through shaft (2) to hold gear (3) to shaft (2). GO TO FRAME 4



4-23. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY (CONT)

FRAME 4	
Step	**Procedure**
1.	Using grease, lubricate gears on shaft (pointer) (1), idler gear assembly (2), and hub gear (3) (JPG).
2.	Install shaft (pointer) (1) into housing assembly (4).
3.	Install idler gear assembly (2) over stud (5).
4.	Install hub gear (3) over shaft pointer (1).
5.	Adjust stud (5) by sliding up or down to line up idle gear (2) with hub gear (3) and gear (6); hold in place.
6.	Turn hub gear (3) so that teeth engage fully.
7.	Using Allen wrench, tighten setscrew (7) to hold stud (5).
	END OF TASK



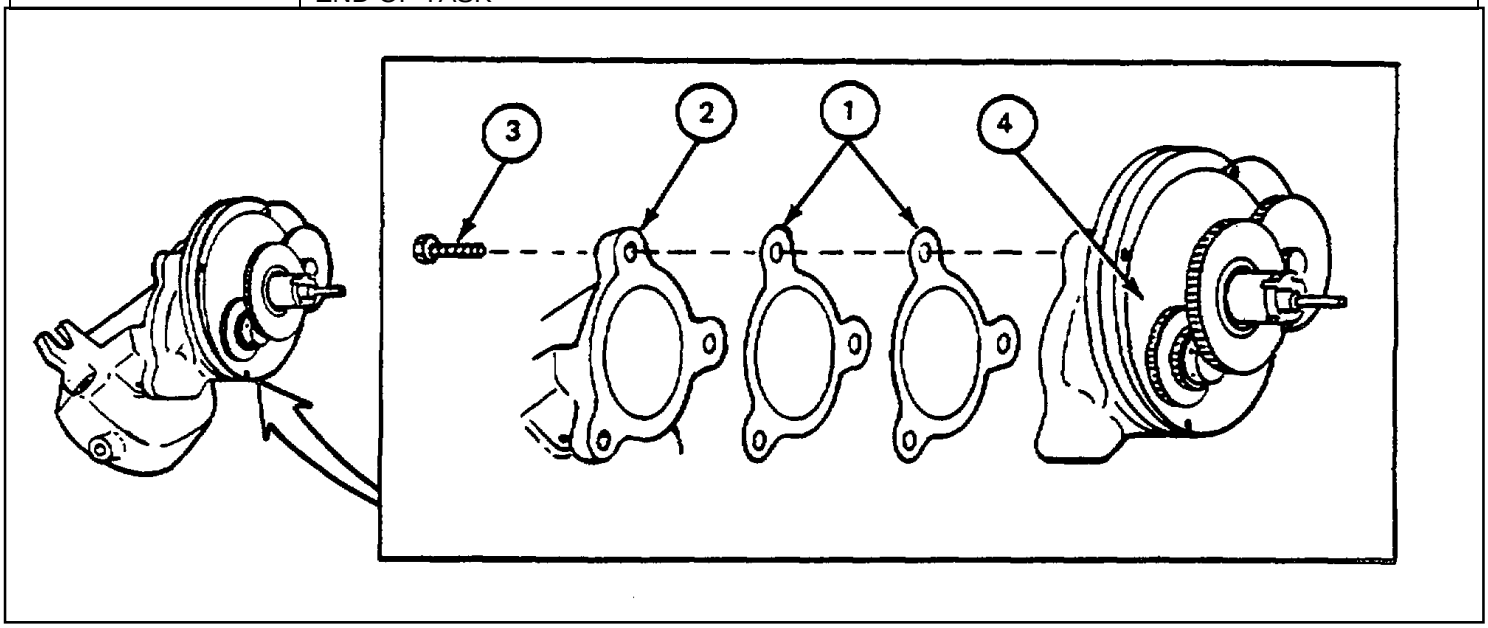
4-24. MIDDLE HOUSING ASSEMBLY AND RELATED PARTS INSTALLATION

TOOLS: 9/16" open end wrench

PERSONNEL: One

EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Place shim(s)(l) on lower housing (2) and line up holes.
2.	Place a screw (3) through lower housing (2) and shim(s) (1).
3.	Place middle housing (4) on lower housing (2) and hand tighten screw (3).
4.	Install two screws (3) and hand tighten.
5.	Using wrench, tighten screws (3) to hold middle housing (4).
	NOTE FOLLOW-ON MAINTENANCE Install dial housing (para 4-19). Do checkout procedure (Vol I, para 2-2).
	END OF TASK



Section 8. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS

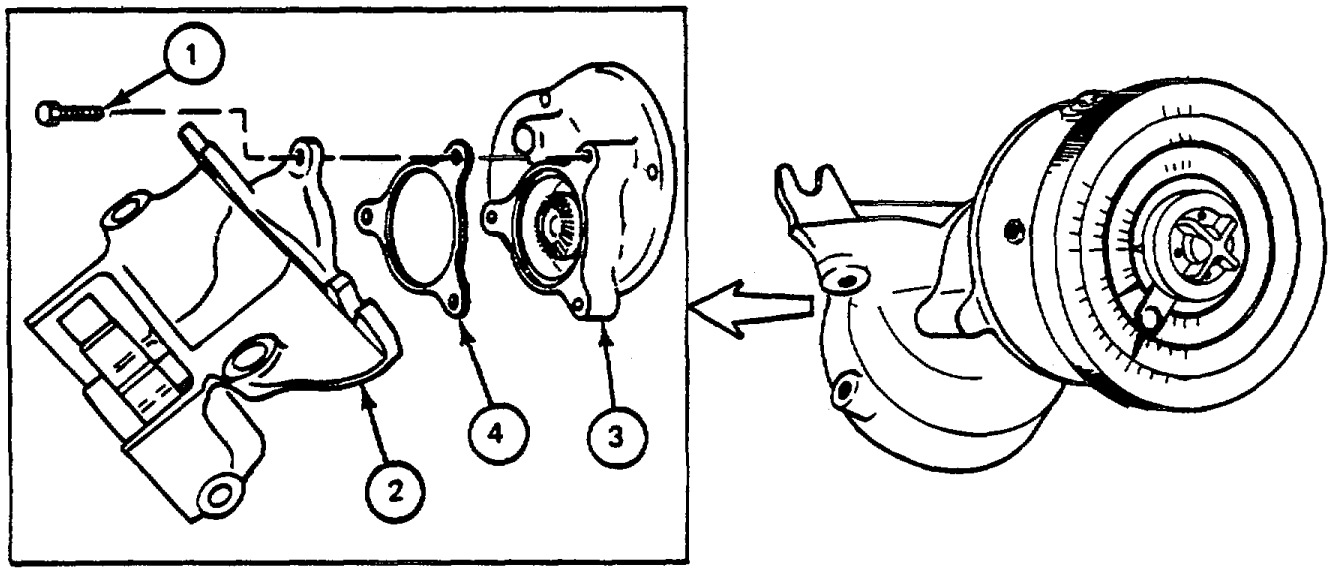
4-25. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS MAINTENANCE PROCEDURES INDEX

Task	Reference
Removal	4-26
Disassembly	4-27
Assembly	4-28
Installation	4-29

4-26. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS REMOVAL
TOOLS: 9/16" open end wrench

PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Using wrench, remove three screws (1) and separate bottom housing (2) from middle housing (3).
2.	Remove shim(s) (4) from bottom housing (2) or middle housing (3). END OF TASK



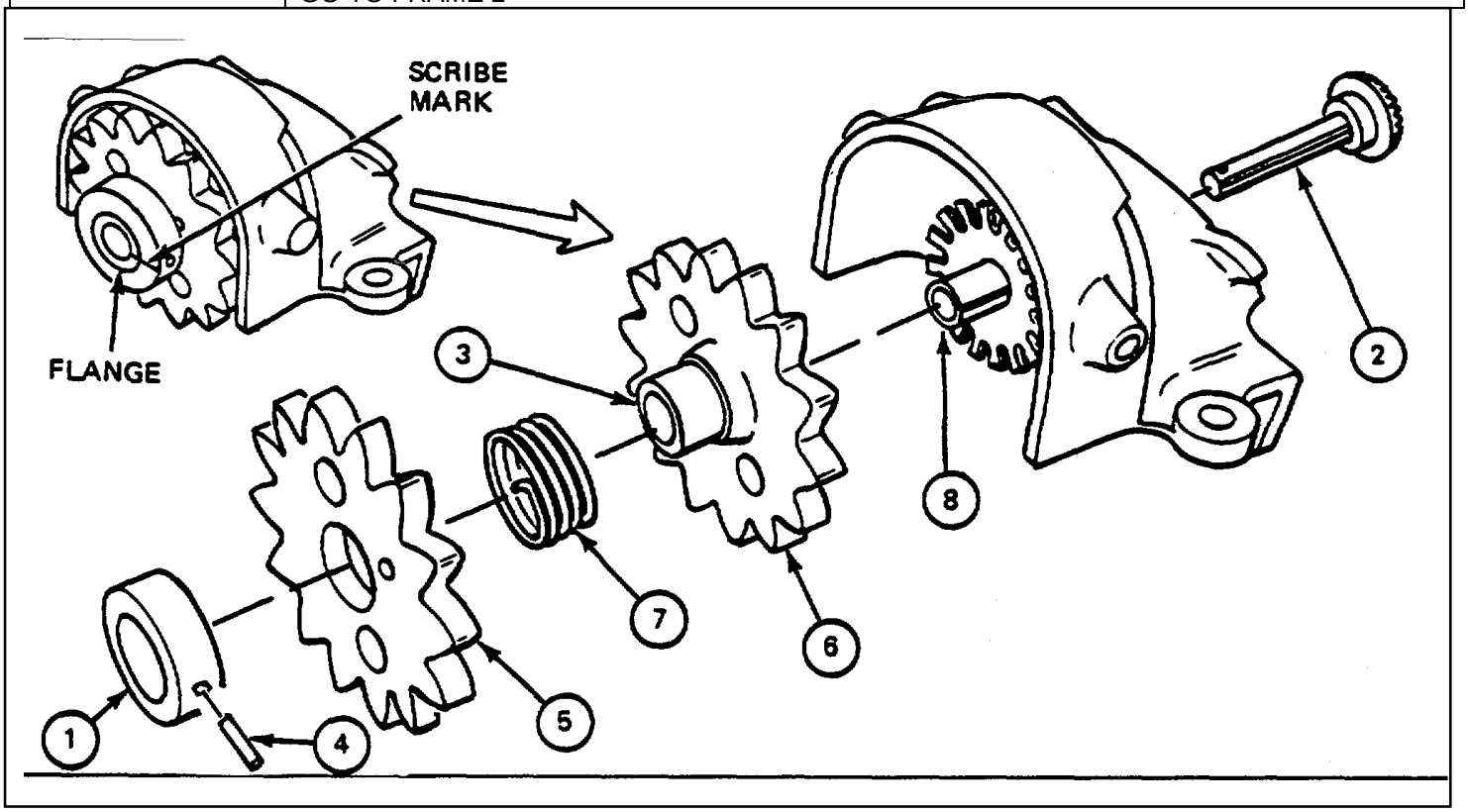
4-27. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY

TOOLS: 1/8" and 5/16': drive pin punch
1/4" flat tip screwdriver
Machinist scriber
5/32" socket head screw key (Allen wrench or equivalent)
4 oz. ball peen hammer

PERSONNEL: One

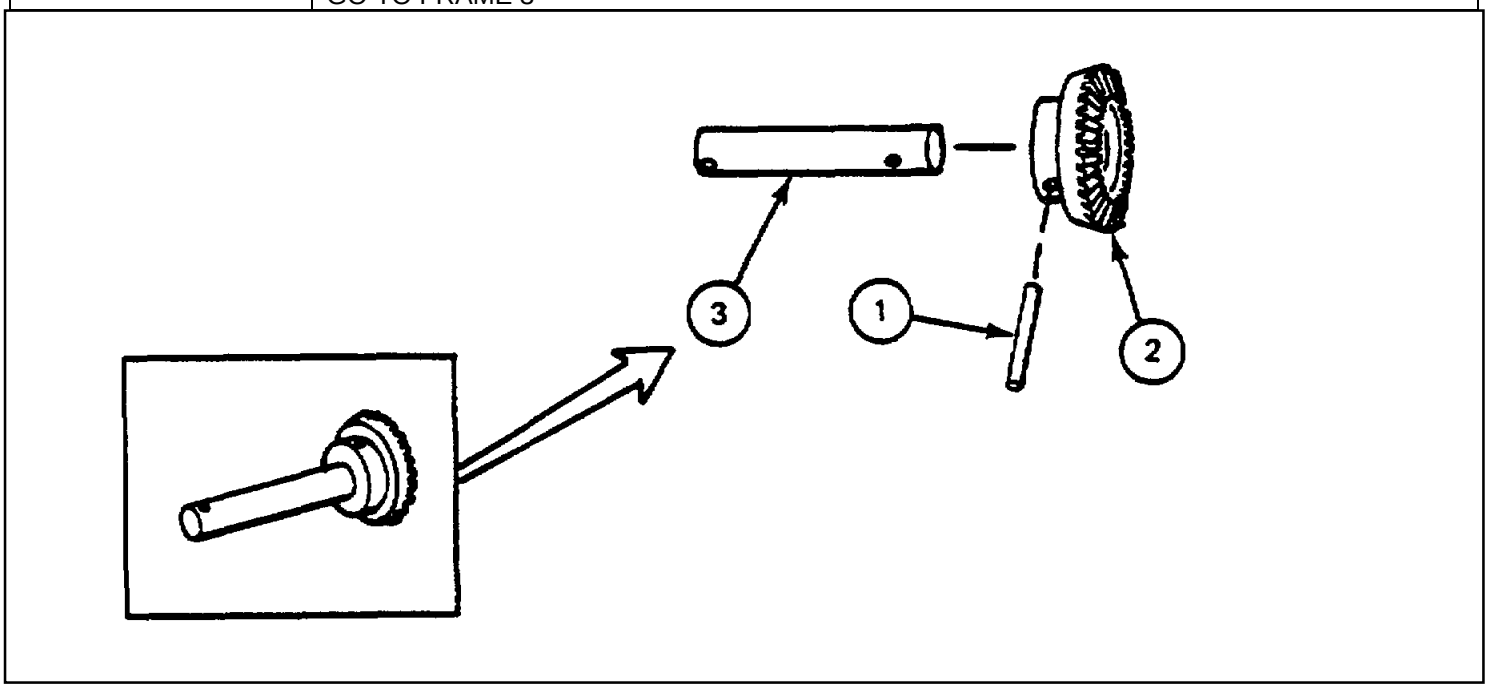
EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1.	Using scriber, draw a scribe mark on collar (1), shaft (2), and flange (3).
2.	Using 5/16" punch and hammer, drive out pin (4) far enough to remove collar (1). Remove collar.
3.	Remove anti-backlash gear assembly (5), (6) and (7) from shaft (2).
4.	Slide shaft (2) out of sleeve bearing (8).
5.	Using screwdriver, disassemble anti-backlash gear assembly by prying apart gears (5) and (6) and spring (7).
6.	Look at pin (4), gears (5) and (6) and torsion spring (7). If gears (5) and (6) are changed in shape or have missing or broken teeth, replace gear. If pin (4) or torsion spring (7) is changed in shape, replace pin or spring. GO TO FRAME 2



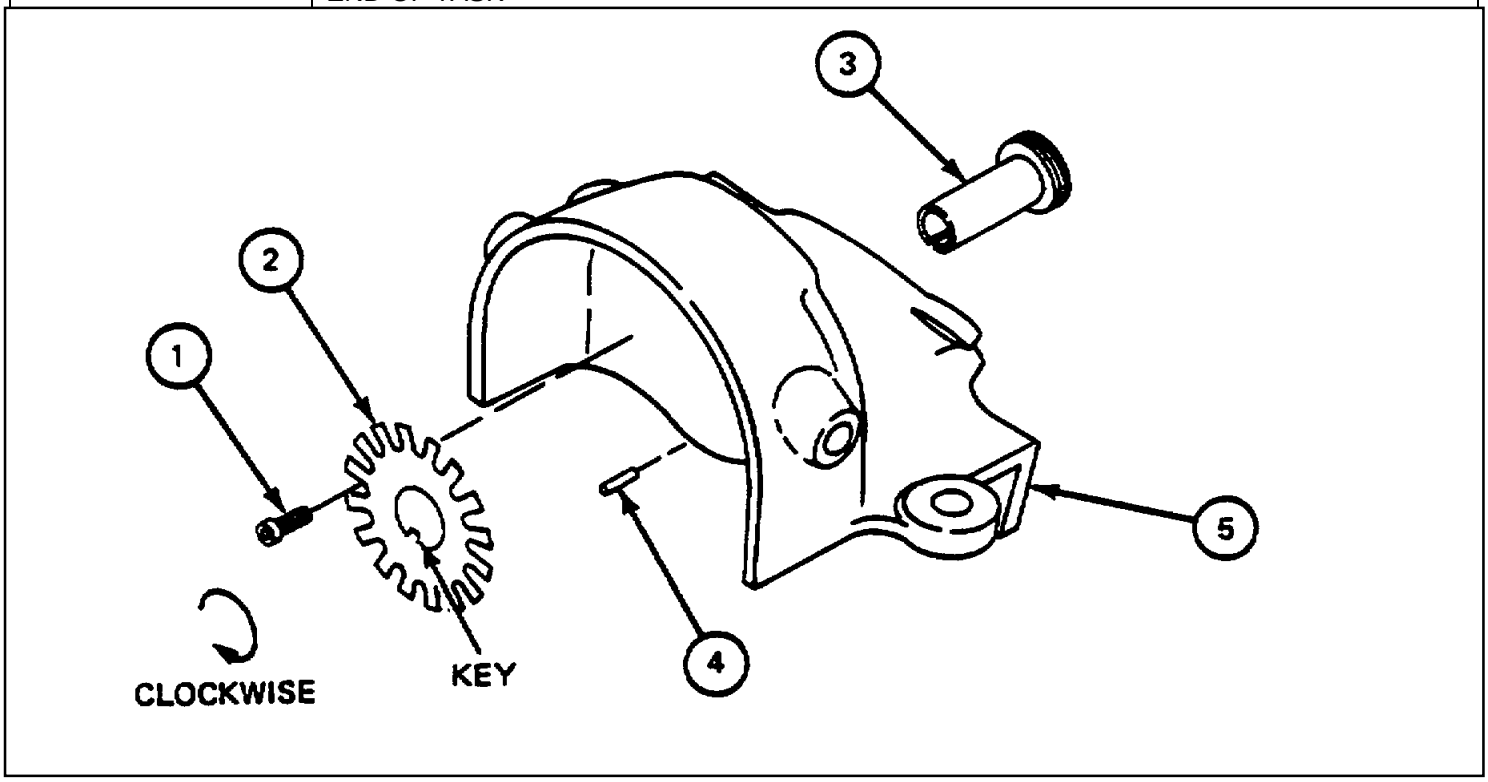
4-27. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY (CONT)

FRAME 2	
Step	**Procedure**
1. 2. 3.	Using 1/8" punch and hammer, drive out spring pin (1). Remove gear (2) from shaft (3). Look at gear (2), pin (1), and shaft (3). If gear (2) is changed in shape, or has broken or missing teeth, replace gear. If pin (1) or shaft (3) is changed in shape, replace. GO TO FRAME 3



4-27. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS DISASSEMBLY (CONT)

FRAME 3	
Step	**Procedure**
1.	Using Allen wrench, remove two screws (1).
2.	Remove locking plate (2) from sleeve bearing (3).
3.	Using 5/16" punch and hammer, remove pin (4).
4.	Place locking plate (2) with key into keyway of sleeve bearing (3).
5.	Turn locking plate (2) clockwise until sleeve bearing (3) is removed from housing assembly (5).
6.	Remove locking plate (2) from sleeve bearing (3).
7.	Look at screw (1), locking plate (2), pin (4) and sleeve bearing (3). If screw (1), locking plate (2), pin (4), or sleeve bearing (3) is changed in shape, replace. END OF TASK



4-28. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY

TOOLS: 5/16" drive pin punch
4 oz. ball peen hammer
3/16" flat tip screwdriver
5/32" socket head screw key (Allen wrench or equivalent)

SUPPLIES: Grease (item 3, App. A)
Rags, clean (item 1, App A) ,)
Ethyl alcohol (item 2, App. A)

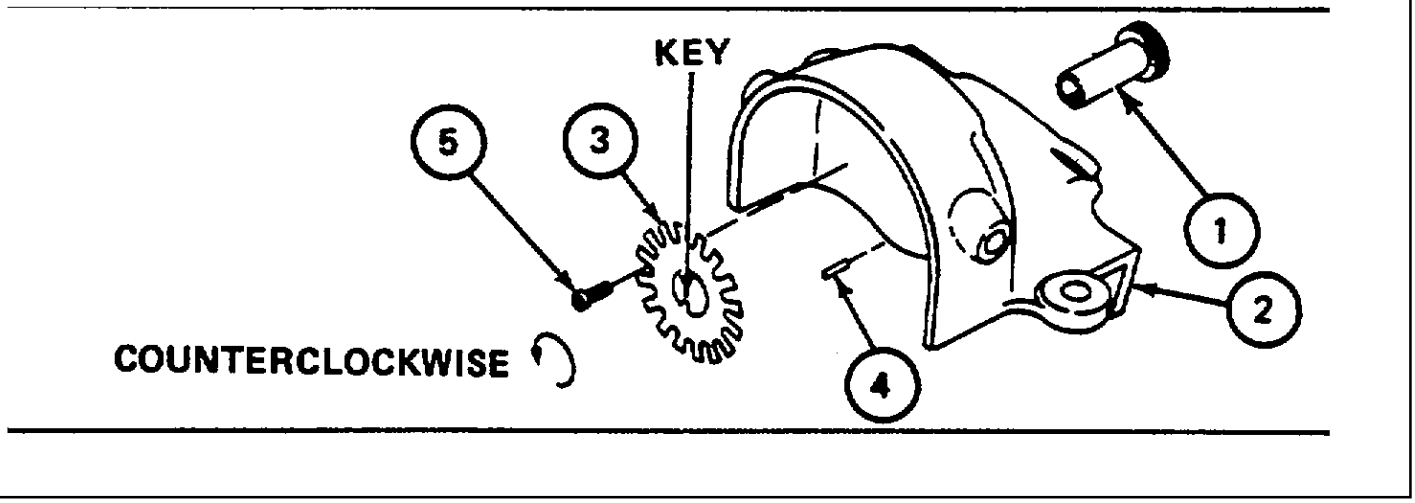
PERSONNEL: Two

REFERENCES: JPG 41C for: Cleaning
Lubricating

EQUIPMENT CONDITION: Azimuth indicator on work bench

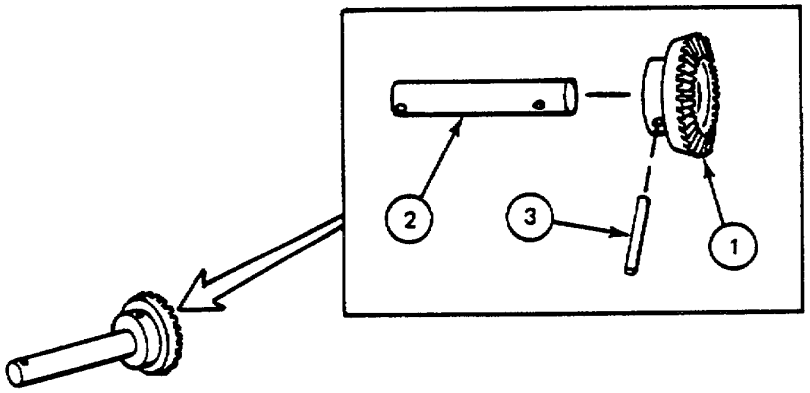
FRAME 1

Step	Procedure
1.	Using clean rags, clean all parts (JPG).
2.	Place sleeve bearing (1) in housing assembly (2).
3.	Place locking plate (3) key in keyway of sleeve bearing (1).
	NOTE It may be necessary to turn the locking plate (3) clockwise to line up a slot in locking plate with pinhole In housing (2).
4.	Turn locking plate (3) counterclockwise until sleeve bearing (1) is tight on housing assembly (21
5.	Using punch, drive pin (4) in housing assembly (2).
6.	Using Allen wrench, install two screws (5) in housing assembly (2).
	GO TO FRAME 2



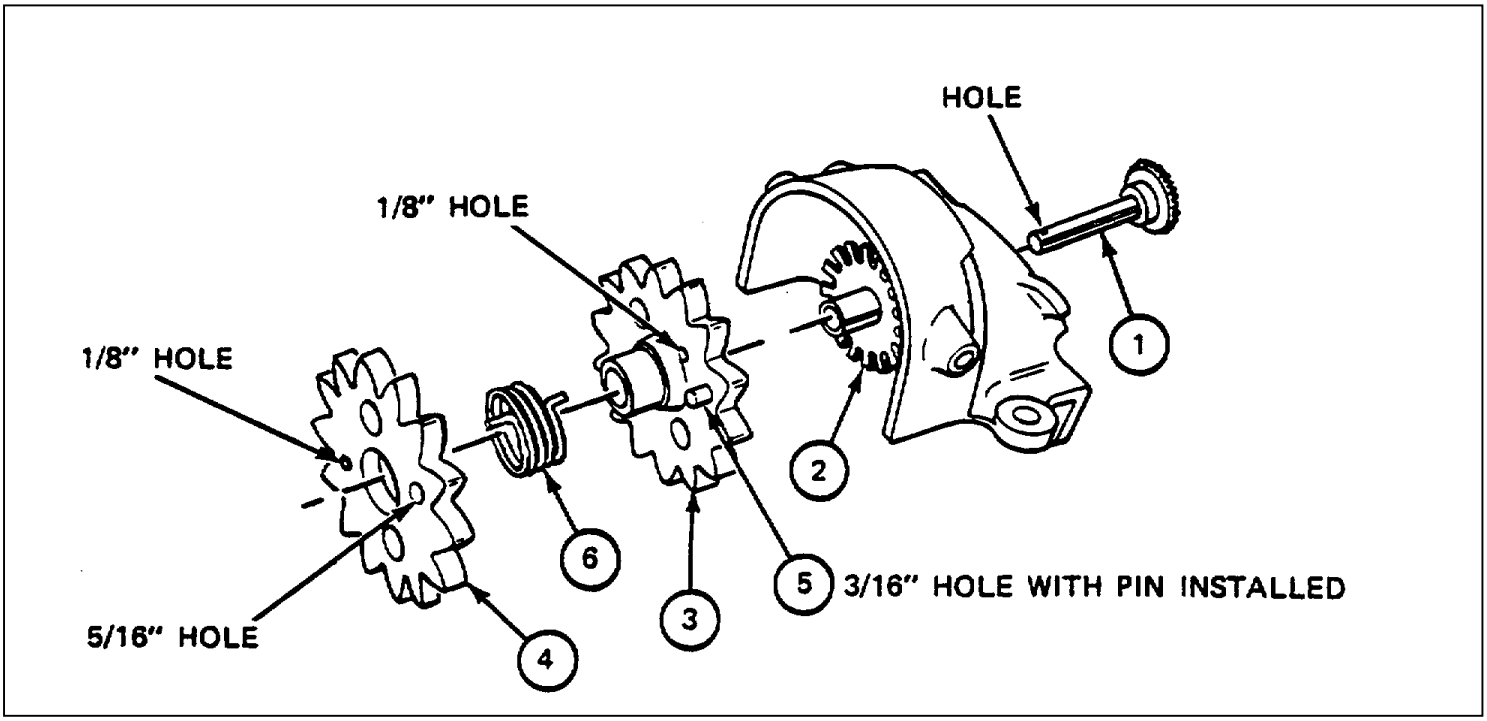
4-28. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY
..... (CONT)

FRAME 2	
Step	**Procedure**
1.	Using grease, lubricate gear (1) (JPG).
2.	Place gear (1) on shaft (2) and line up holes.
3.	Place pin (3) into hole of gear (1) and shaft (2).
4.	Using punch and hammer, drive pin (3) through shaft (2) to hold gear (1).
	GO TO FRAME 3



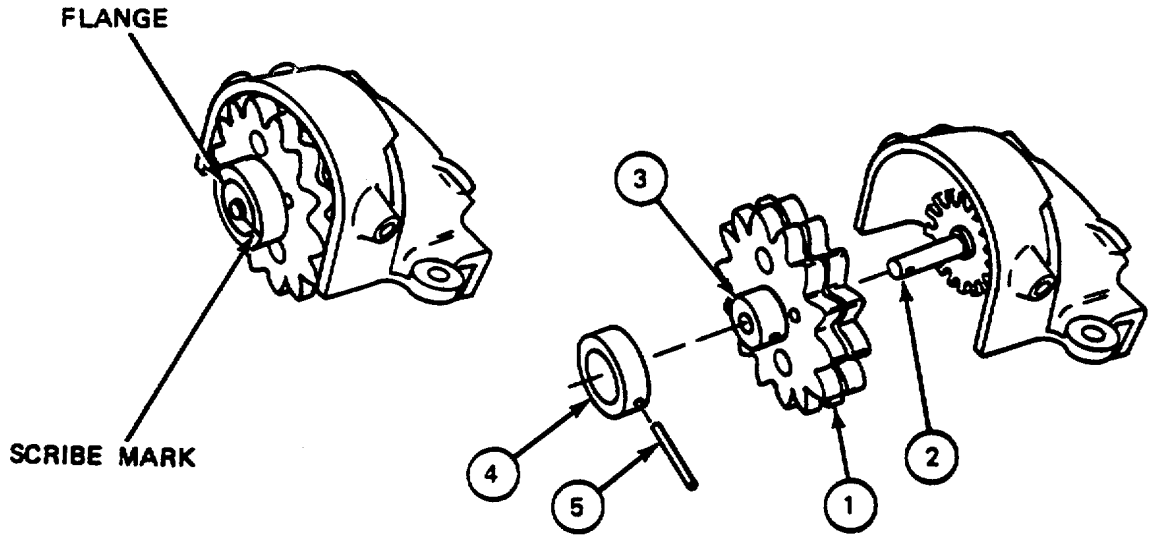
4-28. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY ..... (CONT)

FRAME 3	
Step	**Procedure**
1.	Push shaft (1) into sleeve bearing (2).
2.	Using grease, lubricate gears (2), (3), and (4) (JPG).
3.	Using hammer, drive pin (5) even with face of gear (3).
4.	Hold gear (3) and place one end of spring (6) into 1/8" hole of gear (3).
5.	Place drive gear (4) on spring (6).
	NOTE It may be necessary to put a 3/16" flat tip screwdriver between the gears to position spring so that end of spring lines up with 1/8" hole in gear (4).
6.	Press drive gear (4) and turn until spring (6) goes into 1/8" hole of gear (4).
	NOTE When doing steps 7 and 8, one repairman must hold gears together to prevent spring from coming part.
7.	Repairman A, holding gears, turns gear until 5/16" hole in gear (4) is lined up with pin (5).
8.	Repairman B, not holding gears, taps pin (5) through holes on gears (3) and (4). GO TO FRAME 4



4-28. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS ASSEMBLY ..... (CONT)

FRAME 4	
Step	**Procedure**
1.	Place anti-backlash assembly (1) on shaft (2).
2.	Line up scribe marks on flange (3) and shaft (2).
3.	Put collar (4) on gear flange (3) and line up collar (4) scribe mark with scribe mark on gear flange (3) and shaft (2).
4.	Using punch and hammer, drive pin (5) through collar (4), gear flange (3) and shaft (2).
	END OF TASK



Para 4-28 Cont

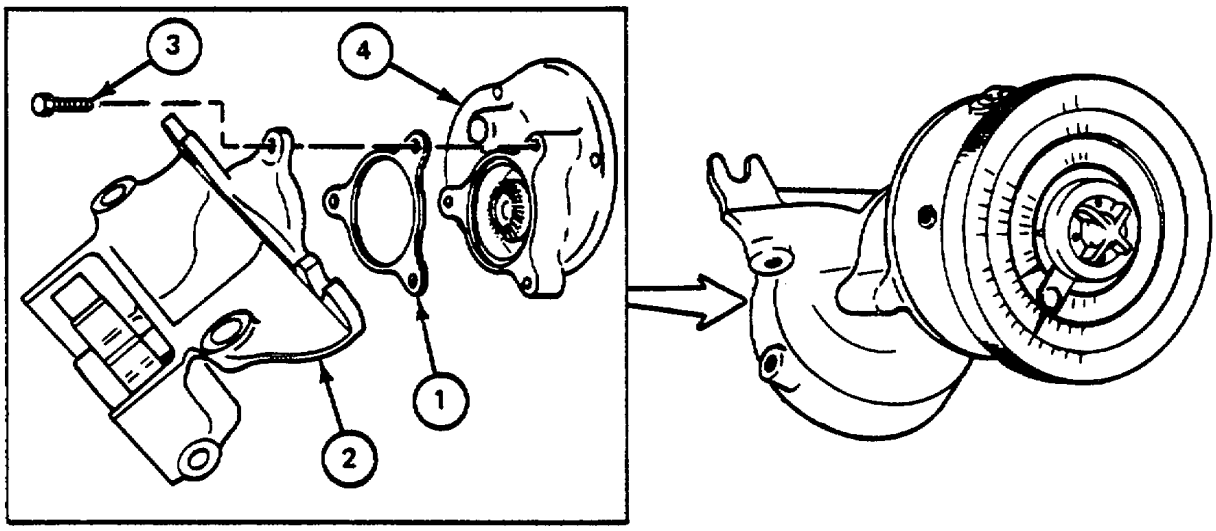
4-29. BOTTOM HOUSING ASSEMBLY AND RELATED PARTS INSTALLATION

TOOLS: 9/16" open end wrench

PERSONNEL: One

EQUIPMENT CONDITION: Azimuth indicator on work bench

FRAME 1	
Step	**Procedure**
1. 2. 3. 4. 5.	Place shim(s) (1) as required on bottom housing (2) and line up holes. Place one screw (3) through bottom housing and hold. Place bottom housing (2) on middle housing (4) and hand tighten screw (3). Place two screws (3) through bottom housing and hand tighten. Using wrench, tighten three screws (3) to hold bottom housing (2) to middle housing **(4).** **NOTE** FOLLOW-ON MAINTENANCE Do checkout procedure (Vol I, para 2-2). END OF TASK



CHAPTER 5
FINAL INSPECTION

5-1. SCOPE

This chapter gives final inspection and maintenance procedures to be done after repairing the mechanical azimuth indicator.

5-2. FINAL MAINTENANCE PROCEDURES INDEX

Task	Reference (para)
Backlash Adjustment	5-3
Final Inspection	5-4

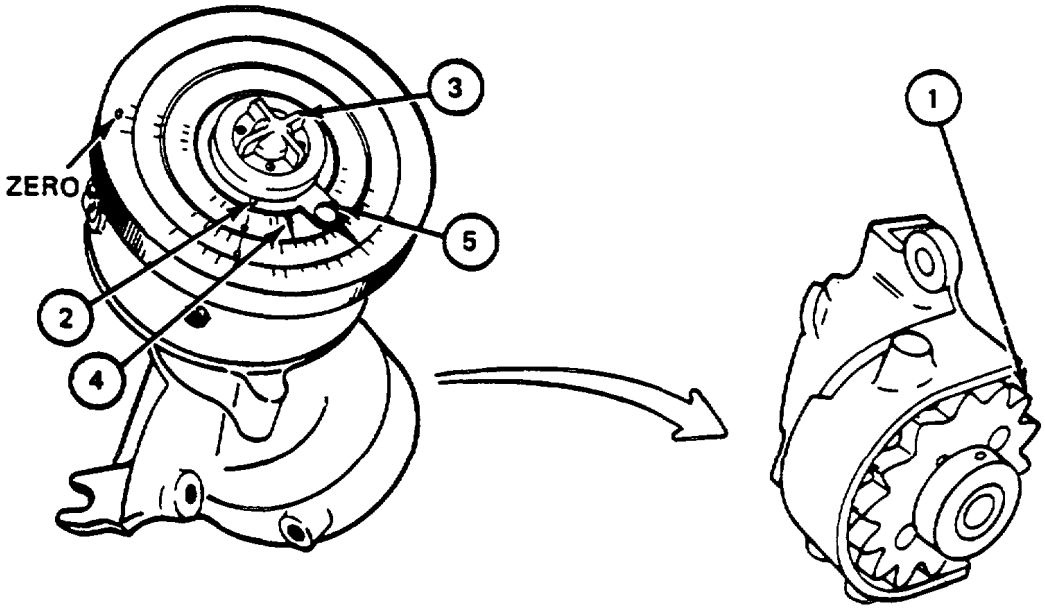
5-3. BACKLASH ADJUSTMENT

TOOLS: Machinist scriber
1/8" socket head screw key (Allen wrench or equivalent)
Vise
1/4" flat tip screwdriver

PERSONNEL: One
EQUIPMENT CONDITION: Azimuth indicator on work bench

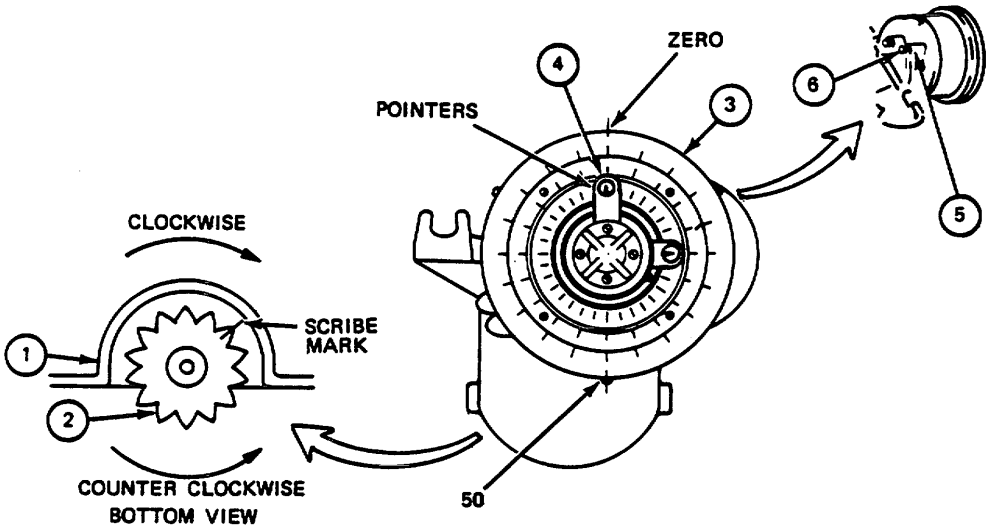
FRAME 1

Step	Procedure
	NOTE When clamping azimuth indicator with -a vise, make sure that drive gear can be reached by hand. Do not tighten vise too much.
1.	Using vise, clamp azimuth indicator in upright position.
2.	Turn drive gear (1) until directional pointer (2) is pointing to "0".
3.	Press down on resetter knob (3) and turn to set azimuth pointer (4) to "O'".
4.	Release pressure to resetter knob (3). Turn resetter knob (3) and set micrometer pointer (5) to "0".
	GO TO FRAME 2



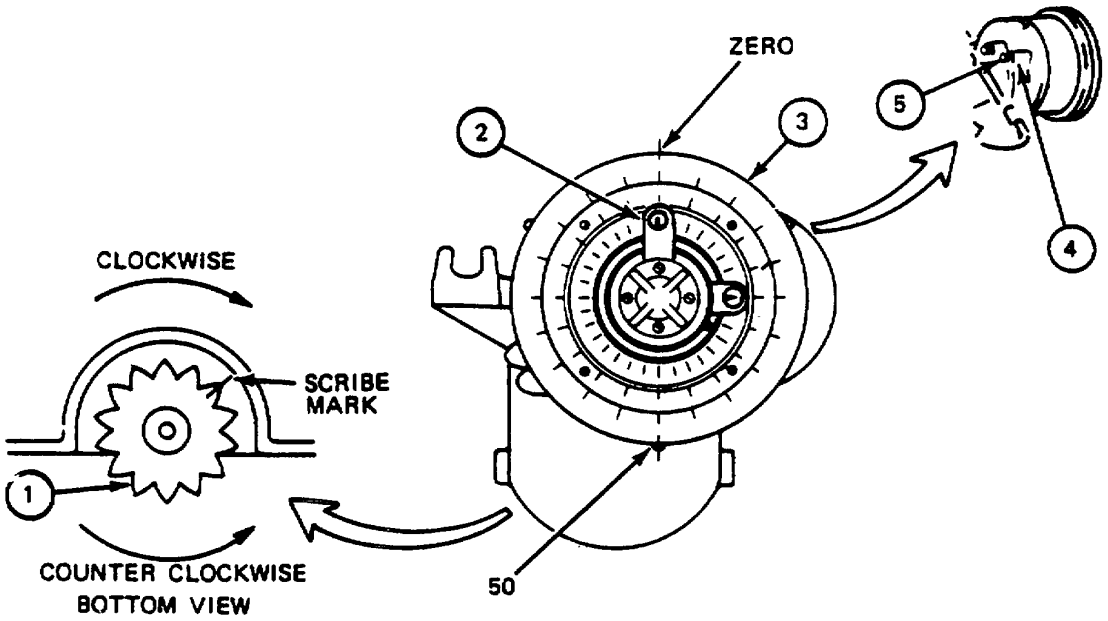
5-3. BACKLASH ADJUSTMENT (CONT)

FRAME 2	
Step	**Procedure**
1.	Using scriber, make a mark on housing (1) and drive gear (2).
2.	Check that all three pointers point to "O".
3.	If pointers do not point to 0, look at gearing (para 4-22 and 4-27).
4.	Turn gunner's aid dial (3) until its "0" is lined up with micrometer pointer (4).
5.	Turn drive gear (2) clockwise until micrometer pointer (4) points at 50 on gunner's aid dial (3).
6.	Turn drive gear (2) counterclockwise until scribe marks are lined up.
7.	Check that micrometer pointer (4) is pointing between "0" and midpoint to first marking on gunner's aid dial (3).
8.	If pointer is not pointing correctly, loosen setscrew (5) using Allen wrench. Using screwdriver, turn stud (6) fully clockwise, then turn stud (6) counterclockwise 1/8 turn. Repeat steps 4 thru 7 until correct response is seen. Tighten setscrew (5). GO TO FRAME 3



5-3. BACKLASH ADJUSTMENT (CONT)

FRAME 3	
Step	**Procedure**
1.	Turn drive gear (1) counterclockwise until micrometer pointer (2) points at 50 on gunner's aid dial (3).
2.	Turn drive gear (1) clockwise until scribe marks are lined up.
3.	Check that micrometer pointer (2) is pointing between "0" and midpoint to first marking on gunner's aid dial (3).
4.	If pointer is not pointing correctly, loosen setscrew (4) using Allen wrench. Using screwdriver, turn stud (5) fully clockwise, then turn stud (5) counterclockwise 1/8 turn. Repeat steps 1 thru 3 until correct response is seen. Tighten setscrew (4). END OF TASK



5-4. FINAL INSPECTION

PERSONNEL: One

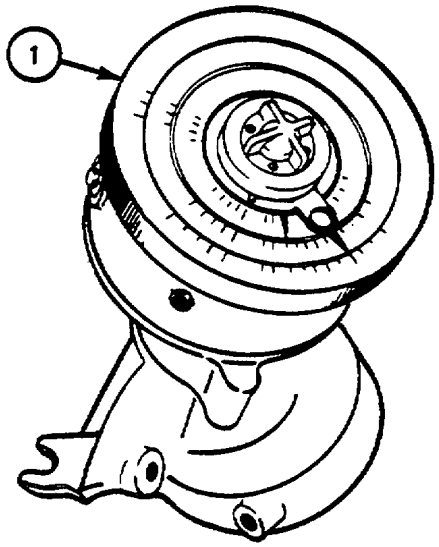
EQUIPMENT CONDITION: Azimuth indicator on work bench

NOTE

If you find a fault, tell your supervisor. If you do not find a fault, send good azimuth indicator back to service.

FRAME 1

Step	Procedure
1.	Check azimuth indicator (I) for loose or missing parts.
2.	Check azimuth indicator (1) for grease, or smears, and general cleanliness. If grease, smears, or dirt appear, clean.
	END OF TASK



CHAPTER 6
PACKAGING

6-1. SCOPE
This chapter gives information on packaging of the azimuth indicator for storage or shipment.

6-2. PREPARATION FOR PACKAGING OF OPTICAL COMPONENTS
Cover all prisms or optical elements with at least four thicknesses of neutral lens tissue and hold in place with water-resistant, pressure- sensitive adhesive tape. Cover the lens tissue with cellulose cushioning material and hold in place with pressure-sensitive tape.

6-3. CONTAINERS
Pack all parts in a container of the right size. Make sure they are braced and cushioned so that they will not break.

APPENDIX A
EXPENDABLE SUPPLIES AND MATERIALS LIST

Section 1. INTRODUCTION

A-1. SCOPE

This appendix lists expendable supplies and materials you will need to repair the mechanical azimuth indicator. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

A-2. EXPLANATION OF COLUMNS

a. Column 1 - Item Number. This number is assigned to the entry in the listing and is used in the manual to identify the material, for example, grease (item 3, App. A).

b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.

F - Direct Support Maintenance
H - General Support Maintenance

c. Column 3 - National Stock Number. This is the National stock number assigned to the item. Use it to request or requisition the item.

d. Column 4 - Description. This tells the Federal item name and, if needed, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parenthesis, if applicable.

e. Column 5 - Unit of Measure (U/M). This column shows how the item is measured. For example, you may see these abbreviations: ea (each), in (inches), or pr (pair). Order the smallest amount you need.

Section 2. EXPENDABLE SUPPLIES AND MATERIALS

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
1	F	7920-00-205-1711	Rags, Clean 50 pound	LB
2	F	6810-00-264-5906	Ethyl Alcohol, FED-0-C-265 1 pt container	PT
3	F	9150-00-269-8255	Grease, MIL4343 1 lb can	LB
4	F	8010-00-298-2300	Paint, Gray, TTE-489 1 qt can	QT
5	F	8010-00-286-7758	Paint, Yellow, Alkalyd Gloss, TTE-489 1 qt can	OT
6	F	8010-00-297-2092	Paint, White, Alkalyd Gloss, TTE-489 1 qt can	QT
7	F	8010-00-292-1127	Primer, Rust Inhibitor, TT-P-664 1 qt can	QT

APPENDIX B
MAINTENANCE TASK INDEX

B-1. SCOPE

This appendix helps you find maintenance tasks for the mechanical azimuth indicator by giving you references to the procedures.

B-2. MAINTENANCE TASK INDEX

INDICATOR, AZIMUTH, MECHANICAL, 10954720 (1290-00-901-8667) / NOMENCLATURE	MAINTENANCE TASKS: INSPECTION UPON RECEIPT (VOL II)	FINAL INSPECTION (VOL II)	CHECKOUT (VOL I)	ADJUST, ALIGN, CALIBRATE (VOL II)	TROUBLESHOOT (VOL I)	REMOVAL/INSTALLATION (VOL II)	DISASSEMBLY/ASSEMBLY (VOL II)	TOOLS AND TEST EQUIPMENT (VOL I/VOL II)	NOTES
AZIMUTH INDICATOR	Para 3-2	Para 5-4	Para 2-2	Para 5-3	Para 4-2			Para 1-4/ 2-7	
BOTTOM HOUSING ASSEMBLY AND RELATED PARTS						Para 4-26/ 4-29	Para 4-27/ 4-28		
DIAL HOUSING ASSEMBLY AND RELATED PARTS						Para 4-16/ 4-19	Para 4-17/ 4-18		
FLANGE AND WINDOW						Para 4-10/ 4-11			
KNOB (RESETTER)						Para 4-7// 4-8			
MIDDLE HOUSING ASSEMBLY AND RELATED PARTS						Para 4-21/ 4-24	Para 4-22/ 4-23		

B-2 MAINTENANCE TASK INDEX

INDICATOR, AZIMUTH, MECHANICAL, 10954720 (1290-00-901-8667)	MAINTENANCE TASKS								
NOMENCLATURE	INSPECTION UPON RECEIPT (VOL II)	FINAL INSPECTION (VOL II)	CHECKOUT (VOL I)	ADJUST, ALIGN, CALIBRATE (VOL II)	TROUBLESHOOT (VOL I)	REMOVAL/INSTALLATION (VOL II)	DISASSEMBLY/ASSEMBLY (VOL II)	TOOLS AND TEST EQUIPMENT (VOL I/VOL II)	NOTES
POINTERS						Para 4-13/ 4-14			
SCALE DIAL (GUNNER'S AID)						Para 4-4/ 4-5			

Para B-2 Cont

APPENDIX C
DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Current as of 6 May 1981

Section I. INTRODUCTION

C-1. SCOPE

This appendix lists spares and repair parts; special tools; Special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of direct support and general support of the Indicator, Azimuth, Mechanical 10954720. It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. GENERAL

This Repair Parts and Special To List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance. The list also include parts which must be removed for replacement of the authorized parts. Parts list are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence.

b. Section III. Special Tools List. (Not Applicable)

c. Section IV. National Stock Number and Part Number Index. A list in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify item called out in the illustration.

b. Source, Maintenance, and Recoverability (SMR) Codes.

(1) Source Code. Source codes indicate the manner of acquiring

support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA	-Item procured and stocked for anticipated or known usage
PB	-Item procured and stocked for insurance purpose because essentially dictates that a minimum quantity be available in the supply system.
PC	-Item procured and stocked and which otherwise would be code c PA except that it is deteriorative in nature.
PD	-Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional' initial issues or outfittings. Not subject to automatic replenishment.
PE	-Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	-Support equipment which will not be stocked but which will be centrally procured on demand.
PG	-Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	-An item of a depot overhaul/ repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	-An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	-Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	-Item to be manufactured or fabricated at organizational level.
MF	-Item to be manufactured or fabricated at the direct support maintenance level.
MH	-Item to be manufactured or fabricated at the general support maintenance level.
MD	-Item to be manufactured or fabricated at the depot maintenance level.
AO	-Item to be assembled at organizational level.
AF-	Item to be assembled at direct support maintenance level.
AH-	Item to be assembled at general support maintenance level.

AD -Item to be assembled at depot maintenance level.

XA -Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.

XB -Item is not procured or stocked. If not available through salvage, requisition.

XC -Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.

XD -A support item that is not stocked. When required, item will be procured through norms supply channels.

NOTE: Cannibalization or salvage may be used as a source of supply for any items coded above except those coded XA and aircraft support items as restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
C	-Crew or operator maintenance performed within organizational maintenance.
O	-Support item is removed, replaced, used at the organizational level.
F	-Support item is removed, replaced, used at the direct support level.
H	-Support item is removed, replaced, used at the general support level.
D	-Support items that are removed, replaced, used at depot, mobile depot, or specialized repair activity only.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	-The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	-The lowest maintenance level capable of complete repair of the support item is the general support level.

D -The lowest maintenance level capable of complete repair of the support item is the depot level.

L -Repair restricted to Specialized Repair Activity (Not Applicable).

Z -Nonreparable. No repair authorized.

B -No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No part or special tools are procured for the maintenance of this item.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability Codes	Definition
Z	-Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
0	-Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F	-Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H	-Reparable item. When uneconomically reparable, condemn and dispose at the general support level
D	-Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	-Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.
A	-Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

d. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

e. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE: When a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr, etc). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned

h. Quantity Incorporated in Unit Indicates the quantity of the item uses in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, (e.g., shims, spacers, etc).

C-4. SPECIAL INFORMATION
(Not Applicable)

C-5. HOW TO LOCATE REPAIR PARTS

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the item belongs. This is necessary since illustrations are prepared for functional groups, and listings are divided into the same groups.

(2) Second. Find the illustration covering the functional group to which the item belongs.

(3) Third. Identify the item on the illustration and note the illustration figure and item number of the item.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in NIIN sequence followed by a list of part numbers in alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. ABBREVIATIONS
(Not Applicable)

Section II

REPAIR PARTS LIST

C-7

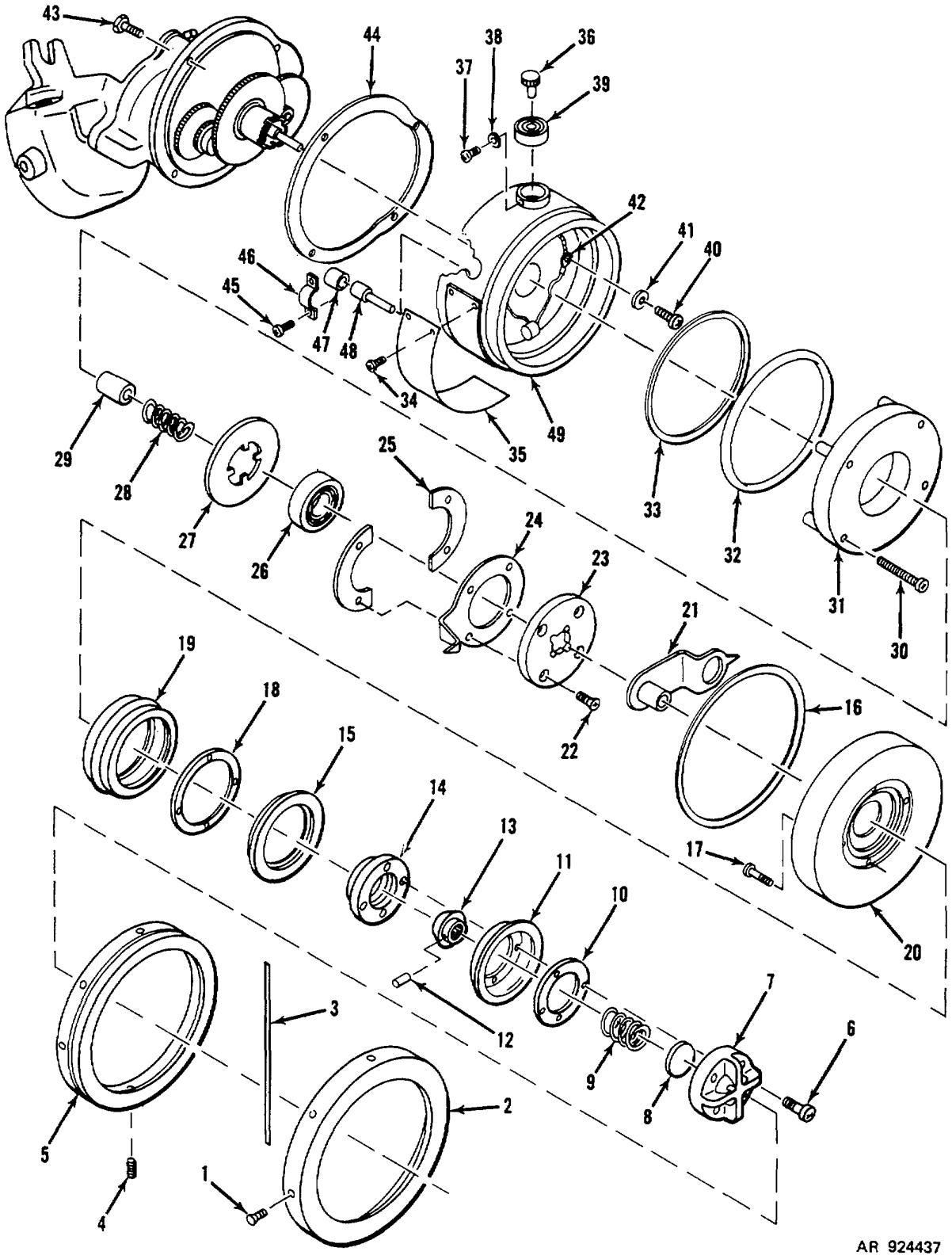


Figure C-1. Mechanical azimuth indicator 10954720 (front view)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 MECHANICAL AZIMUTH INDICATOR 10954720-1 (FRONT VIEW)		
C-1	1	PAFZZ	5305-00-994-4982	96906	M535206-225	SCREW, MACHINE	EA	3
C-1	2	XBFZZ	5355-00-917-2697	19207	10954715	DIAL, SCALE	EA	1
C-1	3	PAFZZ	5340-00-522-9963	19207	7068048	CLIP, SPRING	EA	1
C-1	4	PAFZZ	5305-00-724-6799	96906	M851964-51	SETSCREW	EA	6
C-1	5	XBFZZ	1260-00-706-8069	19200	7068069	CLAMP	EA	1
C-1	6	PAFZZ	5305-00-543-2752	96906	MS35265-45	SCREW, MACHINE	EA	4
C-1	7	PAFZZ	5355-00-534-5713	19200	5345713	KNOB	EA	1
C-1	8	XBFZZ	1260-00-513-2182	19200	5345712	RETAINER	EA	I
C-1	9	PAFZZ	5360-00-692-8927	19207	5393335	SPRING, HELICAL	EA	1
C-1	10	PAFZZ	5330-00-531-2364	19207	7068070	GASKET	EA	1
C-1	11	XBFZZ	1260-00-706-8073	19200	7068073	CUP	EA	1
C-1	12	PAFZZ	5315-00-9S1-6906	96906	M535671-17	PIN, GROOVED	EA	1
C-1	13	PAFZZ	1290-00-507-9520	19207	8383922	CONE	EA	1
C-1	14	XBFZZ	1260-00-522-9965	19200	8668651	FLANGE ASSEMBLY	EA	1
C-1	15	XBFZZ	1260-00-706-5074	19207	7068074	RING, BELLOWS, STOP	EA	1
C-1	16	PAFZZ	5330-00-527-8900	19207	7069656	GASKET	EA	1
C-1	17	PAFZZ	5305-00-954-3938	96906	MNS35206-207	SCREW, MACHINE	EA	4
C-1	18	XBFZZ	5330-00-706-8072	19207	7068072	RETAINER, PACKING	EA	1
C-1	19	PAFZZ	1260-00-706-8097	19207	7069097	BELLOWS	EA	1
C-1	20	PAFZZ	5355-00-706-8064	19207	7069064	WINDOW, DIAL	EA	1
C-1	21	PAFZZ	1290-00-247-7180	19207	11653612	POINTER ASSEMBLY	EA	1
C-1	22	PAFZZ	5305-00-958-5474	96906	M835190-250	SCREW, MACHINE	EA	4
C-1	23	XBFZZ		19201	706060	FLANGE	EA	1
C-1	24	PAFZZ	5355-00-144-7213	19207	11653613	POINTER, DIAL	EA	1
C-1	25	PAFZZ	5310-00-534-5718	19204	5345718	WASHER, SPLIT	EA	1
C-1	26	PAFZZ		21450	700026	BEARING, BALL	EA	1
C-1	27	PAFZZ	5355-00-144-7215	19207	11653614	POINTER, DIAL.	EA	1
C-1	28	PAFZZ	5360-00-530-5624	19200	5345723	SPRING, HELICAL	EA	1
C-1	25	XBFZZ		19207	5345720	SPACER, SLEEVE	EA	1
C-1	30	PAFZZ	5305-00-721-7436	24446	N81P9024C13	SCREW, MACHINE	EA	4
C-1	31	XBFZZ	1260-00-702-8395	19200	7028399	DIAL	EA	1
C-1	32	PAFZZ	5365-00-530-4468	19200	5345922	SPACER, RING	EA	1
C-1	33	PAFZZ	5365-00-530-9427	19200	5345924	SPACER, RING	EA	1
C-1	34	PAFZZ	5305-00-253-5614	96906	MS21318-20	SCREW, DRIVE	EA	4
C-1	35	PADZZ	9905-01-094-0955	19207	7068175-1	PLATE	EA	1
C-1	36	PAOZZ	6240-00-051-4843	96906	MS25236-8623	LAMP, INCANDESCENT	EA	2
C-1	37	PAFZZ		21450	224933	SCREW	EA	2
C-1	38	PAFZZ	5310-00-264-1337	34895	1041571-5	WASHER, LOCK	EA	2

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 MECHANICAL AZIMUTH INDICATOR 10954720-1 (FRONT VIEW) (CONTINUED)		
C-1	39	XBFZZ	6250-00-620-9551	19207	6209551	LAMPHOLDER	EA	2
C-1	40	PAFZZ	5305-00-984-6191	96906	MS35206-243	SCREW, MACHINE	EA	1
C-1	41	PAFZZ	5310-00-559-0070	96906	MS35333-38	WASHER, LOCK	EA	2
C-1	42	PAFZZ	5940-00-050-6202	21450	506202	TERMINAL, LUG	EA	2
C-1	43	XDFZZ	5305-00-068-0518	96906	MS90727-6	SCREW, CAP, HEXAGON, HEAD	EA	4
C-1	44	PAFZZ	5330-00-753-7551	19207	7537551	GASKET	EA	1
C-1	45	PAFZZ	5305-00-059-8263	96901	MS35214-38	SCREW, MACHINE	EA	2
C-1	46	XBFZZ		19200	17978441	CLIP	EA	1
C-1	47	XBFZZ		19207	17089292	INSULATOR, SLEEVE	EA	1
C-1	48	XBFZZ		19200	15320625	PLUG	EA	1
C-1	491	XBFZZ		19207	17537556	HOUSING, INDICATOR	EA	1

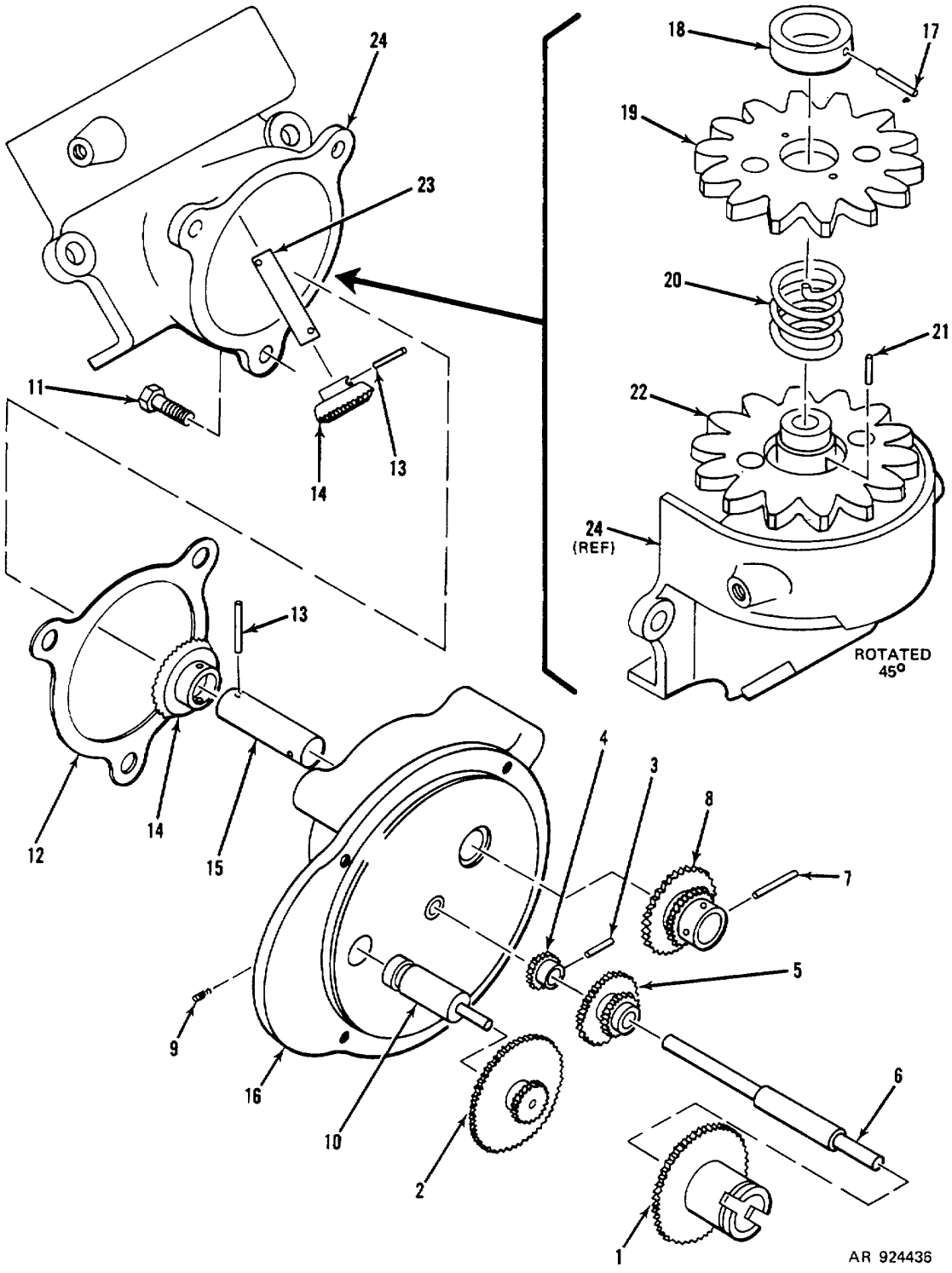


Figure C-2. Mechanical azimuth indicator 1095420 (rear view)

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION USABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 00 MECHANICAL AZIMUTH INDICATOR 10954720-1 (REAR VIEW)		
C-2	1	PAHZZ	3020-00-753-7546	19207	7537548	GEAR, SPUR	EA	1
C-2	2	PAHZZ	2920-00-753-7558	19207	7537558	GEAR, ASSEMBLY	EA	1
C-2	3	PAHZZ		21450	142958	PIN	EA	1
C-2	4	PAHZZ	1260-00-753-7547	19200	7537547	GEAR	EA	1
C-2	5	PAHZZ	1290-01-091-1920	19207	7537559	GEAR ASSEMBLY	EA	1
C-2	6	PAHZZ	1260-00-534-5727	19200	5345727	SHAFT	EA	1
C-2	7	PAHZZ	5315-00-014-2501	21450	142501	PIN, GROOVED	EA	1
C-2	8	PAHZZ	1260-00-753-7546	19200	7537546	GEAR DRIVE	EA	1
C-2	9	PAHZZ	5305-00-723-9387	96906	MS51963-63	SETSCREW	EA	1
C-2	10	PBHZZ	5315-00-534-5706	19200	5345706	PIN, SHOULDER	EA	1
C-2	11	PAHZZ	5305-00-s55-4181	96906	M590728-59	SCREW, CAP, HEXAGON HEAD	EA	3
C-2	12	XBHZZ	5365-00-939-t109	19207	10954712	SHIM	EA	1
C-2	13	PAHZZ	5315-00-657-3791	96906	M5904B-140	PIN, SPRING	EA	2
C-2	14	PAHZZ	3020-01-099-5166	19207	10954719	GEAR, BEVEL	EA	2
C-2	15	XBHZZ		19207	10954713-1	SHAFT	EA	1
C-2	16	XBFZZ		19207	10954707	HOUSING ASSEMBLY	EA	1
C-2	17	PAFZZ	5315-00-087-2841	96906	M535671-39	PIN, GROOVED	EA	1
C-2	18	PAFZZ		19204	10954714	BUSHING, SLEEVE	EA	1
C-2	19	PAFZZ	3020-01-089-5511	19204	10954718	GEAR, SPUR	EA	1
C-2	20	PAFZZ	5360-00-798-3827	19207	79B3627	SPRING, HELICAL	EA	1
C-2	21	PAFZZ		19207	7089295	PIN	EA	1
C-2	22	PAFZZ	3020-01-100-3487	19207	10954717	GEAR, SPUR	EA	1
C-2	22	XBFZZ		19207	10954713-2	SHAFT	EA	1
C-2	24	XBFZZ		19207	10954711	HOUSING ASSEMBLY	EA	1

Section III

SPECIAL TOOLS LIST

(NOT APPLICABLE)

Section IV

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

C-17

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER NO.	FIGURE NO.	ITEM NO.	STOCK NUMBER NO.	FIGURE NO.	ITEM NO.
5315-00-014-2501	C-2	7	5360-00-692-8927	C-1	9
5940-00-050-6202	C-1	42	1260-00-702-8399	C-1	31
6240-00-051-4943	C-1	36	5355-00-706-8064	C-1	20
5305-00-059-8263	C-1	45	1260-00-706-8069	C-1	5
5305-00-068-0513	C-1	43	5330-00-706-8072	C-1	1I
5315-00-087-2841	C-2	17	1260-00-706-8073	C-1	11
5355-00-144-7213	C-1	24	1260-00-706-8074	C-1	15
5355-00-144-7215	C-1	27	1260-00-706-8097	C-1	19
1290-00-247-7180	C-1	21	5305-00-721-7436	C-1	30
5305-00-253-5614	C-1	34	5305-00-723-9387	C-2	9
5310-00-264-1337	C-1	38	5305-00-724-6799	C-1	4
1290-00-507-9520	C-1	13	1260-00-753-7546	C-2	8
1260-00-513-2182	C-1	8	1260-00-753-7547	C-2	4
5340-00-522-9963	C-1	3	3020-00-753-7549	C-2	1
1260-00-522-9965	C-1	14	5330-00-753-7551	C-1	44
5330-00-527-8900	C-1	16	2920-00-753-7559	C-1	2
5365-00-530-4468	C-1	32	5360-00-798-3827	C-2	20
5360-00-530-5624	C-1	28	5355-00-917-2697	C-1	2
5365-00-530-9427	C-1	33	5365-00-939-1095	C-2	12
5330-00-531-2364	C-1	10	5315-00-951-6906	C-1	12
5315-00-534-5706	C-2	10	5305-00-954-3938	C-I	17
5355-00-534-5713	C-1	7	5305-00-958-5474	C-1	22
5310-00-534-5718	C-1	25	5305-00-984-4982	C-1	1
1260-00-534-5727	C-2	6	5305-00-984-6191	C-1	40
5305-00-543-2752	C-1	6	3020-01-089-5511	C-2	19
5305-00-559-4191	C-2	11	1290-01-091-1920	C-2	5
5310-00-559-0070	C-1	41	9905-01-094-0955	C-1	35
6250-00-620-9551	C-1	39	3020-01-099-5186	C-2	14
5315-00-687-3791	C-2	13	3020-01-100-3487	C-2	22

FSCM	PART NUMBER	FIGURE NO.	ITEM NO.	FSCM	PART NUMBER	FIGURE NO.	ITEM NO.
96906	MS21318-20	C-1	34	19200	5345712	C-1	B
96906	MS25236-8623	C-1	36	19200	5345713	C-1	7
96906	MS35190C-250	C-1	22	19204	5345719	C-1	25
96906	MS35206-207	C-1	17	19207	S345720	C-1	29
96906	MS35206-225	C-1	9	19200	5345723	C-1	28
96906	MS35206-243	C-1	40	19200	534S727	C-2	6
96906	MS35214-38	C-1	45	19200	5345922	C-1	32
96906	MS3S265-45	C-1	6	19200	5345924	C-1	33
96906	MS35333-38	C-1	41	19207	6209551	C-1	39
96906	MS35671-17	C-1	12	21450	700026	C-1	26
96906	MS35671-39	C-2	17	19200	7029399	C-1	31
96906	MSS1963-63	C-2	9	19207	7068048	C-1	3
96906	MS51964-51	C-1	4	19200	7068060	C-1	23
96906	MS9049-140	C-2	13	19207	7069064	C-1	20
96906	MS90727-6	C-2	43	19200	706B069	C-1	5
96906	MS90728-59	C-2	11	19207	7068070	C-1	10
24446	NB1P9024C13	C-1	30	19207	706B072	C-2	19
34895	1041571-5	C-1	38	19200	7068073	C-2	11
19207	10954707	C-2	16	19207	706B074	C-1	15
19207	10954711	C-2	24	19207	7068097	C-2	19
19207	10954712	C-2	12	19207	706B175-1	C-1	35
19207	10954713-1	C-2	15	19207	7069656	C-1	16
19207	10954713-2	C-2	23	19207	7099292	C-1	47
19207	10954714	C-2	Is	19207	7089295	C-2	21
19207	10954715	C-1	*2*	19200	7537546	C-2	8
19207	10954717	C-2	22	19200	7537547	C-2	4
19204	10954718	C-2	19	19207	7537548	C-2	1
19207	10954719	C-2	14	19207	7537551	C-1	44
19207	11653612	C-1	21	19207	7537556	C-1	49
19207	f1653613	C-1	24	19207	7537558	C-2	2
19207	11653614	C-1	27	19207	7537559	C-2	5
21450	142501	C-2	7	19200	7978441	C-1	46
21450	142959	C-2	3	19207	7983827	C-2	20
21450	224933	C-1	37	19207	3833335	C-1	9
21450	506202	C-I	42	19207	9383922	C-1	13
19200	5320625	C-1	48	19200	8668651	C-1	14
19200	5345706	C-2	10				

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