

TECHNICAL MANUAL

DIRECT SUPPORT AND
GENERAL SUPPORT

MAINTENANCE MANUAL

VOLUME I - TROUBLESHOOTING

VOLUME II - MAINTENANCE

PERISCOPE, TANK:
M19-OLD AND NEW
CONFIGURATION
(6650-00-765-2971)
(1240-01-005-6035)
M24-OLD AND NEW
CONFIGURATION
(6650-00-344-4647)
(1240-01-005-6036)

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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), or 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 TM 9-6650-216-34, March 1960.

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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 M 19 and M24 Periscopes.

- 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 1-3. 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.

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CHAPTER 1

INTRODUCTION

1-1. SCOPE

This volume contains troubleshooting requirements and procedures for direct support and general support (DS/GS) maintenance of the M19 and M24 Periscopes. See Volume II for maintenance procedures.

1-2. ORGANIZATION

- a. Chapter 2, Checkout Procedure, gives you flow charts to follow to check that the periscope 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 Procedures, shows you step-by-step how to troubleshoot the fault symptoms found in Chapter 3.
- d. Appendix A, Wiring Diagrams, may be used to help you find the cause of a fault. They can be used to trace signal flow or to find out what a voltage should be.

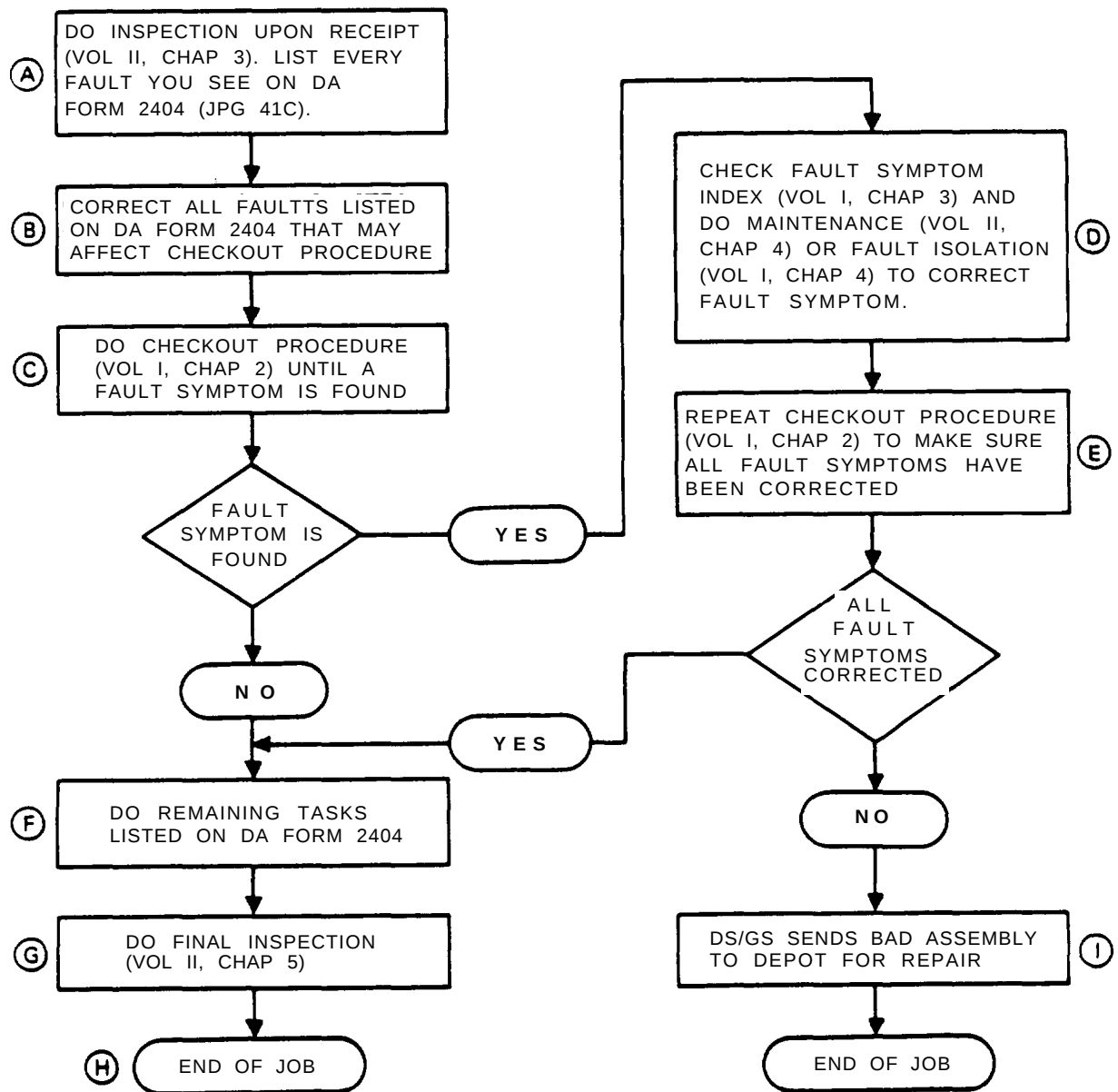
1-3. HOW TO TROUBLESHOOT

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

- Ⓐ 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.
- Ⓑ If you see any faults that may affect the checkout procedure, fix them now. This does not mean small things like painting scratches.
- Ⓒ Do the checkout procedure in Vol I, Chap 2 from the beginning until you find a fault symptom.
- Ⓓ 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.
- Ⓔ After the bad part has been repaired or replaced, do the checkout procedure in Chapter 2 again. This is to make sure all fault symptoms have been corrected.
- Ⓕ If all the faults are now corrected, do the remaining maintenance tasks on DA Form 2404.
- Ⓖ Do the final inspection given in Vol II, Chap 5.
- Ⓗ The job is over and the good assembly is sent back to service.
- Ⓘ If all faults were not corrected after step E, the bad assembly is sent 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
1. 0-36 VDC Power Supply	6130-00-435-1116	Functional Check	JPG 41C
2. Cable	2590-00-065-1973	Functional Check	App B
3. Multimeter	6625-00-964-2629	Continuity and Resistance	JPG 41C
4. Power Supply, High Voltage	2590-00-025-3676	Functions! Check	App B1C

1-5. SAMPLE FAULT ISOLATION PROCEDURE

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

Callouts	Description
A B C D	This is the symptom shown in the Fault Symptom Index in Chapter 3. Block number. Tells you the number of the block on the page. Block numbers start over at every page. 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. 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: 3 01 means that you should go to sheet 3, block 01, to continue the procedure.