

TM 9-4931-710-14&P

TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL (Including Repair Parts and Special Tools List) for

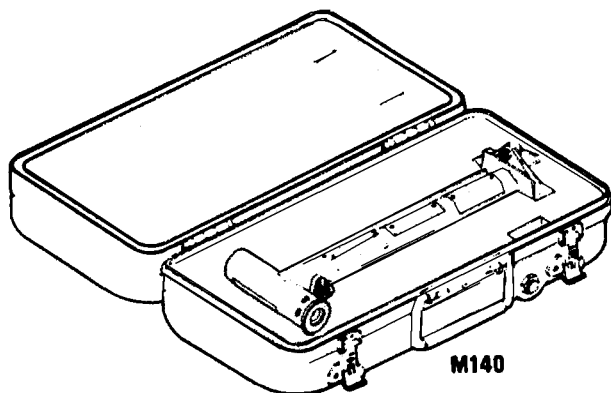
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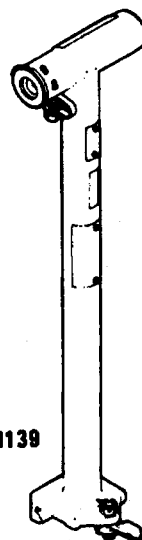
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M140



M139

ALIGNMENT DEVICE: M139
(RADIOACTIVE)
(4931-01-048-5834)
M139A1 (NONRADIOACTIVE)
(4931-01-472-6621)
and
ALIGNMENT DEVICE WITH
CASE: M140 (RADIOACTIVE)
(4931-01-187-9713)
M140A1 (NONRADIOACTIVE)
(4931-01-472-7329)
and
ALIGNMENT DEVICE WITHOUT
CASE: M140 (RADIOACTIVE)
(4931-00-341-5119)
M140A1 (NONRADIOACTIVE)
(4931-01-472-6622)

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HEADQUARTERS, DEPARTMENT OF THE ARMY

AUGUST 1986

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AND GENERAL SUPPORT MAINTENANCE MANUAL
(Including Repair Parts and Special Tools List)
for
ALINEMENT DEVICE: M139 (RADIOACTIVE)
(4931-01-048-5834)
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M140A1 (NONRADIOACTIVE)
(4931-01-472-6622)
Current as of 9 February 1986 for Appendix C**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028-2 (Recommended Changes to Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <http://aeprs.ria.army.mil>. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of the AEPS. Fill out the form and click on SUBMIT. Using this form on the AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program. You may also mail, fax or E-mail your letter, DA Form 2028, or DA Form 2028-2 direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-LC-CIP-WT, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil. The fax number is DSN 793-0726 or Commercial (309) 782-0726.

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HOW TO USE THIS MANUAL

This manual describes the operator, organizational, direct support, and general support maintenance procedures for the M139/M140 alinement device. Before beginning any maintenance tasks on the M139/M140 alinement device, you should become thoroughly familiar with this manual,

OVERVIEW

This manual is organized by chapters, sections, and appendixes. A summary follows.

Front cover index gives you a quick reference to sections and appendixes.

Warnings - All warnings you should observe while working on the alinement device are on the warning page and repeated where they apply.

Table of Contents - The contents of the chapters and appendixes are listed here.

Chapter 1 - This chapter contains general information about the alinement device. It also shows and describes major components and lists specific data that you will find helpful while performing tasks.

Chapter 2 - This chapter describes alinement device inspection, troubleshooting, and maintenance procedures that must be performed upon receipt of equipment.

Appendix A - This appendix lists the technical manuals and other publications that may be required while performing maintenance on the alinement device.

Appendix B - This appendix lists the spares that may be required to maintain the alinement device.

Appendix C - This appendix lists the expendable/durable supplies and materials list required to perform maintenance on the alinement device.

Index - The index is an alphabetical listing of the contents of this manual.

Back Cover - The inside back cover contains a metric conversion table.

USING THE MANUAL ON THE JOB

Find the task or components that needs repair by using the Index (p Index 1), then turn to the page listed for that task or component.

Read the INITIAL SETUP procedures, and gather the necessary items. Pay attention to the warnings. The INITIAL SETUP sheet is described on page iv.

5-4 M139/M140 ALINEMENT DEVICE MAINTENANCE INSTRUCTIONS

This task covers:

a. Disassembly	c. Repair
b. Cleaning	d. Reassembly

INITIAL SETUP

Tools:

Shop Equipment, Instrument and Fire Control, Field Maintenance, Basic (SC4931-95-CL-A07)

Materials/Parts — Continued:

Packing	P/N MS9021-024
Packing	P/N MS9021-026

Materials/Parts

Alcohol	Item 1, Appendix D
Bag, Plastic	Item 2, Appendix D
Brush	Item 3, Appendix D
Cleaning Compound	Item 4, Appendix D
Enamel	Item 5, Appendix D
Grease	Item 6, Appendix D
Paper, Lens	Item 7, Appendix D
Sealing Compound	Item 9, Appendix D

References:

Page 5-5	Base does not seat properly
Page 5-5	Lens fogged or condensation present
Page 5-5	No illumination
Page 5-6	Illuminated, but no reticle pattern
TM 9-254	
TM 750-116	

General Safety Instructions:

WARNING

When maintaining the alignment device, follow radiation hazard procedures on warning page.

1. **TITLE** - This is the name of the task.
2. **TASKS** - This lists all the tasks included in the module.
3. **TOOLS** - These are the tools and equipment you will need to do the task.
4. **MATERIALS** - These are the supplies you will need to do the task.
5. **PARTS** - If parts are required, they are listed here by nomenclature and either part number or national stock number.
6. **REFERENCES** - These are troubleshooting and other technical publications that you need to help do the task.
7. **GENERAL SAFETY INSTRUCTIONS** - These are the safety precautions that must be observed while you are doing the task.

CHAPTER 1
INTRODUCTION

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Section I. GENERAL INFORMATION

1-1 SCOPE

- a. Type of Manual: Operator, Organizational, Direct support and General Support Maintenance.
- b. Model Numbers and Equipment Names:
 - (1) M139 Alinement Device
 - (2) M140 Alinement Device
- c. Purpose of Equipment: Verify boresight retention of artillery pieces.

1-2 MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS) as contained in the Maintenance Management Update.