

TM 9-4910-420-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR AND ORGANIZATIONAL
MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND
SPECIAL TOOL LISTS)

TESTER, ENGINE DISTRIBUTOR.
BENCH-TYPE, 6,12, AND 24-VOLT
DISTRIBUTORS, SINGLE-PHASE
60-CYCLE, 115-VOLT (HEYER
PRODUCTS COMPANY INC.,
MODEL 168) (4910-392-2939)

This copy is a reprint which includes current
pages from Change 1

HEADQUARTERS, DEPARTMENT OF THE ARMY
30 SEPTEMBER 1963

Technical Manual

No. 9-4910-420-12

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 30 September 1963

TESTER, ENGINE DISTRIBUTOR, BENCH-TYPE 6, 12, AND 24-VOLT DISTRIBUTORS, SINGLE-PHASE 60-CYCLE, 115 VOLT (HEYER PRODUCTS COMPANY INC., MODEL 168) (4910-392-2939)

Paragraph Page

CHAPTER 1.	INTRODUCTION		
Section I.	General	1-3	2
Section II.	Description and data	4-7	3,4
CHAPTER 2.	OPERATING INSTRUCTIONS		
Section I.	Service upon receipt of materiel	8,9	5
Section II.	Control and instruments.	10-26	8,9
Section III.	Operation	27-35	9-16
CHAPTER 3.	OPERATOR MAINTENANCE INSTRUCTIONS		
Section I.	Repair parts, tools, and equipment	36-39	18
Section II.	Preventive-maintenance services	40-46	18-20
Section III.	Troubleshooting	47-49	21
CHAPTER 4.	ORGANIZATIONAL MAINTENANCE INSTRUCTIONS		
Section I.	Repair parts, tools, and equipment	50-53	23
Section II.	Lubrication and printing	54,55	23
Section III.	Preventive-maintenance services.	56-59	25,26
Section IV.	Troubleshooting.	60-62	26
Section V.	Electrical clips and electrical cable nipples	63,64	27
Section VI.	Work lamp	65,66	28
Section VII.	Vacuum pump	67,68	28
CHAPTER 5.	SHIPMENT AND ADMINISTRATIVE STORAGE AND DEMOLITION TO PREVENT ENEMY USE		
Section I.	Shipment and administrative storage	69-71	30
Section II.	Demolition to prevent enemy use	72,73	31
APPENDIX I.	REFERENCES		33
APPENDIX II.	BASIC ISSUE ITEMS LIST		
Section I.	Preface		35
Section II.	Basic issue items list		37
APPENDIX III.	MAINTENANCE ALLOCATION CHART		39
APPENDIX IV.	REPAIR PARTS AND SPECIAL TOOL LISTS		
Section I.	Preface		40
Section II.	Repair parts and special tools.		43
INDEX			4 5

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This technical manual contains instructions on operation and maintenance of the distributor tester for the operator and instructions for organizational maintenance of the distributor tester by personnel of the using organization.

b. Appendix I contains a list of current references, including supply manuals, forms, technical manuals and other available publications applicable to the distributor tester.

c. Appendix II contains the basic issue items which are required by first-echelon maintenance and includes accessories, attachments, component assemblies, and subassemblies with quantities thereof, which constitute the major end item of equipment; and the first echelon maintenance accessories, tools, supplies, and spare assemblies and parts accompanying the equipment, all of which constitute the major end item for issue to users.

d. Appendix III contains the maintenance allocation chart for the tester listing all maintenance and repair operations authorized for all maintenance echelons.

e. Appendix IV contains a list of repair parts which are required by the using organization for performing organizational maintenance on the distributor tester.

f. The direct reporting of errors, omissions and recommendations for improving this equipment manual by the individual user, is authorized and encouraged. DA Form 2028 will be used for reporting these improvements. This form may be completed using pencil, pen or typewriter. DA Form 2028 will be completed in triplicate and forwarded by the individual using the manual. The original and one copy will be forwarded direct to:

Commanding General
Headquarters, U. S. Army Weapons
Command

ATTN: AMSWE-SMM-TE

Rock Island Arsenal

Rock Island, Illinois 61202

One information copy will be provided to the individual's immediate supervisor (e. g., officer, noncommissioned officer, supervisor, etc.)

2. Maintenance Allocation

a. *Operator Maintenance Allocation.* The prescribed maintenance to be performed by the operator will apply as reflected in the operator-maintenance (first echelon) column of the maintenance allocation chart (app. III). In all cases, where the nature of the repair, modification, or adjustment is beyond the scope or facilities of the operator, organizational-maintenance should be informed so that trained personnel with suitable tools and equipment may be provided or other instructions issued.

b. *Organizational Maintenance Allocation.* The prescribed maintenance to be performed by maintenance personnel of the using organization will apply as reflected in the organizational-maintenance (second echelon) column of the maintenance allocation chart (app. III). In all cases, where the nature of the repair, modification, or adjustment is beyond the scope or facilities of the using organization, the supporting maintenance unit should be informed so that trained personnel with suitable tools and equipment may be provided or other instructions issued.

3. Forms, Records, and Reports

a. *General.* Responsibility for the proper execution of forms, records, and reports rests upon the officers of all units maintaining this equipment. However, the value of accurate records must be fully appreciated by all persons responsible for

their compilation, maintenance, and use. Records, reports, and authorized forms are normally utilized to indicate the type, quantity, and condition of materiel to be inspected, to be repaired, or to be used in repairs. Properly executed forms convey authorization and serve as records for replacement of materiel in the hands of troops and for delivery of materiel requiring further repair to shops in arsenals, depots, etc. The forms, records, and reports establish the work required, the progress of the work within shops, and the status of the materiel upon completion of its repair.

b. *Authorized Forms.* The forms gen-

erally applicable to the units operating or maintaining this materiel are listed in appendix I. For a listing of all forms, refer to DA Pam 310-2.

c. *Equipment Improvement Recommendations.* Deficiencies detected in the equipment or materiel should be reported using the Equipment Improvement Recommendation section of DA Form 2407.

d. *Field Report of Accidents.* The reports necessary to comply with the requirements of the Army safety program are prescribed in detail in AR 385-40. These reports are required whenever accidents involving injury to personnel or damage to materiel occur.

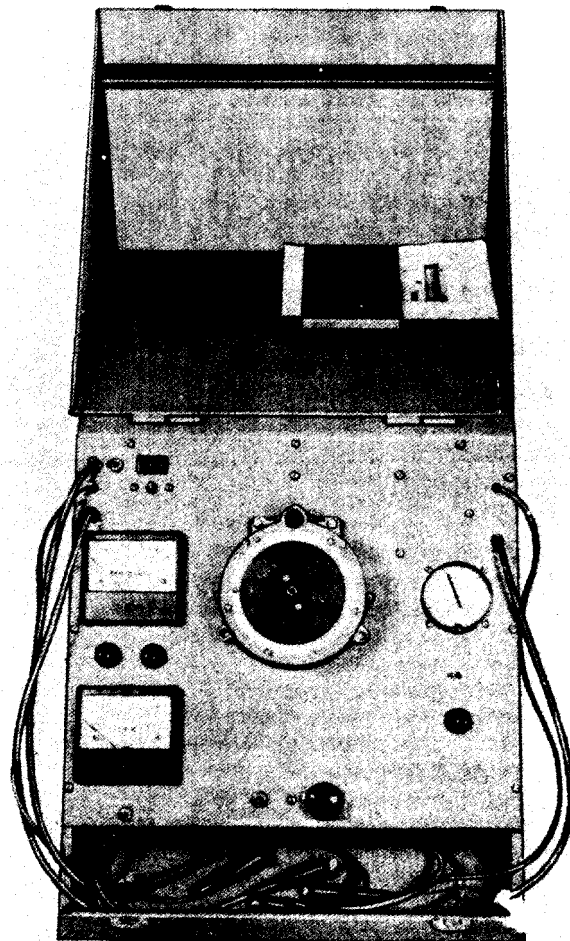
Section II. DESCRIPTION AND DATA

4. Description

The distributor tester (fig. 1) is an electrically operated device for testing battery ignition distributors removed from the engine. It is used to determine whether a distributor meets specified tolerances required for satisfactory operation when installed on the engine. The distributor under test is driven by a variable speed device consisting of a cone, movable idler, and disk. Manifold vacuum is simulated by an electrically driven vacuum pump. A stroboscope is provided for accurately checking cam angle, spark advance (vacuum and mechanical) and cam lobe accuracy of both single and dual breaker point distributors having either clockwise or counterclockwise rotation. A tachometer is provided to register revolutions per minute of the distributor shaft. A hinged cover protects the controls and instruments of the tester. The tester is primarily designed for testing the following distributors:

- Delco-Remy DR1110159
- Delco-Remy DR1110170
- Delco-Remy DR1110174
- Delco-Remy DR1110184
- Delco-Remy DR1110611
- Delco-Remy DR1111556
- Delco-Remy DR1111561
- Delco-Remy DR1111565
- Delco-Remy DR1111605
- Auto-Lite 1AC4003
- Auto-Lite 1AU4005UT

Auto-Lite 1AU4006UT
Auto-Lite 1GC4902A



ORD F6119

Figure 1. Distributor tester.