ORDNANCE MAINTENANCE

POWER TRAIN
BODY AND FRAME
FOR 1/4-TON
4 x 4 UTILITY TRUCK
M38A1

DEPARTMENTS OF THE ARMY AND THE AIR FORCE
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CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual is published for the use of personnel responsible for field and depot maintenance of this materiel. It contains information on maintenance which is beyond the scope of the tools, equipment, or supplies normally available to using organizations. It does not contain information which is intended primarily for the using organization, since such information is available to ordnance maintenance personnel in the pertinent operator's technical manual or field manual.

b. This manual contains a description of and procedures for removal, disassembly, inspection, repair, rebuild, and assembly of the power train, body, and frame of the 1/4-ton, 4 x 4 utility truck M38A1 (figs. 1, 2, and 3). The appendix contains a list of current references, including supply manuals, technical manuals, and other available publications applicable to the materiel.

c. This first edition is being published in advance of complete technical review of all concerned. Any errors or omissions will be brought to the attention of Chief of Ordnance, Washington 25, D. C., Attn: ORDFM-Pub.

d. TM 9–804A (To be renumbered TM 9–8014) contains operating and lubricating instructions for the materiel and contains all maintenance operations allocated to using organizations in performing maintenance work within their scope.

e. TM 9–8015–1 contains service information on the engine.

f. TM 9–8627 contains service information on the Delco-Remy electrical equipment.

g. TM 9–1825B (To be renumbered TM 9–8629) contains service information on Auto-Lite electrical equipment.

h. TM 9–1826A (To be renumbered TM 9–8641) contains service information on the Carter carburetor.

i. TM 9–1827C (To be renumbered TM 9–8653) contains service information on the hydraulic brakes.

j. TM 9–1828A (To be renumbered TM 9–8655) contains service information on the AC fuel pump.
Figure 1. 3/4-ton, 4 x 4 utility truck M38A1—three-quarter left front view.
Figure 2. 1/4 ton, 4 x 4 utility truck M38A1, three-quarter right rear view.
Figure 3. ¼ ton, 4 x 4 utility truck M38A1—top view.
2. Field and Depot Maintenance Allocation

The publication of instructions for complete disassembly and rebuild is not to be construed as authority for the performance by field maintenance units of those functions which are restricted to depot shops and arsenals. In general, the prescribed maintenance responsibilities will be reflected in the allocation of maintenance parts listed in the appropriate columns of the current ORD 8 supply manual pertaining to this vehicle. Instructions for depot maintenance are to be used by maintenance companies in the field only when the tactical situation makes the repair functions imperative. Supply of parts listed in the depot guide column of ORD 8 supply manuals will be made to field maintenance only when the emergency nature of the maintenance to be performed has been certified by a responsible officer of the requisitioning organization and upon express authorization by the chief of the service concerned. Those operations which can be performed as emergency field maintenance are specifically covered as such in this manual.

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 repair. Properly executed forms convey authorization and serve as records for repair or replacement of materiel in the hands of troops and for delivery of materiel requiring further repair to ordnance shops in arsenals, depots etc. The forms, records, and reports establish the work required, the progress of the work within the shops, and the status of the materiel upon completion of its repair.

   b. Authorized Forms. The forms generally applicable to units maintaining this equipment are listed in the appendix. For current and complete listing of forms, refer to current SR 310-20-6. Additional forms applicable to the using personnel are listed in the operators manual. For instructions on use of these forms, refer to FM 9-10.

   c. Field Reports of Accidents. The reports necessary to comply with the requirements of the Army safety program are prescribed in detail in the SR 385-10-40 series of special regulations. These reports are required whenever accidents involving injury to personnel or damage to materiel occur.
d. Report of Unsatisfactory Equipment or Materials. Any suggestions for improvement in design and maintenance of equipment and spare parts, safety and efficiency of operation, or pertaining to the application of prescribed petroleum fuels, lubricants, and/or preserving materials, or technical inaccuracies noted in Department of the Army Publications, will be reported through technical channels as prescribed in SR 700-45-5 to the Chief of Ordnance, Washington 25, D. C., ATTN: ORDFL, using DA Form 468, Unsatisfactory Equipment Report. Such suggestions are encouraged in order that other organizations may benefit.

*Note.* Do not report all failures that occur. Report only REPEATED or RECURRENT failures or malfunctions which indicate unsatisfactory design or material. However, reports will always be made in the event that exceptionally costly equipment is involved. See also SR 700-45-5 and the printed instructions on DA Form 468.

**Section II. DESCRIPTION AND DATA**

4. Description

a. General. The materiel covered in this publication comprises the power train, body, and frame of the ¾-ton, 4 x 4 utility truck M38A1. This utility truck (figs. 1, 2, and 3) is a four-wheel vehicle with both a front and rear driving axle. Designed for use as a general purpose personnel or cargo carrier, the vehicle is readily adaptable for reconnaissance, communications or other special duties. It is capable of operating with the engine completely submerged in water. Underwater operation is possible because of waterproofed components and a design which utilizes the engine ventilating system as a pressure seal against entry of water past mating surfaces. Since a majority of the waterproofed assemblies require atmospheric pressure, either to operate or prevent condensation damage, a ventilating tube system (fig. 4) is used for this purpose.

b. Vehicle Nomenclature. For identification of the location of the various groups, systems, assemblies, and component parts, the terms "front" and "rear" and "right" and "left" are defined with respect to the driver sitting in his seat in position to drive. "Front" refers to the radiator end and "rear" refers to the towing pintle end of the vehicle. "Right" and "left" are referenced with respect to the driver's right and left sides.