TM 9-1817

WAR DEPARTMENT TECHNICAL MANUAL

ORDNANCE MAINTENANCE

Power Train, Chassis, and Body for 5- to 6-Ton Ponton Tractor Truck (Autocar Model U8144T)

WAR DEPARTMENT • *28 APRIL 1944*

FOR ORDNANCE PERSONNEL ONLY

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TM 9-1817, Ordnance Maintenance: Power Train, Chassis, and Body for 5- to 6-Ton Ponton Tractor Truck (Autocar Model U8144T), is published for the information and guidance of all concerned.

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BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:
J. A. ULIO,
Major General,
The Adjutant General.

DISTRIBUTION: C and H 9 (1).

(For explanation of symbols, see FM 21-6.)

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★This manual supersedes pertinent information from TB ORD 20, dated 24 January 1944; TB 800-21, dated 30 November 1943; and TB 10-1000-27, dated 6 August 1943. This manual, together with TM 9-817 and TM 9-1832A, supersedes TM 10-1497, dated 1 July 1942.

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ORDNANCE MAINTENANCE — POWER TRAIN, CHASSIS, AND BODY FOR 5- TO 6-TON PONTON TRACTOR TRUCK (AUTOCAR MODEL U8144T)

CHAPTER 1

INTRODUCTION

1. SCOPE.

a. The instructions contained in this manual are for the information and guidance of personnel charged with the maintenance and repair of the 5- to 6-ton, 4 x 4 Ponton Tractor Truck (Autocar Model U8144T). These instructions are supplementary to Field Manuals and Technical Manuals prepared for the using arms. This manual does not contain information which is intended primarily for the using arms, since such information is available to ordnance maintenance personnel in 100-series Technical Manuals or Field Manuals.

b. This manual contains a description of, and procedure for, disassembly, cleaning, inspection, repair, and assembly of the following vehicle components: clutch, transmission, power take-off, transfer case, drive shafts, drive shaft hand brake shoes, front axle, rear axle, service (air) brake shoes, wheels, hubs and tires, steering gear, springs and shock absorbers, frame, cab and body, winch, fifth wheel, fuel tanks, radiator, fan and hub.

c. TM 9-817 contains a description of the 5- to 6-ton, 4 x 4 Ponton Tractor Truck (Autocar Model U8144T) and technical information required for the identification, use and care of the materiel. Part one of TM 9-817 contains vehicle operating instructions. Part two contains vehicle maintenance instructions for using arm personnel charged with the responsibility of doing maintenance work within their jurisdiction. Part three contains instructions for storage and shipment of the materiel, references to all Standard Nomenclature Lists, Technical Manuals, and other publications for the materiel covered by this manual, and an index of the manual arranged alphabetically.

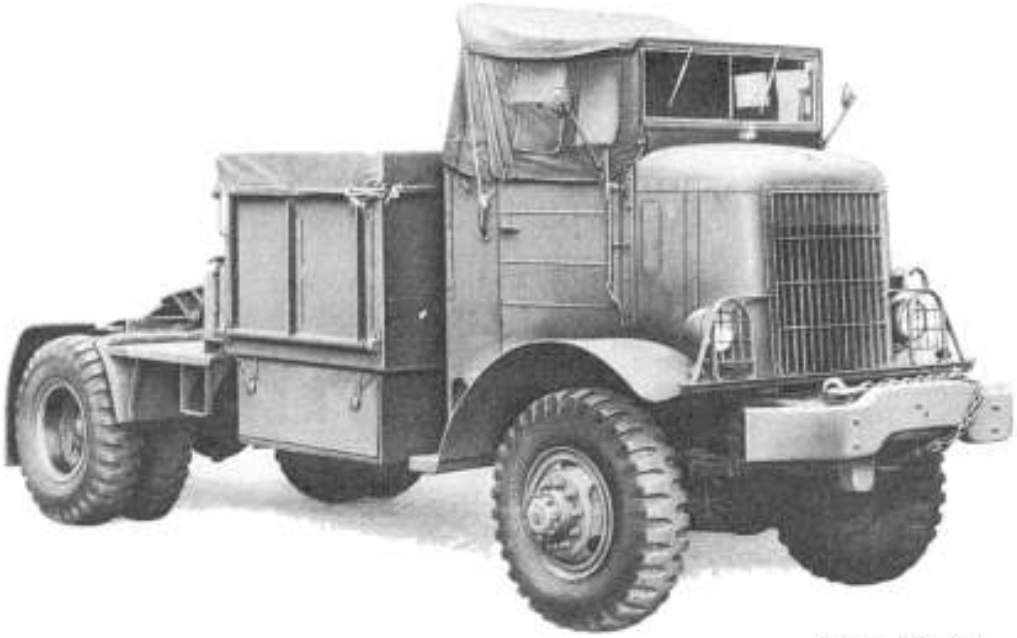
d. TM 9-1832A contains a description of, and procedures for disassembly, inspection, repair, and assembly of the engine used on this vehicle.

e. TM 9-1825B contains a description of, and procedures for disassembly, inspection, repair, and assembly of the cranking motor and generator used on this vehicle.

f. TM 9-1826C contains a description of, and procedures for disassembly, inspection, repair, and assembly of the carburetor used on this vehicle.

g. TM 9-1828A contains a description of, and procedures for disassembly, inspection, repair, and assembly of the fuel pump used on this vehicle.

h. TM 9-1827A contains a description of, and procedures for



RA PD 321945

Figure 1 — Right Side — 5- to 6-ton 4 x 4 Ponton Tractor Truck (Open Cab) — Front Side View

disassembly, inspection, repair, and assembly of components of the air brake system on this vehicle.

2. VEHICLE MODIFICATION RECORDS.

a. MWO and Major Unit Assembly Replacement Record.

(1) DESCRIPTION. Every vehicle is supplied with a copy of A.G.O. Form No. 478 which provides a means of keeping a record of each MWO completed, or major unit assembly replaced. This form includes spacer for the vehicle name and U.S.A. registration number, instructions for use, and information pertinent to the work accomplished. It is very important that the form be used as directed, and that it remain with the vehicle until the vehicle is removed from service.

(2) INSTRUCTIONS FOR USE. Personnel performing modifications or major unit assembly replacements must record clearly on the form a description of the work completed and must initial the form in the columns provided. When each modification is completed, record the date, hours, and/or mileage, and MWO number. When major unit assemblies, such as engines, transmissions, and transfer cases, are replaced, record the date, hours, and/or mileage, and nomenclature of the unit assembly. Minor repairs, minor parts, and accessory replacements need not be recorded.

(3) EARLY MODIFICATIONS. Upon receipt by a third or fourth echelon repair facility of a vehicle for modification or repair, maintenance personnel will record the MWO numbers of modifications applied prior to the date of A.G.O. Form No. 478.

ORDNANCE MAINTENANCE — POWER TRAIN, CHASSIS, AND BODY FOR 5- TO 6-TON PONTON TRACTOR TRUCK (AUTOCAR MODEL U8144T)

CHAPTER 2

CLUTCH

Section I

DESCRIPTION AND DATA

3. DESCRIPTION AND OPERATION.

a. Description (figs. 2 and 4). The single-disk type clutch, located between the engine and transmission, consists of a pressure plate assembly, disk, pilot bearing, throwout shaft and trunnion levers, and a clutch release bearing. The pressure plate assembly, consisting of a conical spring compressed against an adjusting plate and a clutch release sleeve, is attached to the clutch flywheel ring by six flywheel ring adjusting straps and nuts. Shims for adjusting the distance between the clutch release sleeve and the rear of the flywheel ring are placed under these adjusting straps. Twenty clutch pressure levers with a fulcrum ring ball in each lever are held in position between two fulcrum rings and secured to clutch release sleeve by a snap ring. The pressure levers rest against the clutch pressure plate with studs protruding through flywheel ring. Pressure plate retracting springs are placed over pressure plate studs and secured with retaining pins and washers. The clutch disk facings, composed of an asbestos composition reinforced with copper wire, are attached to the clutch disk with rivets. The splined bore of the disk hub rests on the main drive gear spline. A clutch pilot bearing (which is packed with a special heat-resistant grease) is pressed into the bore of the flywheel and provides a seat for the main drive gear. The clutch throwout shaft and trunnion levers are located in the clutch housing attached to the transmission. Bushings are used for seats of the throwout shaft. The clutch release bearing is pressed into a trunnion block which is seated on the main drive gear bearing cap. A return spring is attached to the trunnion block and a cap screw on the main drive gear bearing cap.

b. Operation. The clutch engages and disengages engine power with the transmission. When the clutch pedal is depressed, motion is transmitted by linkage to the trunnion block and clutch release bearing, which is brought forward against clutch release sleeve. This applies pressure on clutch pressure spring and, through an arrangement of interlocked pressure levers and fulcrum ring balls, creates a centrifugal force which opposes action of clutch pressure spring.