

TM 9-1821

WAR DEPARTMENT TECHNICAL MANUAL

ORDNANCE MAINTENANCE

Power Train, Axles, Bodies, and Frame for 2½-Ton 4x2 Dump Truck (Federal)

WAR DEPARTMENT

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16 MARCH 1944

FOR ORDNANCE PERSONNEL ONLY

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Power Train, Axles, Bodies,
and Frame for 2½-Ton
4 x 2 Dump Truck (Federal)



WAR DEPARTMENT
Washington 25, D. C., 16 March 1944

TM 9-1821, Ordnance Maintenance: Power Train, Axles, Bodies, and Frame for 2½-ton 4 x 2 Dump Truck (Federal), is published for the information and guidance of all concerned.

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

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**ORDNANCE MAINTENANCE — POWER TRAIN, AXLES, BODIES, AND
FRAME FOR 2½-TON 4 X 2 DUMP TRUCK (FEDERAL)**

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 2½-ton 4 x 2 dump truck (Federal). 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, the disassembly, inspection, repair and/or rebuilding of the power train, axles, body, and frame.

c. TM 9-821 contains a description of, and procedure for, removal and installation of the components.

d. TM 9-1832A contains ordnance maintenance information on the Hercules Model JXD engine.

e. TM 9-1826A contains ordnance maintenance information on the Carter Model BBRI-429-S carburetor.

f. TM 9-1828A contains ordnance maintenance information on the AC Model 1537983 fuel pump.

g. TM 9-1825B contains ordnance maintenance information on the Auto-Lite distributor, cranking motor, generator, and generator regulator.

h. TM 9-1827B contains ordnance maintenance information on the Bendix Hydrovac portion of the brake system.

i. TM 9-1827C contains ordnance maintenance information on the Wagner hydraulic portion of the brake system.

2. MWO AND MAJOR UNIT ASSEMBLY REPLACEMENT RECORD.

a. **Description.** Every vehicle is supplied with a copy of AGO Form No. 478 which provides a means of keeping a record of each MWO completed or major unit assembly replaced. This form includes spaces 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.

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b. 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, transfer cases are replaced record the date, hours and/or mileage, and nomenclature of the unit assembly. Minor repairs and minor parts and accessory replacements need not be recorded.

c. 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 AGO Form No. 478.

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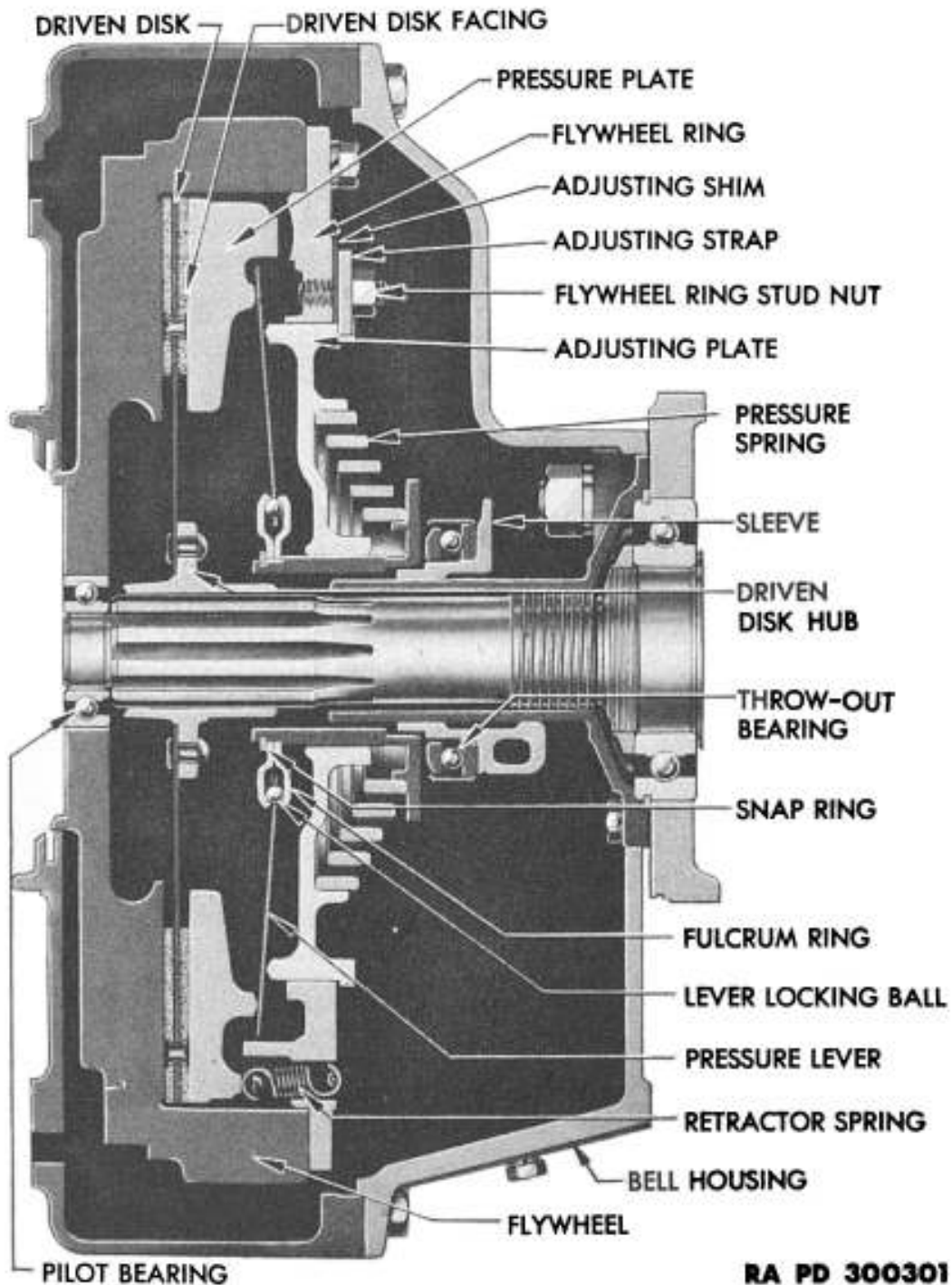


Figure 1 — Clutch — Sectional View

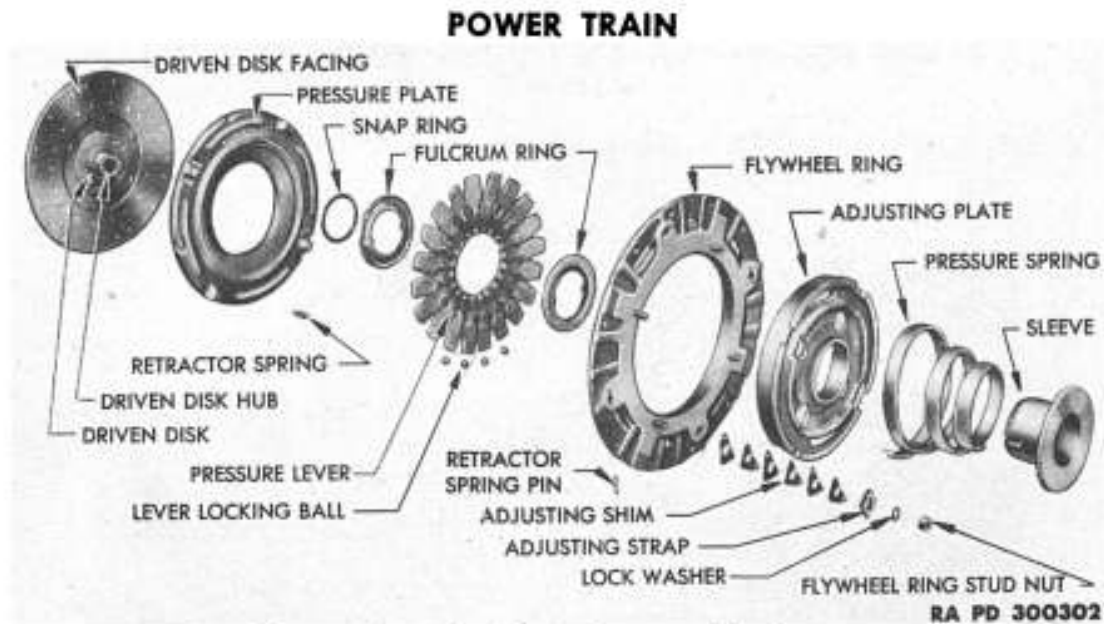


Figure 2 — Clutch — Disassembled View

CHAPTER 2

POWER TRAIN

Section I

CLUTCH

3. DESCRIPTION AND DATA (figs. 1 and 2).

a. Description and Operation. The clutch consists of a clutch cover plate assembly and a driven disk assembly. The clutch functions by clamping the driven disk, splined to the transmission drive shaft on which friction material is mounted between the face of the flywheel and the clutch pressure plate. When the clutch is engaged, the pressure spring acts on a sleeve which transmits the energy to 20 ball-bearing-hinged levers. The levers multiply the pressure of the spring and transmit the increased pressure to the pressure plate. When the clutch is released, the sleeve moves toward the flywheel, causing the outer end of the hinged levers to move in a direction opposite to the spring pressure on these levers. As the pressure on the pressure plate is relieved, the retractor springs pull the pressure plate out of contact with the driven disk.

b. Data.

Make	W. C. Lipe
Type	Single Plate
Model	Plate Z34-S-C-26, Disk ZP-1-P178
Size	12 in.

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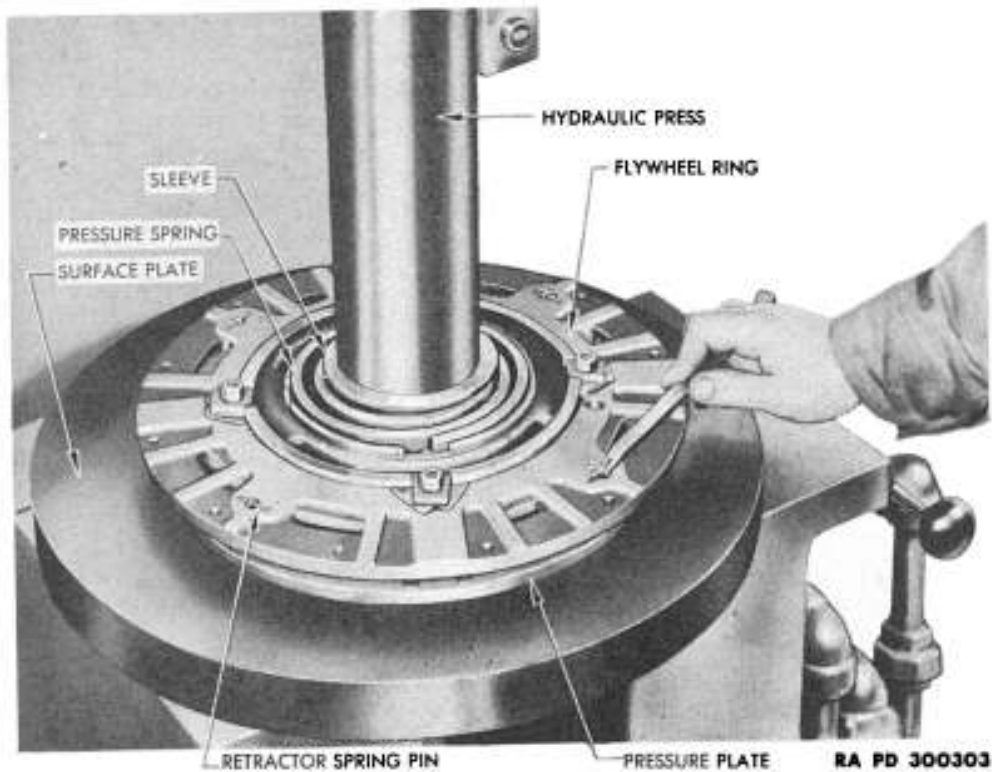


Figure 3 — Removing Pressure Plate Retractor Spring Pin

Driven disk:

Facings	2
Outside-diameter	11⅞ in.
Inside diameter	7¼ in.
Facing thickness (each facing)	0.125 to 0.128 in.
Plate thickness (plate and two facings)	0.326 to 0.338 in.
Area of one face	58 sq. in.
Friction area	116 sq. in.

Pressure plate:

Adjusting shims—quantity under each strap (new)	5
Pressure spring—pressure at 1¼-inch in height	360 to 390 lb
Throw-out bearing	BCA 3631A
Pilot bearing	MRC205MF

4. DISASSEMBLY OF CLUTCH COVER ASSEMBLY.

a. Remove Pressure Plate.

(1) Place clutch cover assembly in arbor press with pressure plate facing downward (fig. 3). Install pilot on release sleeve face and compress pressure spring to limit of travel.