

TECHNICAL MANUAL

VOLUME 2 OF 2

PART 2 OF 2

MAINTENANCE

DIRECT SUPPORT AND GENERAL SUPPORT LEVEL

**ENGINE ASSEMBLY, DIESEL (MULTIFUEL):
NATURALLY ASPIRATED OR TURBOCHARGED,
FUEL-INJECTED, WATER-COOLED, 6-CYLINDER**

**MODELS: LD-465-1 , NSN 2815-00-239-5824;
LD-465-1C, NSN 2815-00-134-4830; LDT-465-1C,
NSN 2815-00-103-2642; LDS-465-1 , NSN 2815-00-075-0087;
LDS-465-1A, NSN 2815-00-239-5819; AND LDS-465-2,
NSN 2815-00-808-8011 AND CLUTCHES**

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Inspection
And Repair

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NOTE:

THE STYLE OF THIS TM IS
EXPERIMENTAL. IT IS BEING TRIED
BY THE ARMY ONLY ON
A LIMITED BASIS

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NSN 2815-00-808-8011 AND CLUTCHES**

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedure, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MB, Warren, Michigan 48090. A reply will be furnished to you.

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* This manual, together with TM 9-2815-210-34-1, 3 April 1981; and TM 9-2815-210-34-2-1, 3 April 1981, supersedes TM 9-2815-210-34, 16 June 1978.

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CHAPTER 4

CLEANING, INSPECTION, AND REPAIR

Section I. SCOPE

4-1. EQUIPMENT ITEMS COVERED. This chapter gives instructions for cleaning, inspection, and repair of engine accessories and engine components.

4-2. EQUIPMENT ITEMS NOT COVERED. All equipment items are covered in this

Section II. GENERAL CLEANING, INSPECTION, AND REPAIR PROCEDURES

TOOLS: No special tools required

SUPPLIES: Solvent, dry cleaning, type II (SD-2), Fed. Spec P-D-680
Compressed air source, 30 psi max
Stiff wire
Penetrant kit, MIL-I-25135

PERSONNEL: One

EQUIPMENT CONDITION: Engine disassembled.

4-3. CLEANING.

- a. Clean all parts before inspection, after repair, and before assembly.
- b. Clean all bearing cones and cups. Refer to Inspection, Care, and Maintenance of Antifriction Bearings, TM 9-214.

WARNING

Dry cleaning solvent is flammable. Do not use near an open flame. Keep a fire extinguisher nearby when solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and damage to equipment.

Do not use more than 30 psi of *air* pressure for drying parts. Eye shields must be worn when using compressed air. Eye injury can occur if eye shields are not used.

CAUTION

When scraping gasket material from surface of parts, be careful not to scratch or gouge metal surfaces.

- c. Clean all other parts with solvent. Scrape all gasket material from surface of parts. Rinse parts in clean solvent and dry with compressed air.

d. Make sure all oil passages are open. Open clogged passages with compressed air or by working a stiff wire back and forth. Flush with solvent.

c. After cleaning, all parts should be covered or wrapped in plastic or paper to protect them from dust and dirt.

4-4. INSPECTION.

Check all bearing cones and cups. Refer to Inspection, Care, and Maintenance of Antifriction Bearings, TM 9-214.

b. Small chips, burrs or scratches in castings that do not go into screw holes or openings can be repaired.

c. Check all mating flanges on housings and supports for warpage with a straight edge or on a surface plate. Check mating flanges for discoloring. Discoloring of flanges will mean that oil has been leaking which may mean that flanges are warped.

d. Check aluminum castings for cracks using penetrant kit. If dye penetrant inspection equipment is not available, use a magnifying glass and a strong light.

e. Check all other type castings for cracks with magnetic particle inspection equipment. If magnetic particle inspection equipment is not available, use a magnifying glass and a strong light.

NOTE

There are no wear limits on gear teeth. Good judgement is needed to know if parts are good.

f. Check all gears for cracks, worn teeth, and pitted surfaces.

g. Check all threaded parts for worn or stripped threads.

4-5. REPAIR.

a. Smooth out any chips, burrs, or scratches on castings, gears, and shafts.

b. Weld cracks and small holes in castings. Refer to TM 9-237.

c. Drill out any bolts or studs broken off in tapped holes.

d. Drill out threaded holes that are stripped or out-of-round to the next larger size and retap them. When putting engine together, use a bolt or stud the size of the newly tapped hole.

e. Tell the machine shop to mill warped castings.

Section III. CLEANING, INSPECTION, AND REPAIR OF ENGINE COMPONENTS AND ACCESSORIES

TOOLS: Valve seat replacing tool, pn 11642007
Exhaust valve seat replacer, pn 11642006
Hand reamer, pn 12254220
Air compressor pulley adjusting wrench, pn 10935288
Fuel passages cleaning brush, pn ST 876

SUPPLIES: Dry cleaning solvent, type II (SD-2), Fed. Spec P-D-680
Air compressor unloader valve gasket
Air compressor intake air cleaner gasket
Air compressor air discharge manifold gasket