



Allis Chalmers

Service Manual

Two-Twenty

Service Manual

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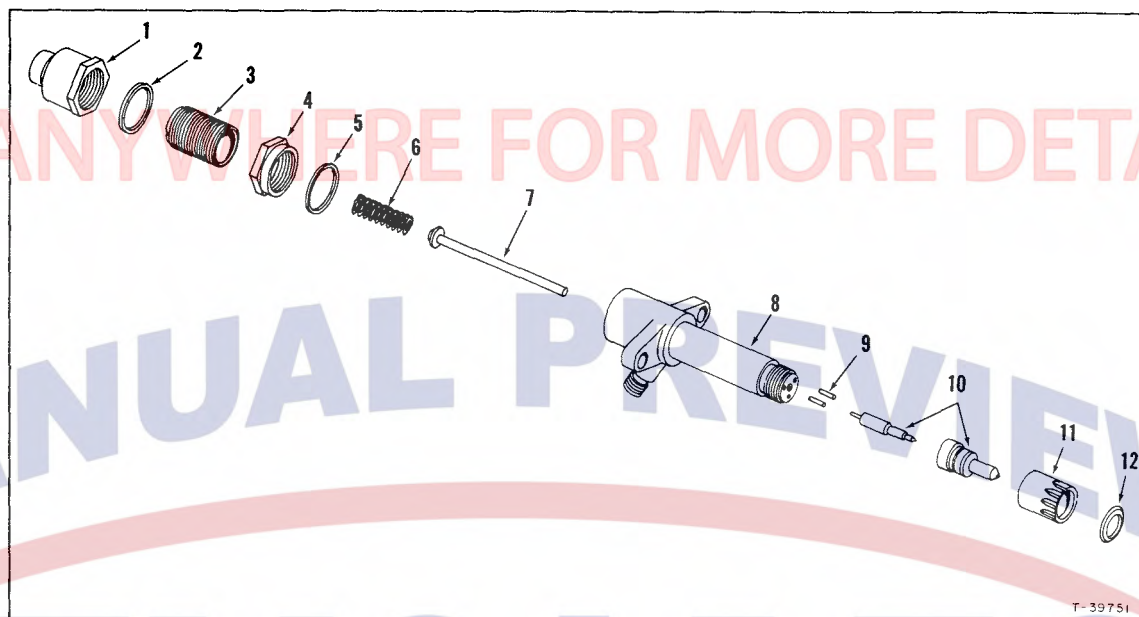
WATER PUMP

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FUEL SYSTEM (Cont'd)



1. Cap Nut
2. Gasket
3. Adjusting Screw

4. Locking Nut
5. Gasket
6. Spindle Spring

7. Spindle
8. Holder Body
9. Dowel Pins

10. Nozzle Assembly
11. Retaining Nut
12. Gasket

Nozzle Holder Assembly

pressure exerted by the spindle spring as soon as the fuel injection pump has ceased to deliver fuel to the nozzle holder.

Service

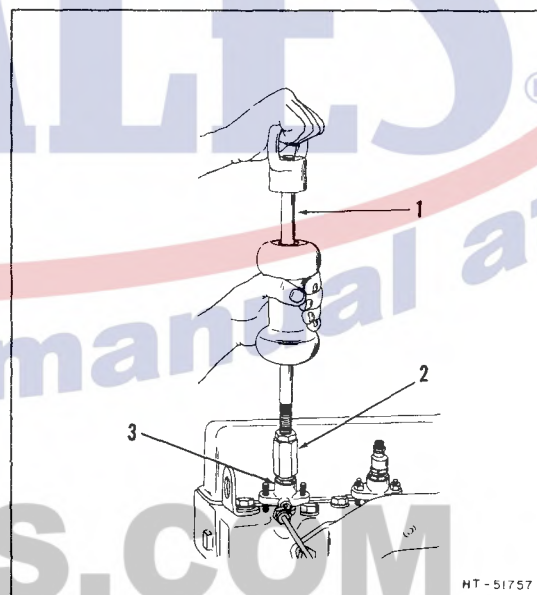
After each operating interval of approximately 2000 hours, the fuel injection nozzles should be removed, cleaned, tested and adjusted if necessary. The specified opening ("popping") pressure is 3125 PSI plus or minus 25 PSI. Popping pressure can be adjusted with the pressure adjusting screw. Turn the adjusting screw counterclockwise to decrease opening pressure and clockwise to increase opening pressure. A nozzle tester with an accurate pressure gauge must be used to observe the opening pressure spray pattern and general function of the nozzle.

Removal

- a. Thoroughly clean fuel injection nozzles, lines, connectors and surrounding area.
- b. Remove fuel drip manifold and disconnect lines from nozzle holder assemblies.

CAUTION: Do not bend lines when disconnecting. Cover all openings immediately to prevent entrance of dirt.

- c. Remove nuts and lockwashers securing nozzles to cylinder head.



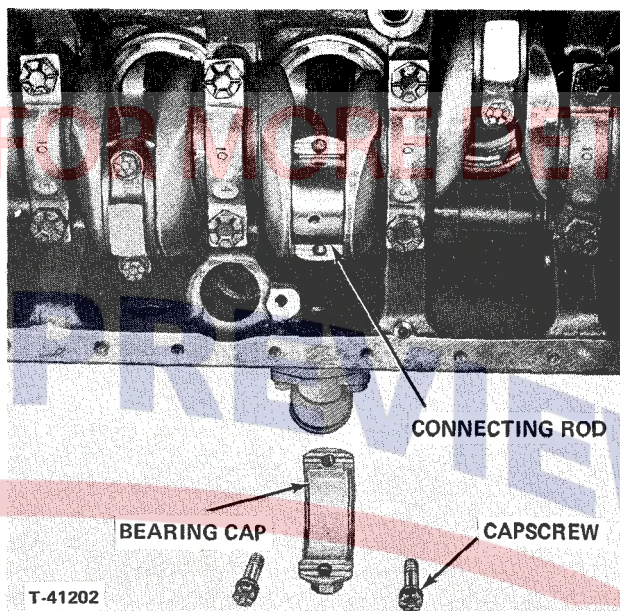
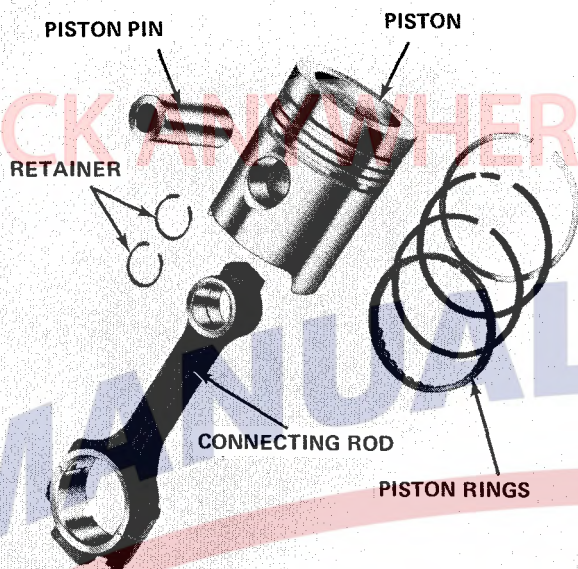
1. Slide Hammer J-6471-1
2. Adaptor J-8689
3. Nozzle Holder

Removing Fuel Injection Nozzle Holder

- d. Remove nozzles from cylinder head by using two small pry bars, or by using a slide hammer with adaptor similar to that illustrated.

CAUTION: Use care when removing an injection nozzle to prevent striking nozzle tip against a hard object which could result in damage to the tip.

CONNECTING RODS AND CONNECTING ROD BEARINGS

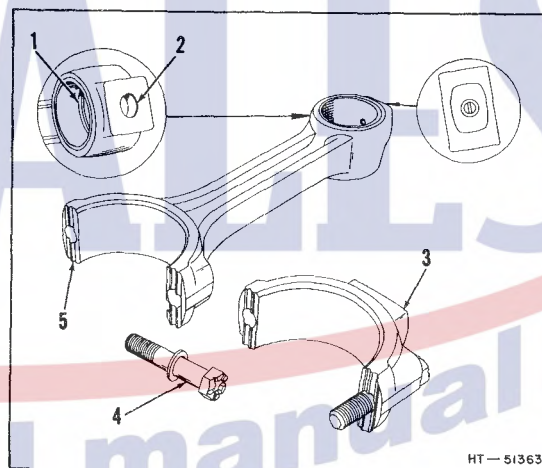


GENERAL INFORMATION

Connecting rods are made of drop-forged, heat-treated steel and are statically and electronically balanced. A funnel-shaped hole in the upper end of each rod catches oil that is splashed or sprayed within the cylinder block and allows it to flow into a radial groove in the connecting rod bushing for continuous piston pin lubrication.

The precision type connecting rod bearings are replaceable without machining and are held in position by bearing caps. Each half of the bearing shell is prevented from radial movement by a tang that extends into a recess.

The mating surfaces of the connecting rod and the bearing cap are serrated to assure side to side alignment. This type of construction gives added strength to the connecting rod assembly. The bearing cap is secured to the connecting rod by hardened washers and capscrews.



1. Oil Groove in Bushing
2. Funnel Shaped Oil Hole
3. Bearing Cap
4. Capscrew (Lock Bolt) and Washer
5. Serrations

Connecting Rod

can be checked with or without the piston assembled to it.

1. Clean connecting rod so it is free from oil and other matter. Check connecting rod for cracks by the magnetic particle method. Magnetize the connecting rod and cover it with a fine magnetic powder or solution. Cracks will form a small local magnet which causes the magnetic particles in the powder or solution to gather there, marking the cracks. If any cracks are detected, the connecting rod must be replaced.
2. Whenever connecting rods are removed from an engine it is good practice to check alignment of the piston pin bushing end with the large bore end. Alignment can be checked with a direct reading alignment gauge similar to the one shown. Note that with this type alignment gauge the rod

3. Measure outside diameter of the piston pin to determine amount of wear. Specified O.D. of a new piston pin is 1.5015" to 1.5017". Specified I.D. of the connecting rod bushing is 1.5027" to 1.5032". These dimensions of pin and bushing provide a running clearance of 0.001" to 0.0017". Clearances of up to 0.003" are permissible. Replace the connecting rod bushing, if clearance exceeds 0.003".
4. Make certain funnel oil hole is clean and free of foreign matter.

TWO-TWENTY

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