



6855344HT & 6887139HT Oil Pump Drive/Idler Spur Gears

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Subject: Removal, cleaning, inspection, rework, repair, & installation procedures for 6855344HT - Oil Pump Drive Spur Gear & 6887139HT – Oil Pump Idler Spur Gear.

Compliance: Any time the oil pump is disassembled.

Notes: Refer to OEM’s published engine operation data.

Technical aspects are FAA approved

Standard shop practices may be substituted for materials & procedures referenced herein provided they have been demonstrated as effective & safe for use with these parts or their OEM & other FAA approved equivalents.

1.1 REMOVAL

- 1.2 Remove the lube pump assembly in accordance with the manufacturer’s instructions.
- 1.3 Disassemble lube pump assembly in accordance with the manufacturer’s instructions until the scavenge oil pump cover is pryed loose from the body.
- 1.4 Remove lube pump drive & idle spur gears from scavenge oil pump body.

2.1 CLEANING

- 2.2 Clean parts by Vapor degreasing.

3.1 INSPECTION

- 3.2 Inspect & repair or replace the gear per Table 1:



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Table 1

| Condition | Service Limit | Repair Limit | Corrective Action |
|--|--|---|---------------------------------|
| Cracks in radii root corners of spline teeth (or) in line or parallel indications in close proximity on the involute of a gear tooth side. (Visual & MPI) | Cracks are not acceptable. | No Repair. | Replace defective gear |
| Nonmetallic Inclusions (MPI) | Light scattered nonmetallic indications parallel to the material flow lines are acceptable. | No Repair | Replace defective gear |
| Nicks dents & wear in gear teeth. | Max of 0.010 in. length, width or diameter & without sharp corners not readily detected using a 0.030 in. radius scribe. | Nicks & dents with sharp corners stoned off which are detected using a 0.030 in. radius scribe but do not exceed 0.060 in. in length, width, or diameter. | Remove sharp corners by honing. |
| Tooth damage which involves metal displacement to a degree where sub-surface damage is detected by magnetic inspection. (Visual & MPI) | No sub-surface damage acceptable. | No Repair | Replace gear. |



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| Condition | Service Limit | Repair Limit | Corrective Action |
|--|--|------------------------------|---------------------------|
| Internal Splines (6855344HT only) | .6142 in. max wear (.054 Wire size) | No Repair | Replace gear. |
| Scuffing (Visual) | Scuffing, when accompanied by wear-off of metal pickup, if gear assembly is still matched with respective gears. | Scuffing evidence by pickup. | Remove Scuffing by honing |

NOTES:

- MPI technique as follows: A) Circular between heads & B) Longitudinal in a coil in accordance with the latest revision to ASTM E1444.

4.1 REPAIR

4.2 None

5.1 INSTALLATION

5.2 Install dowel pins in scavenge oil pump body if they have been removed.

Lubricate & install two preformed packings in the scavenge body assembly.

Install the oil pump drive gear & three oil pump idler gears.

Measure the gear end clearance in the pressure & scavenge elements between the split-line & gear end with a dial indicator. The gear end clearance must be 0.0005 - 0.0015 in. max. If the end clearance limit is exceeded, reselect the oil pump drive gear & three idler gears and/or lap body & recheck end clearance. **NOTE: DO NOT LAP BODIES AFTER EPOLY® REPAIR.** Minimal end clearance is desirable.

Install pinned idler gear shafts & bushing in scavenge pump cover if they have been removed.

Place cover assembly on scavenge body assembly. Install oil pump drive gear & oil pump idler gear.



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Complete lube oil pump assembly in accordance with the manufacturer's instructions.