

**SERVICE
INSTRUCTION**

DATE: July 30, 1976

Service Instruction No. 1341
Engineering Aspects are
FAA Approved

SUBJECT: Oil Pump Idler Shaft Lubrication

MODELS AFFECTED: O-235; O-290; O, IO, AIO, AEIO, LIO-320 series; O, IO, AIO, AEIO, HIO, LIO-360 series; O-540 series except dual magneto models identified by "D" as 5th character in model designation; IO, AEIO-540 series except IO-540-E1A5, -K1B5, -K1E5, -P1A5, -S1A5 using large volume oil pump and dual magneto models.

TIME OF COMPLIANCE: At next overhaul.

Positive lubrication for the oil pump impeller idler shaft can be obtained by drilling the accessory housing to provide an oil passage to the idler shaft bore. This hole connects the cavity on the pressure side of the oil pump pad to the idler shaft bore.

In considering this modification for certain models of IO-540 engines as noted above, it is necessary to identify the particular oil pump assembly installed to determine if this change is applicable. During overhaul, engines found with the idler shaft secured by a cotter pin in the oil pump body are not to be modified. This shaft is stationary in its bore.

CAUTION

DO NOT MODIFY HOUSINGS USING AN OIL PUMP WITH A STATIONARY IDLER SHAFT. THIS SHAFT WILL NOT FULLY COVER THE DRILLED PASSAGE WHICH COULD RESULT IN SOME OIL PRESSURE LOSS.

During inspection, check to see if the oil passage in the idler shaft bore may have been incorporated at some earlier time. If not proceed as follows:

GROUP I – All 4 and 6 Cylinder Models Shown Under Models Affected Except Dual Magneto Models.

1. Drill passage with a 1/8 inch (.125) drill to a depth of 3/4 inch (.75) at a 35° angle to the surface of the oil pump mounting pad as shown in Figure 1.
2. Deburr hole and clean to remove metal chips prior to final assembly.

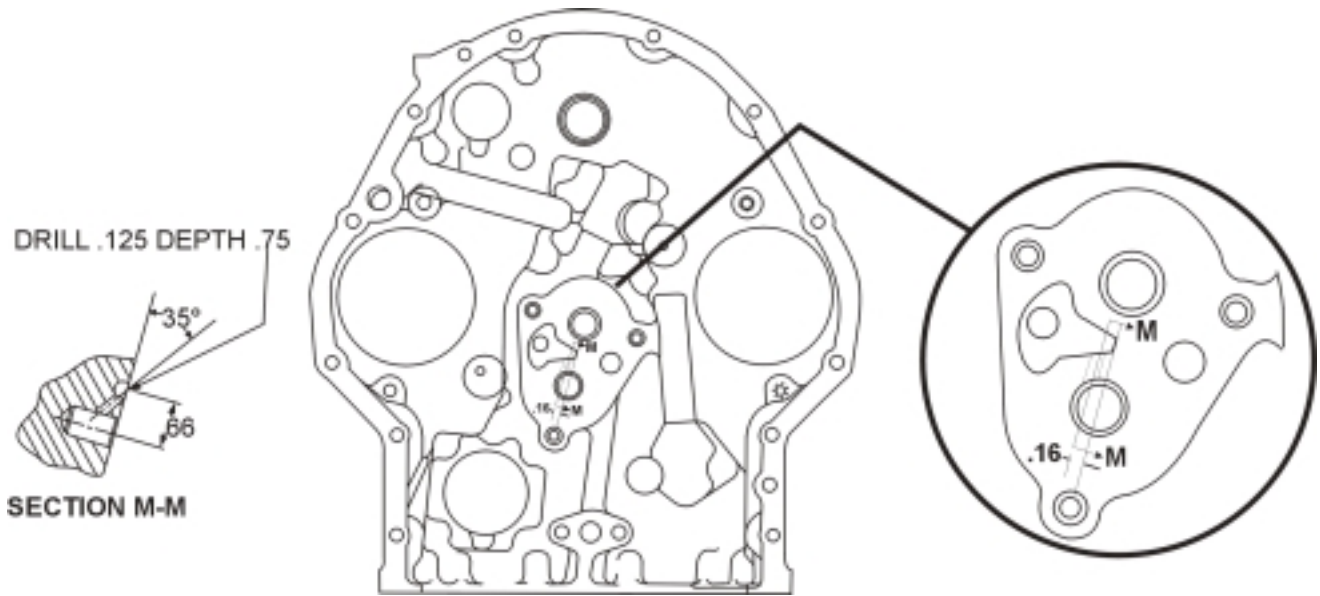


Figure 1. 4 and 6 Cylinder Direct Drive Models Except Those With Large Volume Oil Pump (See Text)

GROUP 11 – 4 Cylinder Dual Magneto Models, Standard Rotation.

1. Drill passage with a $\frac{1}{8}$ inch (.125) drill setting depth at $\frac{3}{4}$ inch (.75) at a 30° angle to the surface of the oil pump mounting pad as shown in Figure 2.
2. Deburr hole and clean to remove metal chips prior to final assembly.

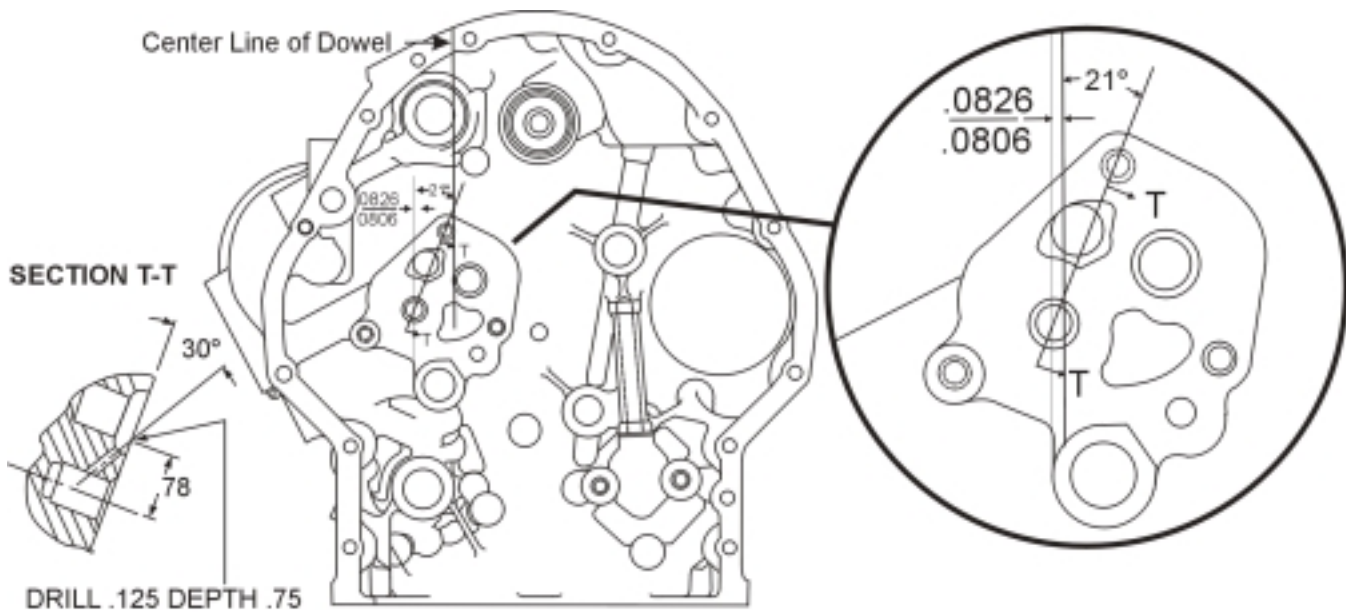


Figure 2. 4 Cylinder Dual Magneto, Standard Rotation Models

GROUP III – 4 Cylinder Dual Magneto Models, Reverse Rotation.

1. Set up location of hole according to dimensions given in Figure 3 and proceed to drill passage with a $\frac{1}{8}$ inch (.125) drill setting depth at $\frac{3}{4}$ inch (.75) at a 45° angle to the surface of the oil pump mounting pad as shown in Figure 3.
2. Deburr hole and clean to remove metal chips prior to final assembly.

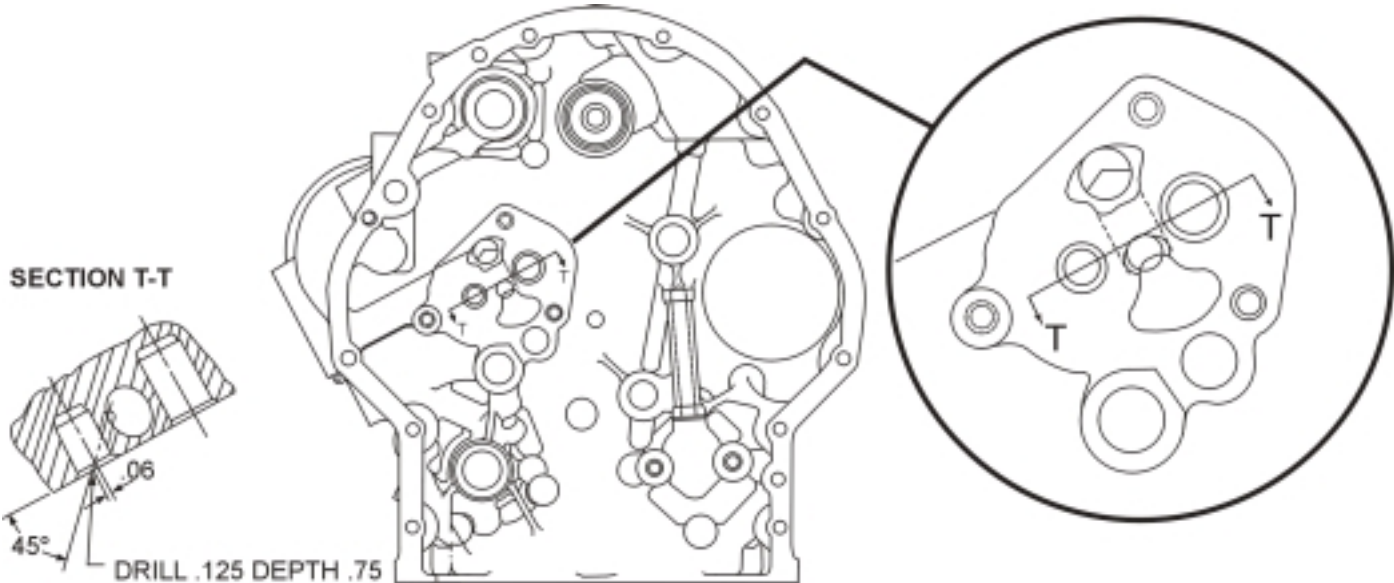


Figure 3. 4 Cylinder Dual Magneto, Reverse Rotation Models