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SERVICE INSTRUCTION

DATE: February 25, 2011

Service Instruction No. 1059D
 (Supersedes Service Instruction No. 1059C)
 Engineering Aspects are
 FAA (DER) Approved

SUBJECT: Pre-Lubrication of Parts Before Assembly
 MODELS AFFECTED: All Lycoming opposed series aircraft engines
 TIME OF COMPLIANCE: At engine assembly

NOTE

Incomplete review of all the information in this document can cause errors. Read the entire Service Instruction to make sure you have a complete understanding of the requirements.

Many premature part failures have been caused by incorrect pre-lubrication during engine assembly. This Service Instruction identifies specific Lycoming engine parts that must be lubricated during engine assembly, and factory-tested lubricants that have been found to be successful for this purpose.

If parts are not correctly lubricated, or if an inferior lubricant is used, many of the engine parts could become scored before the engine oil goes through its first cycle and has had a chance to lubricate the engine. This scoring will cause premature part failure, and in some cases, engine failure before usual accumulation of service hours.

Therefore, it is necessary to apply a coating of undiluted lubricant to the following parts during engine assembly.

1. Camshaft Lobes
2. Face of Tappet Body
3. Valve Stems
4. Valve Guides
5. Supercharger Bearing (where applicable)
6. Piston Pin Plugs
7. Connecting Rod Assembly*
8. Crankshaft Thrust Bearing Surface

* On high crush bearings (used with connecting rod assembly P/N LW-13422 only), you must apply a light (thin) coat of Fel-Pro C5-A or Cop-Graf as a pre-lube to the bearing surface of the connecting rod. For all other bearings, use an engine oil mixture. Fel-Pro C5-A or Cop-Graf can usually be found locally.

Apply a mixture of 15% pre-lubricant and 85% SAE No. 50 mineral base aviation grade lubricating oil to all other engine parts.



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Although other equivalent lubricants can be used for pre-lubrication, Lycoming has applied coatings to engine parts and have done tests on the following lubricants with successful results:

1. Texaco Thuban 140
2. Lubri-bond (A) – Fulfills MIL-L-23398 Spec.
3. Tex MOLYTEX EP 0
4. Castrol Contractor Special NLGI #1

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