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SERVICE INSTRUCTION

DATE: January 27, 2016

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

SUBJECT: Pre-Lubrication of Parts Before Assembly

MODELS AFFECTED: All Lycoming opposed series aircraft engines

TIME OF COMPLIANCE: At engine assembly

REASON FOR REVISION: Update lubricants

NOTICE: 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.

This Service Instruction identifies approved factory-tested lubricants for specific engine parts that must be lubricated during engine assembly. Many premature part failures have been caused by incorrect pre-lubrication during engine assembly.

If parts are not correctly lubricated, or if an unapproved lubricant is used, engine parts could become scored before the engine oil has lubricated the engine during the first cycle of operation. This scoring can cause premature part failure, or, in some cases, engine failure.

As preventive action, during engine assembly and individual engine component replacement, apply the approved lubricant for specified components identified in Table 1.

Table 1
Lycoming-Approved Lubricants for Engine Components

Lycoming-Approved Lubricant	Engine Component
Undiluted lubricant - Castrol Contractor's Special NLGI #1 or Lubri-bond (A) - Fulfills MIL-L-23398 Spec. or Tex MOLYTEX EP 0	<ul style="list-style-type: none"> • Camshaft lobes • Face of tappet body (straight body solid tappet, hydraulic spherical tappet, or hydraulic hyperbolic tappet only) • Rocker arm tips • Valve stems and valve guides • Supercharger bearing (where applicable) • Piston pin plugs • Crankshaft thrust bearing surface • Drive spline of AN-type gear driven fuel pump • Fuel pump plunger for AC-type fuel pump



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**Table 1 (Cont.)
Lycoming-Approved Lubricants for Engine Components**

Undiluted lubricant - Fel-Pro C5-A or Cop-Graf	High crush bearings used with connecting rod assembly P/N LW-13422 (apply as a light coat to the bearing surface of the connecting rod)
Mixture of 15% pre-lubricant (STP or equivalent) and 85% SAE No. 50 mineral base aviation grade lubricating oil	<ul style="list-style-type: none"> • All other connecting rod bearings • Tappet bores (roller tappet engines only) • Roller tappet rollers • Camshaft lobes (roller tappet engines only) • Cylinder base oil ring • All other engine components

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