

SERVICE INSTRUCTION

DATE: August 12, 1994

Service Instruction No. 1472
Engineering Aspects are
FAA Approved

SUBJECT: Removal of Preservative Oil From Engine

MODELS AFFECTED: All Textron Lycoming reciprocating aircraft engines.

TIME OF COMPLIANCE: Prior to installation of engine in aircraft.

Prior to shipment from Textron Lycoming, an engine undergoes a preservative treatment. In order to protect the cylinders and related parts preservative oil is sprayed into each cylinder. If an intake valve is open, it is possible for oil to get into the induction system of the engine. For this reason, careful depreservation of an engine is important.

1. PREPARATION OF ENGINE FOR INSTALLATION.

Before installing an engine that has been prepared for storage, remove all bags of desiccant and preservative oil from the engine. If the fuel servo was installed on the engine, it should be removed. Engines that have been stored in a cold place should be removed to an environment of at least 70°F. (21°C.) for a period of 24 hours before preservative oil is drained from the cylinders. If this is not possible, heat the cylinders with heat lamps before attempting to drain the engine. Preservative oil can be removed by removing the bottom spark plugs and turning the crankshaft three or four revolutions by hand. The preservative oil will then drain through the spark plug holes. Draining will be facilitated if the engine is tilted to one side with bottom spark plug hole oriented vertically and the crankshaft is rotated at least two revolutions. Tilt the engine to the other side and repeat this procedure. When installing spark plugs, make sure that they are clean, if not, wash them in clean petroleum solvent.

CAUTION

DO NOT ROTATE THE CRANKSHAFT OF AN ENGINE CONTAINING PRESERVATIVE OIL BEFORE REMOVING THE SPARK PLUGS, BECAUSE IF THE CYLINDERS CONTAIN ANY APPRECIABLE AMOUNT OF THE MIXTURE, THE RESULTING ACTION, KNOWN AS HYDRAULIC LOCKING WILL CAUSE DAMAGE TO THE ENGINE. ALSO, ANY CONTACT OF THE PRESERVATIVE OIL WITH PAINTED SURFACES SHOULD BE AVOIDED.

2. DRAINING THE OIL SUMP AND ADDING LUBRICATING OIL.

Preservative oil which has accumulated in the sump can be drained by removing the oil sump plug.

After the oil sump has been drained, the plug should be replaced and safety-wired. Fill the sump with lubricating oil.

3. INSPECTION OF INDUCTION RISER TO ENSURE IT IS CLEAN AND DRY PRIOR TO INSTALLING FUEL SERVO.

If significant oil is noted, it is necessary to clean the induction system in the sump. It may also be necessary to inspect, clean and reinstall intake pipes. Be sure the intake pipes are reinstalled properly.

4. GENERAL.

The oil screens should be removed and cleaned in gasoline or some other hydrocarbon solvent. The fuel drain screen located in the fuel inlet of the carburetor or fuel injector should also be removed and cleaned in a hydrocarbon solvent.

5. INSPECTION OF ENGINE MOUNTING.

If the aircraft is one from which an engine has been removed, make sure that the engine mount is not bent or damaged by distortion or misalignment as this can produce abnormal stresses within the engine.

6. ATTACHING ENGINE TO MOUNTS.

See airframe manufacturer's recommendations for method of mounting the engine.

7. OIL AND FUEL LINE CONNECTIONS.

The oil and fuel line connections are called out in the applicable operator's manual.

8. PROPELLER INSTALLATION.

Consult the airframe manufacturer for information relative to propeller installation.

9. PREPARATION OF CARBURETORS AND FUEL INJECTORS FOR INSTALLATION.

Carburetor - Remove the fuel inlet strainer assembly and clean in a hydrocarbon solvent. Reinstall the fuel drain plug and fuel inlet strainer assembly.

Fuel Injector - Remove and clean the fuel inlet strainer assembly and reinstall. Inspect the impact tubes, throttle body area and venturi to ensure that it is clean and dry prior to installation.

There may be a small amount of preservative oil remaining in the engine , but this can cause no harm. However, after twenty-five hours of operation, the lubricating oil should be drained while the engine is hot. This will remove any residual preservative oil that may have been present.

NOTE

Dispose of all materials according to Federal, State and Local Regulations.