

Reciprocating Engine Division/
Subsidiary of Textron Inc.
652 Oliver Street
Williamsport, PA 17701 U.S.A.

MANDATORY

SERVICE BULLETIN

DATE: January 2, 1987

Service Bulletin No. 455D
(Supersedes Service Bulletin No. 455C)
Engineering Aspects are
FAA Approved

SUBJECT: Replacement of Oil Pump Impellers

MODELS AFFECTED:

O-360-A1LD	L-17555-36A thru L22462-36A
O-360-A1F6D	L-16685-36A thru L-22582-36A
O-360-A5AD	L-17057-36A thru L20038-36A
IO-360-A1B6D and	
IO-360-A3B6D	L-9598-51A thru L-16595-51A
	L-17273-51A
	L-17312-51A thru L-17319-51A
	L-17321-51A
	L-17336-51A thru L-17340-51A
	L-17347-51A thru L-17351-51A
	L-17355-51A
	L-17358-51A
	L-17377-51A thru L-17380-51A
	L-14527-51A
IO-360-C1E6D	
TO-360-C1A6D and	
TIO-360-C1A6D	L-101-69A thru L-243-69A

Any of the above model engines overhauled in the field between April 7, 1970 and October 15, 1976.

All above model remanufactured engines shipped prior to April 1, 1981.

TIME OF COMPLIANCE:

If Service Bulletin 455B has not been complied with, the Time of Compliance must be within the next 25 hours; however, if Service Bulletin 455B has been complied with, the Time of Compliance can be extended to the next recommended overhaul.

Avco Lycoming Textron has available, for the listed engines, improved, hardened-steel impellers for the oil pump assembly.

As product improvements, the new driving impeller (P/N LW-18109) and new driven impeller and shaft assembly (P/N LW-18110) replace the steel

driving impeller (P/N 60746) and aluminum driven impeller and shaft assembly (P/N LW-13775).

The new nitrided driving impeller can be identified by the character "N" located on the centerline of a gear tooth. (See Figure 1.) The new, carburized driven impeller will have the character "C" located on a gear tooth centerline. (See Figure 2.)

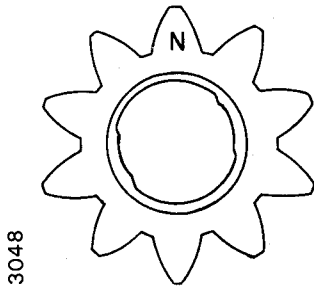


Figure 1. Nitrided Driving Impeller

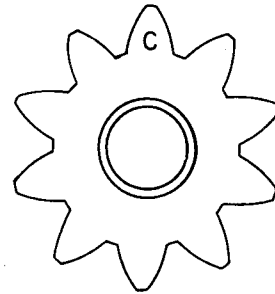


Figure 2. Carburized Driven Impeller

Install the new oil pump impellers as follows:

1. Remove the magneto.
2. Remove the sump.
3. Remove the fuel pump.

NOTE

Care must be taken when removing or reinstalling a diaphragm-type fuel pump. The actuating arm of the pump must be on the base circle of the cam, or pressure exerted on the arm of the fuel pump could cause damage to the mounting bolt threads.

4. Remove any other accessories from the housing.
5. Remove the accessory housing from the engine.

6. After the accessory housing has been removed, disassemble the oil pump and inspect both the housing and oil pump cover for damage.

7. Reassemble the oil pump using the new steel driving impeller (P/N LW-18109) and new steel driven impeller and shaft assembly (P/N LW-18110). Be sure all parts are lubricated thoroughly during assembly. As the slotted nuts are tightened to a torque of 17-foot pounds, make sure that the oil pump impellers are free by rotating the

oil pump shaft. Correct any problems before proceeding.

CAUTION

Although the steel driving impeller P/N 60746 is superseded on all models except GO-435 and GO-480 and is still a functional in-service item on these engines, it must not be used with new impellers.

Aluminum driven Impeller and Shaft Assy. P/N LW-13775 is a discontinued item. In order to avoid confusion and prevent inadvertent mixing of gears, P/N LW-13775 must be returned to your authorized distributor along with the appropriate paperwork to receive full credit. This applies **only** to current "on shelf" inventory. It is not applicable to impellers already installed in any engines.

To insure new impellers are used together, they must be purchased in a Kit P/N 05K19423-S.

8. Before reinstalling the accessory housing make sure that the crankshaft to camshaft timing is correct and has not moved. See Overhaul Manual No. 60294-7 for procedure.

9. Reinstall accessory housing using a new gasket.

10. Reinstall the oil sump using a new gasket. Reinstall any clamps and hoses that were removed.

11. Reinstall the fuel pump.

12. Install magneto or magnetos. Consult the proper magneto timing procedure in Overhaul Manual No. 60294-7.

13. Reinstall any other accessories removed under paragraph 4.

14. Following completion of assembly, run the engine. Check oil pressure and magnetos for drop-off.

15. Check for any oil leaks prior to release for flight.

NOTE

An entry must be made in engine log book that compliance to this service bulletin was accomplished.

PARTS DATA: Oil Pump Impeller and Gasket Kit (P/N LW-18271-1) for the engines listed consists of the following parts:

QTY.	PART NO.	DESCRIPTION
*1	05K19423-S	Oil Pump Impeller Kit (1) Steel Driving Impeller (P/N 18109) (1) Steel Driven Impeller Assembly (P/N 18110) (1) Caution Tag (SSP-285)
1	73818	Accessory Housing Gasket
1	LW-13353	Sump Gasket
1	LW-12681	Magneto Gasket
1	68315	Propeller Governor Gasket
1	8313	Vacuum Pump Gasket
1	60096	Fuel Pump Gasket (for TIO-360-C, order Fuel Pump Adapter Gasket, P/N 69159)

* If the oil pump impellers are to be changed during engine overhaul and the gaskets that are supplied with the Oil Pump Impeller and Gasket Kit P/N LW-18271-1 are not required, order Oil Pump Impeller Kit P/N 05K19423-S which contains 1 ea. P/N LW-18109 Driving Impeller and 1 ea. P/N LW-18110 Driven Impeller only. These impellers are available only by ordering either of the above mentioned kits and must be used together in all instances.

NOTE: Revision "D" revises CAUTION note and Kit part number.

21403B, 22330B — These numbers for Avco Lycoming Textron reference only.

