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# SERVICE LETTER

Service Letter No. L248  
January 14, 2011

TO: All Owners and Operators of Lycoming O-235 Aircraft Engines  
SUBJECT: O-235 Crankcase Design Upgrade

### NOTE

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

This Service Letter introduces the new upgraded O-235 crankcase and associated replacement part numbers available as an option to replace the existing O-235 crankcases.

### NOTE

Crankcase replacement with the upgraded crankcase is not mandatory. However, there is a possibility that O-235 engines sent back to Lycoming for rebuild or overhaul could use the old crankcase, depending upon stock availability. All new O-235 engines sent from the factory will have the new upgraded crankcase.

Lycoming Engines has released a new crankcase design for the O-235 engines. The new crankcase uses twin pressurized main oil galleys (Figure 1) to supply oil to both banks of tappets and all camshaft journals. The new design removed the hydro-control boss and oil catch troughs (Figure 2). In the existing O-235 crankcase, oil drains by gravity into the catch troughs through tappet bores to lubricate tappets and the camshaft. Plugs also are installed on the new crankcase. Refer to Figures 3 and 4.

A new stud, washer and nut, installed on the rear of the crankcase hold the crankcase halves together. Refer to Figure 3.

Table 1 Superseded Crankcase Assembly Part Numbers		
Superseded Part Number	Replacement Part Number	Description
LW-13282	11A26476	Crankcase Assembly
LW-13257	11A26479	Crankcase Assembly
LW-11631	11A26478	Crankcase Assembly
LW-18735	11A26477	Crankcase Assembly



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When replacing the old O-235 crankcase with the new O-235 crankcase, the engine identification plate must be removed from the old crankcase (Figure 4) and installed on the oil sump of the new O-235 crankcase where shown in Figure 5. The engine identification plate can be removed one of two ways:

1. Carefully put a thin flat head screwdriver underneath the engine identification plate and slowly apply cantilever leverage to gently loosen the rivet fasteners and plate.
2. Use pliers to pull each of the four drive studs out.

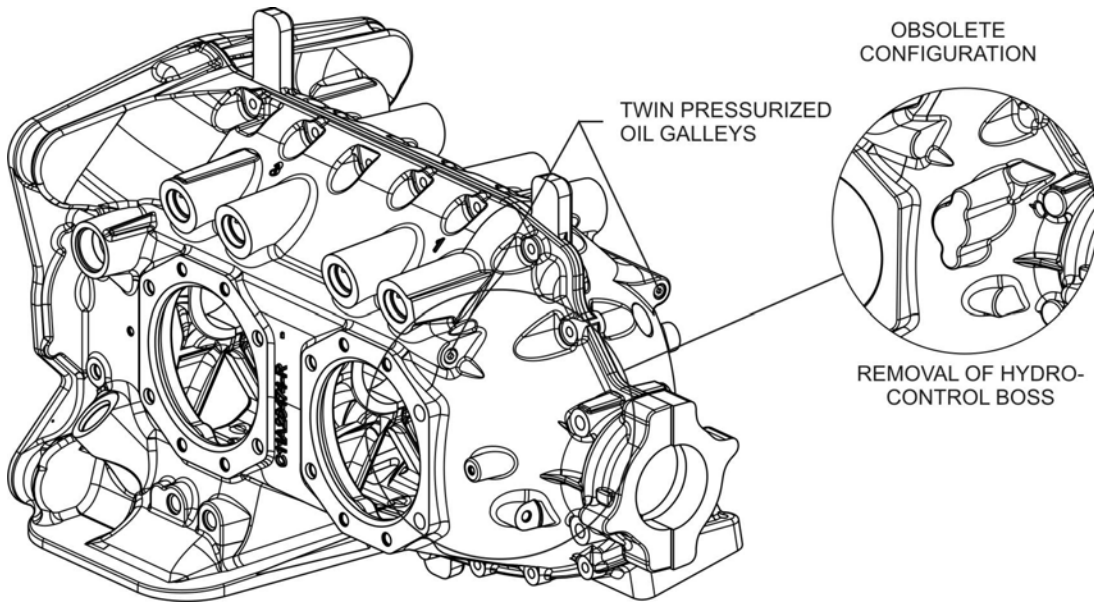
**NOTE**

If the engine identification plate is damaged or not legible, write an order to Lycoming Engines for a new engine identification plate per the latest revision of Service Instruction No. 1304.

If the engine identification plate is legible and not damaged, keep the plate but discard the four removed drive studs because the studs cannot be re-used. Therefore, four new drive studs STD-1901 must be used to install the engine identification plate.

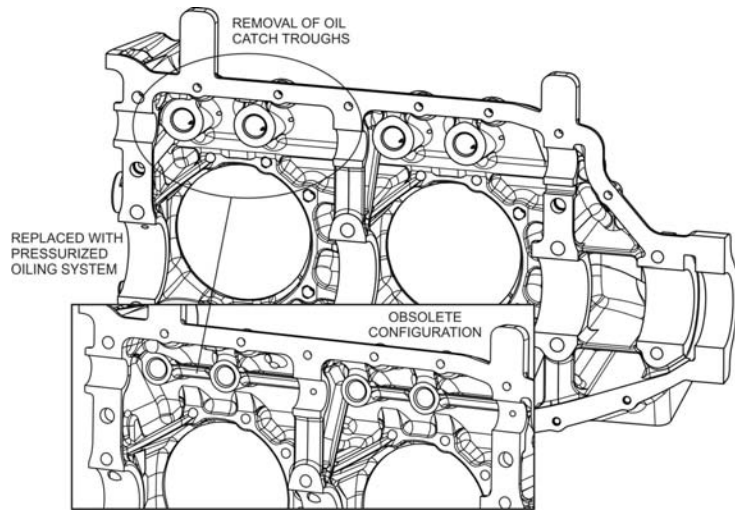
The oil sump already has four blind pre-drilled holes for installing the engine identification plate with the four new drive studs P/N STD-1901. Install the engine identification plate on the oil sump of the new crankcase aligned with the four holes in the location shown in Figure 5. To securely attach the engine identification plate to the oil sump, install the four drive studs, one in each of the four predrilled holes, using a drift and a hammer.

Additional parts do not need to be changed. With the new crankcase configuration, the engine operation remains the same and the solid, mechanical lifter valve train will remain the standard configuration (now pressurized).

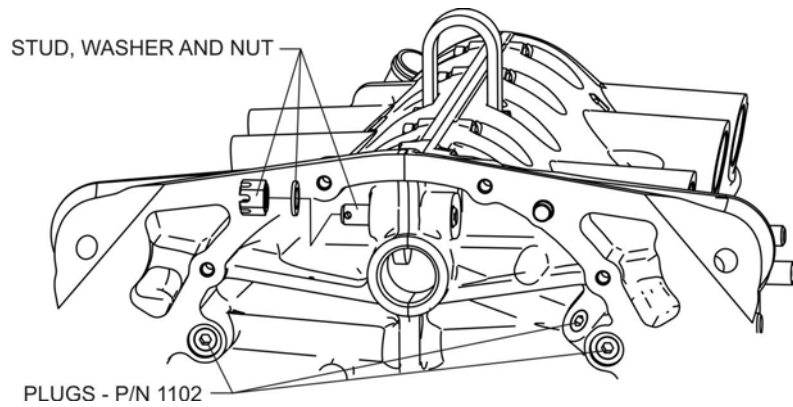


**Figure 1. Twin Pressurized Oil Galleys,  
Tappet Boss Diameter Enlarged**

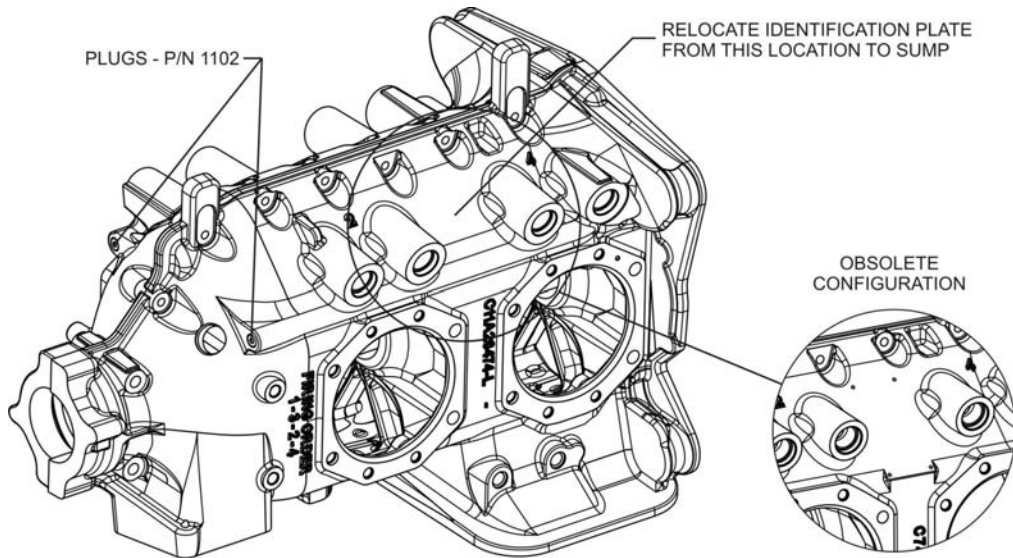
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**Figure 2. Pressurized Oiling System**

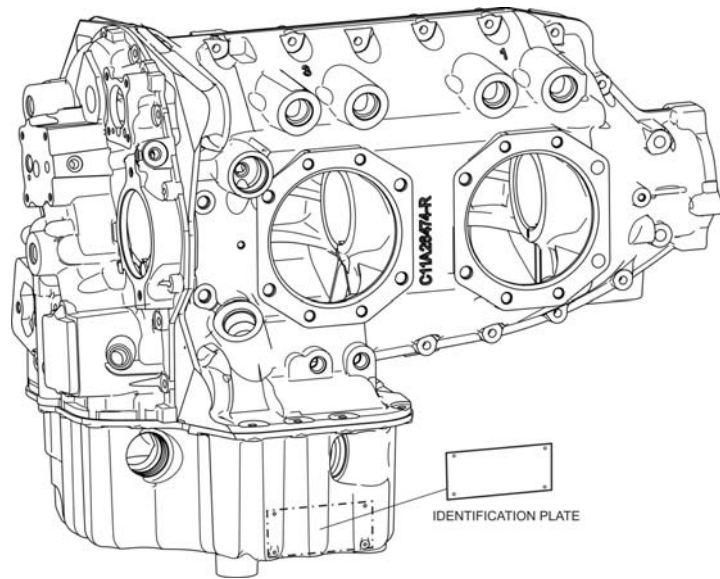


**Figure 3. New Stud, Washer and Nut on Rear of Crankcase**



**Figure 4. Location of Identification Plate on Old O-235 Crankcase**

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**Figure 5. Relocate Identification Plate to Sump**

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