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# SERVICE INSTRUCTION

DATE: September 9, 2014 Service Instruction No. 1406E  
(Supersedes Service Instruction No. 1406D)  
Engineering Aspects are  
FAA Approved

SUBJECT: Crankcase Parts for Use with Large-Diameter Hydraulic Lifters

MODELS AFFECTED: O-320-H2AD, -H3AD; O/LO/TO/LTO-360-E1A6D

TIME OF COMPLIANCE: At owner's discretion (during hydraulic lifter replacement)

### 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.

This Service Instruction identifies part numbers for crankcases with large-diameter hydraulic lifters.

Crankcase assemblies in current production for the "76" series engines have large-diameter hydraulic lifters and wide-lobe camshafts.

For the most part straight bodied hydraulic lifters have been installed on "76" series engines. However, for a short period between July 25, 2012 and October 10, 2013, hyperbolic hydraulic lifters (P/N 15B28040) were available for installation on these engines. These hydraulic lifters are no longer available for these engines and are to be replaced by straight bodied hydraulic lifters P/N 15B28093 when the lifters need to be replaced. Table 1 identifies the serial numbers of Lycoming engine models shipped from Lycoming that had hyperbolic hydraulic lifters P/N 15B28040, installed. Table 2 identifies new part numbers for the latest crankcases, camshafts, hydraulic lifters, and O-rings on the applicable engine models.

### NOTE

When it's time to replace hyperbolic hydraulic lifters P/N 15B28040 on the engines identified in this Service Instruction, you must replace all of the hyperbolic hydraulic lifters as a complete set with straight bodied hydraulic lifters P/N 15B28093. When specifically replacing only the hyperbolic hydraulic lifters (P/N 15B28040) with straight bodied hydraulic lifters (P/N 15B28093) (Table 2) it is **not** necessary to replace the camshaft since both types of hydraulic lifters are made of similar metals.



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**TABLE 1  
SERIAL NUMBERS OF AFFECTED  
LYCOMING ENGINE MODELS**

<b>SERIAL NUMBER</b>	<b>SOLD DATE</b>	<b>ENGINE MODEL</b>
2230-76T	10/10/13	O-320-H2AD
273-74T	10/09/13	LTO-360-E1A6D
1830-76T	09/05/13	O-320-H2AD
415-77T	09/04/13	O-360-E1A6D
6110-76T	08/29/13	O-320-H2AD
1737-76T	08/01/13	O-320-H2AD
167-72T	07/30/13	LO-360-E1A6D
537-72T	07/16/13	LO-360-E1A6D
414-77T	06/27/13	O-360-E1A6D
5182-76T	06/27/13	O-320-H2AD
4149-76T	06/26/13	O-320-H2AD
4418-76T	06/10/13	O-320-H2AD
404-72T	04/30/13	LO-360-E1A6D
327-77T	04/30/13	O-360-E1A6D
326-77T	04/24/13	O-360-E1A6D
375-72T	01/18/13	LO-360-E1A6D
313-77T	11/21/12	O-360-E1A6D
1411-76T	11/19/12	O-320-H2AD
3832-76T	03/20/13	O-320-H2AD
3055-76T	09/28/12	O-320-H2AD
2914-76T	03/05/13	O-320-H2AD
2893-76T	07/25/12	O-320-H2AD

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**TABLE 2  
PARTS DATA**

QTY	NEW PART NUMBER	DESCRIPTION	ENGINE MODEL
1	LW-18464	Crankcase Assembly	O-360-E1A6D TO-360-E1A6D
1	LW-16508	Camshaft Assembly	
8	15B28093	Lifter-Hydraulic Straight Bodied	
8	LW-R-0.750-275	O-ring	
1	LW-18652	Crankcase Assembly	O-320-H2AD, -H3AD
1	LW-16511	Camshaft Assembly	
8	15B28093	Lifter-Hydraulic Straight Bodied	
8	LW-R-0.750-275	O-ring	
1	LW-18465	Crankcase Assembly	LO-360-E1A6D LTO-360-E1A6D
1	LW-16514	Camshaft Assembly	
8	15B28093	Lifter-Hydraulic Straight Bodied	
8	LW-R-0.750-275	O-ring	

Any converted engine made into the new crankcase design must have the letter "T" stamped as a suffix at the end of the engine serial number. At the time of compliance with this Service Instruction, the engine identification plate also is to have the letter "T" stamped on it. (All new, overhauled or rebuilt engines from the Lycoming factory have a serial number stamped on the upper spine of the crankcase.)

Example: L-6005-76T

**NOTE**

Replacement camshafts are available only in the wide-lobe configuration and are compatible with either large or small-diameter lifters. These lifters can be identified by the following part numbers and outside-diameter dimensions:

Small-diameter lifter	15B26089*	0.8745/0.8740 in. (22.21/22.20 mm)
Large-diameter lifter	15B26090**	0.9535/0.9530 in. (24.22/24.21 mm)
	15B28093**	

\* Small-diameter lifters P/N 15B26089 are no longer available.

\*\* Large-diameter lifter P/N 15B26090 was superseded by P/N 15B28040, which was superseded by P/N 15B28093 (P/N 15B26090 and P/N 15B28040 are no longer available).

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