



652 Oliver Street
 Williamsport, PA 17701 U.S.A.
 Telephone +1 (800) 258-3279 (U.S. and Canada)
 Telephone +1 (570) 323-6181 (International)
 Facsimile +1 (570) 327-7101
 Email Technicalsupport@lycoming.com
www.lycoming.com

MANDATORY

SERVICE BULLETIN

DATE: October 11, 2018 Service Bulletin No. 634
Engineering Aspects are
FAA Approved

SUBJECT: Cylinder and Head Assembly Serviceable Life

MODELS AFFECTED: All Lycoming Engines with Parallel Valve Cylinder and Head Assemblies (Table 1) shipped from Lycoming Engines between 1-SEP-2013 and 30-APR-2015 (excludes O-235 series)

TIME OF COMPLIANCE: During Cylinder and Head Assembly removal for condition or overhaul

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

⚠ CAUTION: ABNORMALLY HIGH CYLINDER HEAD TEMPERATURES (CHT) OR CHT SPREAD IN EXCESS OF 50F (10C) MAY BE AN INDICATION OF DETERIORATED AIRCRAFT COOLING BAFFLING. FOLLOW THE AIRFRAME MAINTENANCE INSTRUCTIONS TO ENSURE THE AIRFRAME COOLING BAFFLING IS MAINTAINED IN GOOD CONDITION.

⚠ CAUTION: IMPROPER LEANING CAN INCREASE TEMPERATURES AND DECREASE CYLINDER AND HEAD ASSEMBLY SERVICE LIFE. REFER TO LYCOMING SERVICE INSTRUCTION NO. SI-1094 FOR RECOMMENDED LEANING PRACTICES.

⚠ CAUTION: DO NOT REPAIR, REFURBISH, OR OVERHAUL CYLINDER AND HEAD ASSEMBLIES IDENTIFIED IN THIS SERVICE BULLETIN.

This Service Bulletin is in response to field reports of compression loss in certain parallel valve Cylinder and Head Assemblies identified in Table 1 (Parallel valves are easily identified by rocker arms that are vertically aligned and parallel to one another). In some of these cases the compression loss has been caused by a leakage path through the head casting.

Affected Cylinder and Head Assemblies

The affected Cylinder and Head Assemblies were contained in Cylinder Kits and installed on all parallel valve engines, except for O-235 model engines, that shipped from Lycoming Engines between 1-SEP-2013 and 30-APR-2015. To identify Affected Cylinder Head Assemblies:

1. Refer to the casting marking locations shown in Figures 1 and 2 and find the casting markings on the Cylinder and Head Assembly.
2. Compare the casting markings to those identified for Cylinder and Head Assemblies in Table 1.



ISSUED			REVISED			PAGE NO.	REVISION
MO	DAY	YEAR	MO	DAY	YEAR		
10	11	18	--	--	--	1 of 3	--

Required Action

1. Do not conduct any non-Lycoming authorized repair, refurbishment, or overhaul of Affected Cylinder and Head Assemblies.
2. At overhaul of any engine containing an Affected Cylinder Head Assembly, remove, retire, and replace all Cylinder and Head Assemblies that meet the criteria of Table 1.

Figures

Figure 1

Identification on the Casting

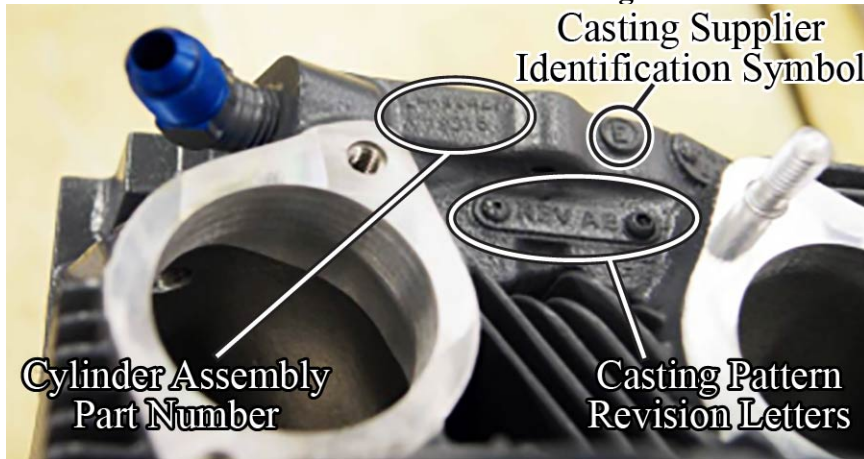


Figure 2

Cylinder Head Flange Stamp



ISSUED			REVISED			PAGE NO.	REVISION	S.B. 634
MO	DAY	YEAR	MO	DAY	YEAR			
10	11	18	--	--	--	2 of 3	--	

Table 1
Affected Cylinder and Head Assemblies

Cylinder and Head Assembly Part Numbers (Figure 1)	Casting Supplier Identification Symbol (Figure 1)	Casting Pattern Revision Letters (Figure 1)	Note
16A21901	Ⓔ	REV AF, AE, or AD	All Cylinder and Head Assemblies meeting these criteria are affected except for a small number of Cylinder and Head Assemblies that have the letter(s) "F" or "FB" stamped (Figure 2) on the cylinder head flange near the shroud tube hole.
16B21508	Ⓔ	REV AF, AE, or AD	
LW-12413	Ⓔ	REV AF, AE, or AD	
LW-12416	Ⓔ	REV AF, AE, or AD	
LW-12425	Ⓔ	REV AF, AE, or AD	
LW-12427	Ⓔ	REV AF, AE, or AD	
LW-13870	Ⓔ	REV AF, AE, or AD	All Cylinder and Head Assemblies meeting these criteria are affected.
16A22023	Ⓔ	REV AA, AB, or AC	
16A22130	Ⓔ	REV AA, AB, or AC	
LW-12418	Ⓔ	REV AA, AB, or AC	
LW-12433	Ⓔ	REV AA, AB, or AC	
LW-15605	Ⓔ	REV AA, AB, or AC	
LW-15682	Ⓔ	REV AA, AB, or AC	
LW-15318	Ⓔ	REV AB or AC	
LW-15322	Ⓔ	REV AB or AC	
LW-16290	Ⓔ	REV N or P	

ISSUED			REVISED			PAGE NO.	REVISION	S.B. 634
MO	DAY	YEAR	MO		YEAR	3 of 3	--	
10	11	18	--	--	--			