



VSP-80

September 23, 1987

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VENDOR SERVICE PUBLICATION

**TO:** All Piper Distributors, Service Distributors, Factory Direct Dealers and Piper Field Service Facilities.

**SUBJECT:** AVCO Lycoming Service Letter No. L213A and Service Instructions No. L1059C.

**PURPOSE:** To distribute the attached AVCO Lycoming Service Letter No. L213A and Service Instruction No. 1059C to all Piper Distributors, Service Distributors, Factory Direct Dealers and Piper Field Service Facilities.

The attached Avco Lycoming Piper Publications may affect AVCO Lycoming equipment installed in Piper airplanes. Refer to the publications for specific details.

# **Avco Lycoming** **TEXTRON**

## **Williamsport Division**

Avco Lycoming/Subsidiary of Textron Inc.  
652 Oliver Street  
Williamsport, PA 17701  
U.S.A.  
5/30/86

# **SERVICE LETTER**

Service Letter No. L213A  
(Supersedes Service Letter No. L213)  
April 10, 1987

**TO:** All Owners and Operators of Avco Lycoming O-235 Series Engines  
with 8.5:1/8.10:1 or 6.75:1 Compression Ratios

**SUBJECT:** Time Between Overhaul (TBO) Extension Kit

## **PART I. EXTENDED TBO TIME WITH PISTON CHANGE**

### **8.5:1/8.10:1 COMPRESSION ENGINES —**

#### **Models Affected:**

O-235-K2A, -K2B, -K2C, -L2A, -L2C, -M1, -M2C, -M3C, -N2A, -N2C, -P1, -P2A, -P2C, -P3C.

Currently all new, remanufactured and factory overhauled engines of the above listed O-235 series are being built with a new increased strength piston, P/N LW-18729. Effectivity for each group is as follows:

**New engines serial numbers L-24231-15 and up.**

**Remanufactured engines shipped after March 20, 1986 except serial numbers RL-20600-15, RL-24190-15, RL-24191-15 and RL-24203-15.**

**Factory overhauled engines shipped after April 1, 1986.**

This part change, together with past service history, will now allow Avco Lycoming to increase our recommended Time Between Overhauls from 2000 hours to a new recommended TBO of 2400 hours.

### **NOTE**

TBO extension applies to engines containing only 100% genuine Avco Lycoming parts.

Due to a weight difference and our desire to provide the benefit of the extended TBO, piston P/N LW-13623 will no longer be offered. In those occasional cases where only a single replacement is needed, a TBO extension kit containing 4 (four) P/N LW-18729 pistons will be available at a reduced price.

The cost of this TBO extension kit is minimal when compared to the increased value of the 400 additional hours of TBO now being recommended. Based on 1986 replacement engine prices, the added hours amount to a value of approximately \$2400.00.

### **CAUTION**

**DO NOT USE OR MIX ANY OTHER P/N PISTON WITH P/N LW-18729 PISTON.**

TBO Extension Kit P/N 05K19614 (Nitrided Cylinders) consists of:

QUANTITY	PART NUMBER	PART NAME
4	LW-18729	Piston
8	78862CH	Ring
4	78864CH	Ring
4	75906	Gasket
16	LW-18661	Seal
4	62869	"O" Ring
1	SSP-586	Logbook Label
1	LW-13215	Oil Filter

TBO Extension Kit P/N 05K19613 (Chrome Cylinders) consists of:

QUANTITY	PART NUMBER	PART NAME
4	LW-18729	Piston
8	LW-14234PL	Ring
4	LW-14235PL	Ring
4	75906	Gasket
16	LW-18661	Seal
4	62869	"O" Ring
1	SSP-586	Logbook Label
1	LW-13215	Oil Filter

These 2 kits are only available through Avco Lycoming Distributors at a special list price of \$638.20 \*FOB Williamsport, PA 17701 which includes all parts necessary for the change.

\*Prices are subject to change without notice.

## PART II. EXTENDED TBO TIME — LOW COMPRESSION ENGINES (6.75:1)

### 6.75:1 COMPRESSION ENGINES —

#### Models Affected:

O-235-C1, -C1B, -C1C, -C2A, -C2B, -C2C, -E1, -E1B, -E2A, -E2B, -H2C.

All O-235 series engines listed above are immediately eligible for the new recommended Time Between Overhaul.

#### NOTE

TBO extension applies to engines containing only 100% genuine Avco Lycoming parts.

NOTE: Revision "A" changes weight difference paragraph and kit price.

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# SERVICE INSTRUCTION

May 19, 1987

Service Instruction No. 1059C  
(Supersedes Service Instruction No. 1059B)  
Engineering Aspects are  
FAA Approved

**SUBJECT:** Pre-Lubrication of Parts Prior to Assembly

**MODELS AFFECTED:** All Avco Lycoming opposed series aircraft engines.

**TIME OF COMPLIANCE:** At engine assembly.

Many premature parts failures have been traced directly to improper pre-lubrication at engine assembly. The purpose of this Service Instruction is to set forth recommended procedures and approved products for pre-lubricating of parts prior to engine assembly.

If parts are not properly lubricated, or if an inferior lubricant is used, many of the engine parts will become scored before the engine oil goes through its first cycle and has had a chance to lubricate the engine. This, of course, will lead to premature parts failure and in some cases, lead to engine failure before normal service hours have been accumulated.

It is of the utmost importance, therefore, that the following recommendations be adhered to at engine assembly. Coat the following parts with undiluted lubricant:

1. Camshaft Lobes
2. Face of Tappet Body
3. Valve Stems
4. Valve Guides

5. Supercharger Bearing (where applicable)
6. Piston Pin Plugs
7. Connecting Rod Bearing\*
8. Crankshaft Thrust Bearing Surface

All other parts should be coated with a mixture of 15% pre-lubricant and 85% SAE No. 50 mineral base aviation grade lubricating oil.

### NOTE

The factory has had success with the following lubricants for coating the parts prior to assembly. This is not to imply that these are the only lubricants that will satisfactorily "do the job", but is merely a listing of lubricants which have been factory tested and used successfully.

1. Texaco Thuban 140
2. Kendall Refining Co., Kendor 155 Compound
3. Atlantic Richfield Co. Modoc 165
4. Lubri-bond (A) - Fulfills MIL-L-23398 Spec.
5. Texaco Moly-Tex Grease EPO

\* - High-crush bearings (LW-13212) require Fel-Pro C5-A or Cop-Graf as a pre-lubricant between the bearing and the rod; all other bearings may be pre-lubricated with engine oil. Fel-Pro C5-A or Cop-Graf is procurable locally.

NOTE: Revision "C" changes Texaco Molytex "O" to Texaco Molytex EPO.

17911-A, 18250 - These numbers for Avco Lycoming reference only.