

Models and Serial Numbers Affected: Refer to attached Lycoming Service Bulletin No. 367D to determine aircraft effectivity with respect to specified engine serial numbers (be sure to read NOTE under Models Affected, Page 1; affected engine serial number listing on Page 3 through 6 inclusive; and NOTE on bottom of Page 6 -- all of which refer to affected engine serial numbers).

If your engine(s) serial numbers(s) is/are not listed, no further action is required.

Compliance Time: Refer to attached Lycoming Service Bulletin No. 367D, Time of Compliance.

Purpose: To provide distribution of attached Lycoming Service Bulletin No. 367D, dated March 8, 1974.

Balance of Piper Service Letter format not applicable; refer to attached Lycoming Service Bulletin No. 367D for detailed information.
SERVICE BULLETIN

DATE: March 8, 1974

SERVICE BULLETIN No. 367D
(Supersedes Service Bulletin No. 367C)
Engineering Aspects are
FAA (DEER) Approved

SUBJECT: Required Inspection of Part No. 68650 Piston Pin

MODELS AFFECTED:
O-320-B2B, -D1F, -D2A; IO-320; O-360-A, -B, -C, -D; HIO-
GO-480; IGSO-480-A1EG; TIO-540 and TIO-540-J; IGO-540; IGSO-540-A, -B; VO-
540; TIO and TIO-541-E; IO-720-A, -B, -C series engines. See pages 3, 4, 5 and 6
for lists of serial numbers for specific applicable engines.

NOTE
This revision to Service Bulletin No. 367 has been published primarily to add serial
numbers of engines that are subject to the requirements of the bulletin. This revision
supersedes all previous editions of Service Bulletin No. 367.

TIME OF COMPLIANCE: Required within next 50 hours of engine operation or before at owners discretion.

Several part no. 68650 piston pins have failed, caused
by transverse grinding or heat cracks which occurred
during manufacture of the piston pin. There is a possi­
bility that a limited number of these pins were assem­
bled in engines now in service.

To preclude failures of this type, removal of all
piston pins from affected engines is required and re­
placement made with either new or reusable 68650
piston pins. A list of applicable engines is attached
herewith. Reusability of piston pins is determined by
magnetic particle inspection, those that are found to
be free from indications should be reassembled in the
engine. New replacement piston pins having any one
of the three following identification markings HB-NM
or FAA-PMA or a large letter M on one end are satis­
factory and do not require magnetic inspection prior
to first use. All other piston pins must be magnetic
inspected prior to their use or returned through your
nearest Avco Lycoming Distributor for replacement
parts.

Owners and operators having access to magnetic
inspection facilities may inspect their piston pins
locally rather than return them to Avco Lycoming. The
accompanying figure shows the type of indications that
may be encountered and the following procedure
describes the method of inspection to be used.

1. Clean the piston pins to remove all traces of oil,
grease or dirt; this is best done in a vapor degreaser
using trichlorethylene as a solvent. The pins must
be clean and dry before proceeding with magnetic
inspection.

2. The equipment used for magnetic inspection must
utilize either battery supplied direct current, or
full wave rectified, 3 phase alternating current.

3. Circular magnetization shall be accomplished by
mounting the piston pins on a 1/2 in. dia. x 6 in.
mla. long copper bar secured between the heads of
the machine. Adjust the current supply to indicate
1000 amperes.

4. The pins must then be magnetized longitudinally
in a coil of 10,000 ampere turns.

5. Use the continuous wet method for application of
the magnetic fluid, either black powder or fluores­
cent may be used in a vehicle of kerosene or equiva­
et petroleum distillate.

6. Use a 5-power magnifying glass to examine the
piston pins. Pay particular attention for indications
around the circumference of the pin; branched
indications as shown in the figure are conclusive
evidence of unsatisfactory pins.

7. Piston pins that are found to be free of indications
should be demagnetized, cleaned and reused. A wire,
confirming the inspection should be sent im­
mediately to Avco Lycoming, collect. Include the
date of inspection and serial number of the engine.

CIRCUMFERENTIAL INDICATION
BRANCHED INDICATION

PISTON PINS WITH ANY INDICATIONS
LIKE THESE MUST NOT BE REUSED

Page 1 of 6
If any piston pins are found to have magnetic indications, the quantity of such pins and serial number of the engine from which they were removed should be promptly sent to Avco Lycoming by wire, or cable, collect; and ship the properly identified pins, via air shipment collect to Avco Lycoming and mark the package for the attention of the Service Department.

Piston pins removed from applicable engines where magnetic inspection facilities are not available may be exchanged for re-inspected or new piston pins through your nearest Avco Lycoming distributor; include the engine model and serial number with the piston pins being returned.

Avco Lycoming will furnish or replace all necessary material required for disassembly and reassembly of the cylinders and pistons to accomplish piston pin inspection, in addition to a labor allowance of $40.00 for each cylinder.

Wherever possible claims for labor allowance should be submitted to your nearest Avco Lycoming distributor; in locations where this is not practicable the claim may be submitted directly to Avco Lycoming. In either case, the claim must be accompanied by the model designation and serial number of the engine, the date of compliance with this bulletin, and results of the inspection.

After the inspection requirements have been completed a note indicating compliance with this bulletin should be entered in the aircraft records.

**PARTS DATA**

<table>
<thead>
<tr>
<th>Qty. Req'd.</th>
<th>Part No.</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LW-13617</td>
<td>Top overhaul gasket set, 4-cylinder angle valve head engines (for IO and TIO-360-A, -C engines) NOTE: 74712 or 77569 intake pipe seals must be reused; they are not included with this kit.</td>
</tr>
<tr>
<td>1</td>
<td>LW-12032</td>
<td>Top overhaul gasket set, 6-cylinder parallel valve head engines (for O-540-B, -E, -G; IO-540-C; TIO-540-C1A)</td>
</tr>
<tr>
<td>1</td>
<td>LW-12033</td>
<td>Top overhaul gasket set, 6-cylinder angle valve head up-exhaust engines (for IO-540-E, -M; TIO-540-A, -J; LTIO-540-J2BD; IGSO-540-B)</td>
</tr>
<tr>
<td>1</td>
<td>LW-12034</td>
<td>Top overhaul gasket set, 6-cylinder angle valve head down-exhaust engines (for IGSO-480-A; IO-540-A, -G, -K, -L, -P; IGSO-540-A)</td>
</tr>
<tr>
<td>1</td>
<td>LW-12035</td>
<td>Top overhaul gasket set, 6-cylinder angle head top-exhaust engines (for TIO and TIGO-541-E series engines)</td>
</tr>
<tr>
<td>1</td>
<td>LW-12037</td>
<td>Top overhaul gasket set, 8-cylinder angle valve head down-exhaust engines (for IO-720-A, -B)</td>
</tr>
<tr>
<td>1</td>
<td>LW-12038</td>
<td>Top overhaul gasket set, 4-cylinder parallel valve head engines (for O-320-B, -D; O-360-A)</td>
</tr>
<tr>
<td>AR</td>
<td>69650 or LW-13444</td>
<td>Piston pin (69650 piston pins are interchangeable with LW-13444 piston pins for all applicable engines)</td>
</tr>
</tbody>
</table>
As of August 15, 1973 the engines identified by the following list of serial numbers are subject to the inspection requirements of this bulletin.

**IO & HIO-360 SERIES**

**(200 HP)**

**New Engines:**

**Remanufactured Engines:**

**LIO-360 SERIES**

**(200 HP)**

**New Engines:**

**O-540-E4A5, -E4B5, -E4C5, -G1A5**

**(260 HP)**

**New Engines:**

**Remanufactured Engines:**

**IO-540-A1A5, -B1A5, -E1A5, -K1A5, -K1B5, -K1C5, -K1E5, -K1E5D**

**(290 and 300 HP)**

**New Engines:**

**Remanufactured Engines:**

**TIO-540-A2B, -A2C, -C1A; TIO-540-J2BD**

**(259, 310, 350 HP)**

**New Engines:**

**Remanufactured Engines:**

**IGSO-540 SERIES**

**(380 HP)**

**New Engines:**

**Remanufactured Engines:**

**IO-720 SERIES**

**(400 HP)**

**New Engines:**

SEE PAGES 4, 5, AND 6 FOR ADDITIONAL ENGINES
Engines with the following serial numbers have been published in error and should be deleted from the list shown on page 3 and previous editions of this bulletin:

10-360 Series (200 HP) - L-9769-51A
10-540 Series (290 HP) - L-10547-48
T10-540 Series (250 HP) - L-2500-61
IGSO-540 Series (380 HP) - RL-2464-50
10-720 Series (400 HP) - L-597-54, L-550-54

As of December 1, 1973 the engines identified by the following list of serial numbers (in addition to lists in previous editions of this bulletin) are subject to the inspection requirements of this bulletin.

O-320-B2B, -D1F
(160 HP)

O-360-A SERIES
(180 HP)

10-360-B1B
(180 HP)
L-10142-51A thru L-10149-51A.

O-540-B2B5, -B4B5
(235 HP)

IO-540-C4B5

IGSO-480-A1E6
(340 HP)
Remanufactured engine RL-1258-44, RL-1508-44.

LTIO-540-J2BD
(360 HP)

IGSO-540 SERIES
(380 HP)

TIO-541-E1C4
L-887-59 thru L-870-59.

TIGO-541-E1A
As of March 1, 1974 the engines identified by the following list of serial numbers (in addition to lists in previous editions of this bulletin) are subject to the inspection requirements of this bulletin. 

**O-320 SERIES**
(160 HP)


L-4952-55.

**O-360 SERIES**
(180 HP)

New Engines:

**10-320 SERIES**
(160 HP)

**0-360 SERIES**
(180 HP)

New Engines:

Remanufactured Engines:


Remanufactured Engines:


New Engines:

Remanufactured Engines:


Remanufactured Engines:


Remanufactured Engines:


**LIO-360 SERIES**
(200 HP)


**O-540-A1C5, -A1D5, -B1A5, -B2B5, -B4B5, -B2C5, -E4A5, -E4B5, -E4C5, -G1A5**
(235, 250, 260 HP)

New Engines:

Remanufactured Engines:


IO-540-C1A5, -C4B5, -D4A5, -E1A5, -E1B5, -G1D5, -J4A5, -K1A5, -K1B5
(250, 260, 290, 300 HP)

New Engines:

Remanufactured Engines:


**TIO-540 SERIES**
(250, 310, 350 HP)

New Engines:

Remanufactured Engines:


**LTIO-540 SERIES**
(390 HP)

L-147-68, L-149-68 thru L-152-68, L-154-68, L-155-68.
Service Bulletin No. 367D

March 8, 1974

NOTE: Revision "D" adds serial numbers for the following engine models to the list of engines subject to the inspection requirements of this bulletin: 0-320-D2A, 10-320, 0-540-A, 10-540-D, J; GO-480; IGO-540, VO-540.

IGO-540 SERIES
(350 HP)

L-320-49.

IGSO-540 SERIES
(380 HP)

New Engines:
L-3093-50, L-3094-50.

Remanufactured Engines:


VO-540 SERIES
(305 HP)

New Engines:
L-2281-43.

Remanufactured Engines:
RL-2269-43.

Remanufactured Engines:
RL-2281-43.

GO-480-G1D6
(295 HP)

Remanufactured Engines:

IGSO-480-A
(340 HP)

Remanufactured Engines:

TIO-541 SERIES
(380 HP)


TIGO-541 SERIES
(425 HP)

New Engines:

Remanufactured Engines:
RL-161-62.