

Airworthiness Directive Schedule

Lycoming TIO-360 Series Engines

28 February 2019

- Notes:**
1. This AD schedule is applicable to Lycoming **TIO-360** series engines manufactured under FAA Type Certificate Number **E16EA**.
 2. The Federal Aviation Administration (FAA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for Lycoming reciprocating engines. State of Design ADs applicable to these engines can be obtained directly from the FAA website at http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAD.nsf/MainFrame?OpenFrameSet
 3. Where a NZ AD is based on a foreign AD, compliance may be shown with either the NZ AD or the equivalent State of Design AD, because they will have essentially the same requirements i.e. the logbook will need to list all the NZ ADs, but the CAA will accept compliance with the equivalent State of Design AD as a means of compliance with the NZ AD. (The same as happens now for an imported aircraft.)
 4. Manufacturer service information referenced in Airworthiness Directives listed in this schedule may be at a later approved revision. Service information at later approved revisions can be used to accomplish the requirements of these Airworthiness Directives.
 5. The date above indicates the amendment date of this schedule.
 6. New or amended ADs are shown with an asterisk *
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From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the FAA web site is available on the CAA website at <http://www.caa.govt.nz/airworthiness-directives/states-of-design/> If additional NZ ADs

need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below. 14

2015-19-07 Fuel Injector Lines – Inspections 14

* DCA/LYC/224A Lycoming Parallel Valve Cylinder and Head Assemblies – Inspection 14

DCA/LYC/128 Centre Main Bearing Retention - Inspection

- Applicability:** As detailed except those engines affected by DCA/LYC/141
- Requirement:** Accomplish Lycoming SB 327C
- Compliance:**
1. Within the next 10 hours TIS on engines that have accumulated more than 600 hours.
 2. Within the next 50 hours TIS on engines that have accumulated more than 500 hours.
 3. At any time metal contamination is evident in the lubrication suction screens.
 4. The inspections may be discontinued upon compliance with DCA/LYC/131.
- (FAA ADs 71-05-02 and 72-21-06 refer)
- Effective Date:** 31 August 1970

DCA/LYC/131A FAA AD 71-05-02 Crankcase Bearing Dowel Replacement – Modification

- Applicability:** Model IO-360-A, IO-360-C, IO-360-D, AIO-360, HIO-360-C, TIO-360, IGO-540 and IGSO-540 engines listed in Lycoming SB 326A.
- Note 1:** No action required if already in compliance with DCA/LYC/131. This AD revised to include note 2 with no change to the AD requirement or compliance.
- Requirement:** To prevent main bearing failure due to possible bearing movement, modify the crankcase per Lycoming SI No. 1123D or repair the crankcase as described in Lycoming SI No. 1112E whichever is applicable, and install straight crankcase bearing dowels per Lycoming SB No. 326A or accomplish an equivalent approved repair.
- Note 2:** Compliance with earlier or later FAA approved SI and SB revisions is acceptable to meet the requirements of this AD.
(FAA AD 71-05-02 and 72-21-06 refer)
- Compliance:** At next overhaul or at any time the engine is completely disassembled prior to overhaul, unless previously accomplished.
- Effective Date:** DCA/LYC/131 - 30 April 1971
DCA/LYC/131A - 27 November 2008

DCA/LYC/136 Crankcase Bearing Dowel Replacement - Modification

- Applicability:** As detailed
- Requirement:** Accomplish Lycoming SI 1225D
- Compliance:** At next overhaul
- Effective Date:** 30 June 1972

DCA/LYC/137 Turbine Housing - Inspection and Replacement

- Applicability:** TIO-360 and TIO-540 as listed in Garrett SB 571-1
- Requirement:** Accomplish Lycoming SB 347 and Garrett SB 571-1
- Compliance:** As detailed
- Effective Date:** 30 September 1972

DCA/LYC/150 FAA AD 73-23-01 Piston Pins - Inspection

Applicability: As detailed

Requirement: Accomplish Lycoming SB 367F.
(FAA AD 73-23-01)

Compliance: Within the next 50 hours TIS

Effective Date: 30 September 1973

DCA/LYC/154 FAA AD 75-09-15 Bendix Fuel Injector Flow Divider Cover Gasket - Modification

Applicability: All Lycoming model IO-320, AIO-320, IO-360, LIO-360, HIO-360-C, IVO-360, TIO-360, AIO-360, IGO-380, IO-540, TIO-540, IVO-540, IGO-540, and IO-720 series engines equipped with Bendix fuel injector flow divider part numbers listed in Lycoming SB 382.

Requirement: Accomplish Lycoming SB 382.
(FAA AD 75-09-15 and Bendix Bulletin RS43 also refer)

Compliance: Within the next 50 hours TIS or by 4 August 1975 whichever occurs the sooner

Effective Date: 6 May 1975

DCA/LYC/156 Rotator Type Inlet Valves - Replacement

Applicability: HIO-360-O1A and any other engines not specifically listed in Lycoming SI 1280C which have been fitted with rotator type inlet valves

Requirement: Some engines have been incorrectly fitted with rotator type inlet valves during overhaul or cylinder replacement. Remove rotator type inlet valves and replace with conventional intake valves P/N 73117.

Compliance: Within the next 25 hours TIS

Effective Date: 15 May 1975

DCA/LYC/166 FAA AD 79-21-08 & 79-26-03 Bendix Fuel Injection Regulator - Inspection

Applicability: Bendix fuel injection systems models RSA-5AB1, RSA-5AD1, RSA-7AA1, RSA-7DA1, RSA-1OAD1, RSA-1ODB1, RSA-1ODB2, RSA-1OED1, and RSA-1OED2 with parts list numbers detailed in Bendix SB's RS-68, RS-69 and RS-70 installed on, but not limited to, IO-320, AIO-320, AEIO-320, IO-360, HIO-360, AIO-360, AEIO-360, TIO-360, IGO-480, IO-540, HIO-540, AEIO-540, IGO-540, IVO-540, TIO-540, TIO-541, TIGO-541 and IO-720 series engines

Requirement: Inspect and modify affected regulators per Bendix fuel systems SB's RS-68, RS-69 or RS-70 as applicable.
(FAA ADs 79-21-08 and 79-26-03 refer)

Compliance: Within next 25 hours TIS or by 18 October 1979 whichever is the sooner

Effective Date: 18 September 1979

DCA/LYC/174F FAA AD 96-09-10 Oil Pump Impellers – Replacement

- Applicability** Engines fitted with sintered iron or aluminium oil pump impellers.
- Textron Lycoming SB 524 lists specific models and S/N that may be affected. All new, overhauled and remanufactured engines shipped from Textron Lycoming after 31 March 1985 are in compliance with this AD.
- Any engines that have complied with DCA/LYC/174B, C, D or E will have the latest (steel) oil pump impellers fitted and are in compliance with this airworthiness directive. Any engines that have complied with Textron Lycoming SB No. 456B, C, D, E or SB 524 will have the latest (steel) oil pump impellers fitted, and are in compliance with this AD.
- For engines overhauled by other facilities, the type of oil pump impeller fitted must be determined. Examination of overhaul records or physical inspection to determine type of oil pump impeller fitted is required.
- Note 1:** No action required if already in compliance with DCA/LYC/174E. This AD revised with Lycoming SI No. 1009AJ now at revision AT and to include note 2 with no change to the AD requirement.
- Requirement:** To prevent failure of engine oil pumps, replace sintered iron or aluminium oil pump impellers per Textron Lycoming SB 524.
- Note 2:** Lycoming SI No. 1009AT and SB No. 524 or later FAA approved revisions pertains to the subject of this AD.
- (FAA AD 96-09-10 refers)
- Compliance:** Sintered iron oil pump impellers:
Within the next 25 hours TIS unless previously accomplished.
- Aluminium oil pump impellers (whichever occurs sooner):
- a) At the next oil pump removal, or
 - b) Next engine overhaul (Not to exceed the hours specified for the particular engine model in SI 1009AS). Except for engines that have already exceeded the hours specified, or are within 200 hours TIS of reaching it, within the next 200 hours TIS, or
 - c) By 18 January 2010.
- Effective Date:** DCA/LYC/174D - 2 August 1996
DCA/LYC/174E - 30 August 1996
DCA/LYC/174F - 18 December 2008

DCA/LYC/182 Propeller Governor Line Support - Inspection

- Applicability:** All four cylinder engines with rear mounted propeller governor and external oil line
- Requirement:** To prevent oil line fracture and loss of engine oil, inspect and modify oil line installation per Textron Lycoming SB 488A. If any leaks, damage or interference condition found, or if support clamps are not properly installed, before further flight, replace oil line and attachment end fittings with new parts even though installed parts may show no signs of visible damage.
- (FAA AD 90-04-06 refers)
- Compliance:** Inspection - within next 50 hours TIS or when oil line is removed for any reason, whichever is the sooner
- Modification - at next engine overhaul
- Effective Date:** 30 March 1990

DCA/LYC/183A Restricted Fuel Pump Vent Fitting - Installation

Applicability: TIO-360 series engines with S/N's up to L-215-64A inclusive; TIO-540 series engines with S/N's up to L-9245-61/61A inclusive, except TIO-540-AE2A engines; LTIO-540 series engines with S/N's up to L-2911-68A inclusive; TIGO-541 series engines with S/N's up to L-780-62 inclusive; all TIO-541 series engines; and all TIVO-540 series engines. Also overhauled and remanufactured engines of these models shipped from Textron Lycoming prior to 15 November 1990, and to any Textron Lycoming engine that has been modified to use a turbocharger and that has the fuel pump vented to the induction system.

Requirement: To prevent engine power loss and possible loss of the aircraft, accomplish the following:

1. Check engine fuel pump for leaking diaphragm per Part A of Textron Lycoming SB 494 or 497 as applicable.

Replace any fuel pump found leaking before further flight. Repeat the check following pump replacement.

2. Inspect and replace if necessary, the fuel pump vent restrictor per Part B of SB 494 or 497 as applicable. The orifice diameter must be within 0.014 to 0.020 inch and the fitting must have the code letter "R" impression stamped on a flat surface.

(FAA AD 91-08-07 refers)

Compliance: 1. Within next 15 hours TIS and thereafter at intervals not to exceed 50 hours TIS, until Part 2 is accomplished.

2. By 31 July 1991

Effective Date: DCA/LYC/183 - 3 May 1991
DCA/LYC/183A - 1 July 1991

DCA/LYC/187 FAA AD 92-12-05 Piston Pin - Removal

Applicability: Models listed in Textron Lycoming SB 501B

Requirement: To prevent piston pin failure, accomplish the following:

1. For engines with S/N's listed in Textron Lycoming SB 501B, remove all piston pins P/N LW-14077 and replace with serviceable parts.

2. For engines not listed by S/N in SB 501B, determine if piston pin P/N LW-14077 purchased from Textron Lycoming or a Textron Lycoming distributor from 18 June 1991 through 5 August 1991 has been fitted. Remove these pins from service and replace with serviceable parts.

3. Piston pins P/N LW-14077 purchased from Textron Lycoming or a Textron Lycoming distributor from 18 June 1991 through 5 August 1991 that are not installed in engines are considered unairworthy and shall not be placed in service.

(FAA AD 92-12-05 refers)

Compliance: 1. At 100 hours TTIS or within next 50 hours TIS, whichever is the later.

2. At 100 hours TTIS or within next 50 hours TIS whichever is the later.

3. Before installation.

Effective Date: 2 October 1992

DCA/LYC/189 FAA AD 95-07-01 Connecting Rod Bolts - Removal

Applicability: All O-360, LO-360, HO-360, HIO-360, TIO-360, LIO-360, AEIO-360, O-540, IO-540, TIO-540, LTIO-540, IVO-540 AEIO-540, TIO-541 and IO-720 series engines that had connecting rod bolts replaced on or after 15 February 1994. This AD is not applicable to engines that contain replacement connecting rod bolts that were purchased directly from Textron Lycoming or Aircraft Technologies Inc. This AD does not apply to engines that were manufactured or remanufactured at Textron Lycoming.

Requirement: To prevent engine failure due to connecting rod bolt failure, which could result in damage to or loss of the aircraft accomplish the following:-

1. For engines that contain replacement connecting rod bolts installed on or after 15 February 1994 that were not purchased directly from Textron Lycoming or Aircraft Technologies Inc., visually inspect to determine if the connecting rod bolts are clearly identified by;
 - (a) raised letters; SPS, S, C, or FC, identifying them as Textron Lycoming parts, or
 - (b) SL75060 etched on the head, identifying them as PMA parts manufactured by Superior Air Parts Inc., or
 - (c) AL75060 forged into the bolt head, identifying them as PMA parts manufactured by Aircraft Technologies Inc.
 If the connecting rod bolts can be positively identified, as described in this paragraph, then no further action is required.
2. If the connecting rod bolts cannot be positively identified per paragraph 1 of this AD, prior to further flight remove unapproved connecting rod bolts and replace with serviceable parts.

(FAA AD 95-07-01 refers)

Compliance: Before further flight

Effective Date: 24 March 1995

DCA/LYC/190A FAA AD 97-01-03 Piston Pin - Removal

Applicability: Piston Pins P/N LW-14077 that were originally shipped from Textron Lycoming during the time period 15 December 1995 through 17 September 1996.

These piston pins may have been obtained individually, or be installed in:-
Models and S/Ns of engines listed in Textron Lycoming Service Bulletin 527C.
Overhauled engines and cylinder kits (including Superior Air Parts supplied kits that use P/N LW-14077 piston pins).

Note 1: Piston pins P/N LW-14077, are not fitted to O-235 series engines.

Requirement: To prevent piston pin failure and engine stoppage, accomplish SB 527C. Piston Pins marked with code 17328 (per SB527B Figure 1) must be removed before further flight.

(FAA AD 97-01-03 refers)

Compliance: Before 50 hours TTIS (piston pins). For piston pins that have already exceeded 50 hours TTIS, before further flight.

Note 2: The aircraft may be operated to a location where the requirements of this AD can be accomplished.

Effective Date: DCA/LYC/190 16 October 1996
DCA/LYC/190A 6 June 1997

DCA/LYC/193A FAA AD 98-02-08 Crankshaft – Inspection

Applicability: Model 320 series engines limited to 160 horsepower, and Model 360 series engines fitted with fixed pitch propellers, Except the following engines fitted to helicopters or with solid crankshafts: model HO-360 series, model HIO-360 series, model LHIO-360 series, model VO-360 series and model IVO-360 series, and model O-320-B2C, O-360-J2A, AEIO-360-B4A, O-360-A4A, -A4G, -A4J, -A4K, -A4M and -C4F engines.

This AD is not applicable to engines with crankshafts with “PID” stamped on the outside diameter of the propeller flange.

Note 1: No action required if already in compliance with DCA/LYC/193. This AD revised with Lycoming SB No. 530 now at revision B and to include note 4 with no change to the AD requirement.

Requirement: To prevent crankshaft failure, which can result in engine failure, propeller separation, and forced landing, accomplish the following:

Visually inspect the inside diameter (ID) of the crankshaft for corrosion pits, per Textron Lycoming MSB 505B.

If corrosion pits are found during this inspection, accomplish the following before further flight:

(i) If the crankshaft is installed in the engine such as during an on-wing inspection, perform a fluorescent penetrant inspection (FPI) per MSB 505B.

(ii) If the crankshaft is removed from the engine at overhaul, perform a magnetic particle inspection (MPI) per MSB 505B.

If any crankshaft is found cracked during FPI or MPI, replace the crankshaft with a serviceable part before further flight.

If corrosion pits but no cracks are found on the ID of the crankshaft during the initial visual inspection and the ID does not exceed the maximum ID specified in MSB 505B, repeat the FPI at intervals not to exceed 100 hours TIS since last FPI or until a serviceable crankshaft is installed in the engine.

If no corrosion pits or cracks are found on the ID of the crankshaft during the initial visual inspection, perform a visual inspection at intervals not to exceed 5 years since last inspection, or at the next engine overhaul or disassembly, whichever occurs sooner.

Note 2: After accomplishing the initial inspection (visual and, if necessary, the FPI or MPI), report findings of any pits or cracks to the CAA. Please ensure that the report references this AD.

Note 3: The application of Urethabond 104 to the inner bore of the crankshaft and confirmed by stamping of the letters “PID” on the outside diameter of the propeller flange per Textron Lycoming MSB 530B, constitutes terminating action to this AD.

Note 4: Lycoming SB No. 530B and MSB No. 505B or later FAA approved revisions pertains to the subject of this AD.

(FAA AD 98-02-08 refers)

Compliance: Initial Inspection:

For engines shipped new from Textron Lycoming prior to and including December 31, 1984, and that have never been overhauled, or any engine remanufactured or overhauled and that has accumulated 1,000 hours or more TIS since manufacture or overhaul, inspect within the next 100 hours TIS, or 6 months, whichever occurs sooner, unless previously accomplished.

For engines shipped new from Textron Lycoming after 31 December 1984, and that have never been overhauled, or any engine remanufactured or overhauled and that has accumulated less than 1,000 hours TIS since remanufacture or overhaul, inspect at the earliest occurrence of the following:

- (i) The next engine overhaul or disassembly.
- (ii) Within 10 years of the original shipping date or within the next 6 months, whichever occurs later.
- (iii) Within 1,000 hours TIS since remanufacture or overhaul, or within the next 6 months, whichever occurs later.

Repetitive inspections:

Repetitive inspection intervals are dependent on the findings of the initial inspection and are required as specified within the requirements of this AD.

Effective Date: DCA/LYC/193 - 13 March 1998
DCA/LYC/193A - 18 December 2008

DCA/ LYC/195B FAA AD 2003-14-03 Rotary Fuel Pump Relief Valve – Inspection

Applicability: Model IO-320, LIO-320, IO-360, HIO-360, TIO-360, LTIO-360, GO-435, GO-480, IGO-480-A1B6, IO-540, IGO-540, AEIO-540, HIO-540, TIO-540, LTIO-540, TIGO-541, IO-720 and TIO-720 fuel injected reciprocating engines fitted with Crane/Lear Romec "AN" rotary fuel pump model series RG9080, RG9570 or RG17980.

These engines are installed on but not limited to fuel injected, reciprocating engine powered aircraft manufactured by Cessna, Piper, Mooney, Beech, Bellanca, Champion, Partenavia, Rockwell, Schweizer, Enstrom, Aerospatiale (SOCATA), Maule, Aero Commander, Hiller, and Pacific Aerospace.

Note 1: No action required if already in compliance with DCA/LYC/195A. This AD revised with Lycoming SB No. 529 now at revision B and to include note 2 with no change to the AD requirement.

Requirement: To prevent rotary fuel pump leaks, which could result in an engine failure, engine fire and damage to or loss of the aircraft, accomplish the following:

Perform initial and repetitive torque check inspections of pump relief valve attaching screws per the instructions in Textron Lycoming SB 529B as follows:

1. Perform the initial torque check inspection. If the torque does not meet the specifications in SB 529B, tighten screws to the required torque per SB 529B.
2. Perform a follow-up torque check inspection. If the torque does not meet the specification in SB 529B, during follow-up inspections, tighten screws to the required torque in accordance with SB 529B.
3. Replacement of a rotary fuel pump series RG9080, RG9570, or RG17980, with a modified pump (with the "/M" after the part number) is a terminating action for the inspection requirements of parts 1 and 2 of this AD.

Note 2: Lycoming SB No. 529B or later FAA approved revisions pertains to the subject of this AD.

(FAA AD 2003-14-03 refers)

Compliance:

1. Within the next 10 hours TIS or 30 days, whichever occurs sooner unless previously accomplished.
2. Repetitive Torque Check Inspections after accumulating 50 hours TIS, or 6 months since the initial torque check inspection, whichever occurs first. Continue the repetitive torque check inspections per requirement 2 of this AD until:
 - (i) The accumulation of 100 hours TIS since the initial inspection with the torque remaining within the SB specification for 50 hours TIS, or

(ii) The torque meets the SB specification during the initial inspection and a subsequent inspection taking place at least 50 hours TIS later.

Effective Date: DCA/LYC/195 - 25 September 1998
 DCA/LYC/195A - 28 August 2003
 DCA/LYC/195B - 18 December 2008

DCA/LYC/196A Piston Pin Plug Wear – Inspection

Applicability: All Lycoming engines fitted with piston pin end plugs P/N 60828 or LW-11775.

Note 1: This AD revised to clarify the applicability and the compliance.

Note 2: This AD is not applicable to engines fitted with piston pin end plugs P/N 72198. Engines manufactured, overhauled or rebuilt by Lycoming after February 1999 are fitted with piston pin end plugs P/N 72198.

Requirement: To prevent abnormal wear of piston pin plugs which could result in engine failure, inspect the oil screen, the oil filter element, the oil suction screen and the oil from the filters as applicable per Lycoming SI 1492C of later FAA approved revisions.

If abnormal aluminium or iron content is found accomplish corrective actions per manufacturer instructions before further flight.

(Lycoming Service Instructions 1267C and 1492C refer)

Compliance: For all remanufactured and overhauled engines fitted with affected piston pin end plugs:

Within the first 10 hours TIS and the next 25 hours TIS, and thereafter at intervals not to exceed 50 hours TIS.

For all other engines in service fitted with affected piston pin end plugs:

At the next oil/oil filter change or before 50 hours TIS whichever is the sooner, and thereafter at intervals not to exceed 50 hours TIS.

Effective Date: DCA/LYC/196 - 28 January 1999
 DCA/LYC/196A - 25 June 2009

DCA/LYC/204B Propeller Strike – Crankshaft Gear Inspection

Applicability: All direct drive piston engines except O-145, O-320-H, O-360-E, LO-360-E, TO-360-E, LTO-360-E, and TIO-541 series.

Note 1: DCA/LYC/204B revised to include note 3 and clarify note 2 with regard to requirements for certifying release-to-service after maintenance.

Requirement: To prevent loosening or failure of the crankshaft gear retaining bolt as result of a propeller strike, which may cause sudden engine failure, accomplish the following:

Inspect the crankshaft counter-bored recess, the alignment dowel, the bolt hole threads and the crankshaft gear for wear galling corrosion and fretting per steps 1 through 5 of Lycoming MSB No.475C. Repair if Necessary per MSB 475C.

Remove the existing gear retaining bolt and lockplate from service and install a new bolt and lockplate per steps 6 and 7 of MSB No.475C.

Do not reinstall any gear retaining bolt and lockplate that were removed in accordance with this AD.

Note 2: This AD mandates a particular inspection of one of the components of Lycoming engines that was found to be necessary by the United States FAA. Inspection by AD was required because the component was not adequately covered by the existing inspection requirements. As such this AD is additional to and not in lieu of the inspections required in the event of a prop strike.

The manufacturer's instructions for continued airworthiness include SB 533A which relates to maintenance which may be required in the event of a prop strike. The CAA strongly recommends compliance with Lycoming Mandatory SB 533A.

(FAA AD 2004-10-14 refers)

Compliance: Compliance with this AD is required before further flight if the engine has experienced a propeller strike.

Note 3: Compliance with this AD may be accomplished by adding the AD requirement to the aircraft AD logbook as a repetitive inspection, interval "as required".

Note 4: For the purposes of this AD a propeller strike is defined as follows:

1. Any incident, whether or not the engine is operating, that requires repair to the propeller other than minor dressing of the blades.
2. Any incident during engine operation in which the propeller impacts a solid object that causes a drop in RPM and also requires structural repair of the propeller (incidents requiring only paint touch-up are not included). This is not restricted to propeller strikes against the ground.
3. A sudden RPM drop while impacting water, tall grass, or similar yielding medium, where propeller damage is not normally incurred.
4. The preceding definitions include situations where an aircraft is stationary and the landing gear collapses causing one or more blades to be substantially bent, or where a hanger door (or other object) strikes the propeller blade. These cases should be handled as sudden stoppages because of potentially severe side loading on the crankshaft flange, front bearing, and seal in the absence of oil pressure.

Effective Date: DCA/LYC/204 - 24 June 2004
DCA/LYC/204A - 25 September 2008
DCA/LYC/204B - 30 October 2008

DCA/LYC/217 AD 2002-12-07 Oil Filter Converter Plate Gasket – Inspection

Applicability: This AD is applicable to the following reciprocating engines models that were manufactured new, rebuilt or overhauled, or had the oil filter converter plate kit P/N LW-13904 or gasket P/N LW13388 replaced after 1 April 1999.

Model O-320-H1AD, -H1BD, -H2AD, -H2BD, -H3AD and -H3BD engines

Model (L)O-360-A1AD, -A1F6D, -A1G6D, -A1LD, -A3AD, -A4AD, -A5AD and -E1A6D engines

Model IO-360-A1B6D, -A1D6D, -A3B6D, -A3D6D, -C1E6D, -J1AD and -J1A6D engines

Model (L)TO-360-A1A6D, -C1A6D, -E1A6D and -F1A6D engines

Model TIO-360-C1A6D engines

Model (L)HIO-360 -E1AD, -E1BD and -F1AD engines

Model O-540-H1A5D, -H1B5D, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5D, -J3C5D and -L3C5D engines

Model IO-540-C4D5D, -K1A5D, -K1B5D, -K1E5D, -K1F5D, -K1G5D, -K1J5D, -L1A5D, -L1B5D, -M1A5D, -M1B5D, -M2A5D, -T4A5D, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D and -W3A5D engines

Model (L)TIO-540-K1AD, -S1AD, -AA1AD, -AB1AD, -AB1BD, -F2BD, -J2BD, -N2BD, -R2AD, -T2AD and -V2AD engines

Model AEIO-540-L1B5D engines

Model TIO-541-E series engines

Model TIGO-541-D1A, -D1B and -E1A engines

Model IO-720-A1BD, -B1BD, -C1BD, -D1BD and -D1CD engines

Note 1: This AD supersedes DCA/LYC/199A and introduces requirement 3 as a terminating action to the repetitive replacement requirements of the converter plate gasket P/N LW-13388 and the oil converter plate kit P/N LW-13904.

Requirement: To prevent complete loss of engine oil and possible seizure of the engine and fire due to oil leaks between the converter plate and accessory housing, accomplish the following:

1. For engines with more than 50 hours TSN, TSO or time since the last replacement of the oil filter converter plate gasket P/N LW-13388 or the oil filter converter plate P/N LW-13904:

Replace the converter plate gasket or converter plate kit per paragraphs 1 and 2 of Lycoming MSB 543A dated 30 August 2000 before further flight.

2. For engines with less than 50 hours TSN, TSO or time since the last replacement of the oil filter converter plate gasket P/N LW-13388 or the oil filter converter plate P/N LW-13904:

Inspect the oil filter base for signs of oil leaks between the oil filter base and the accessory housing and also inspect for any evidence of the gasket extruding beyond the perimeter of the base. If any oil leaks are found, or if the seal is damaged, extruded, displaced or deteriorated, replace the converter plate gasket or converter plate kit per paragraphs 1 and 2 of MSB 543A before further flight.

3. Replace the oil filter converter plate gasket or oil filter converter plate kit per part II or part III of Lycoming Supplement No. 1 of MSB 543A dated 4 October 2000, or Lycoming MSB 543B dated 1 July 2003.

Note 2: Replacement of oil filter converter plate gasket P/N LW-13388 with a new gasket P/N 06B23072 per part II or part III of Supplement No. 1 of MSB 543A, or MSB 543B is a terminating action to requirements 1 and 2 of this AD.

Note 3: Lycoming SB No. 543A and Supplement No. 1 of MSB 543A pertains to the subject of this AD. SB No. 543B has superseded SB No. 543A and Supplement No. 1 of MSB 543A.

(AD 2002-12-07 refers)

Compliance:

1. Before further flight unless previously accomplished, and thereafter replace the converter plate gasket P/N LW-13388 or the oil converter plate kit P/N LW-13904 at intervals not to exceed 50 hours TIS.
2. Within the next 10 hours TIS or the next 3 days, whichever occurs sooner unless previously accomplished, and thereafter replace the converter plate gasket P/N LW-13388 or the oil converter plate kit P/N LW-13904 at intervals not to exceed 50 hours TIS.
3. By 18 December 2009, unless previously accomplished.

Effective Date: 18 December 2008

DCA/LYC/221 Canceled – FAA AD 2015-19-07 refers

Effective Date: 3 November 2015

DCA/LYC/222 FAA AD 2012-03-06 AVStar Fuel Servos – Inspection

Applicability: All Lycoming fuel injected engines fitted with a AVStar Fuel Systems, Inc. (AFS) fuel servo diaphragm P/N AV2541801 or P/N AV2541803.

Note: This AD supersedes DCA/LYC/219 to expand the applicability to include additional affected engines. Affected fuel servos and fuel servo diaphragms are listed in AFS MSB No. AFS-SB6 revision 2, dated 6 April 2011. This SB remains unchanged since the issue of superseded DCA/LYC/219.

Requirement: To prevent fuel servo failure which could result in loss of engine power and aircraft control, accomplish the following:

1. Review the aircraft records and determine if an AFS fuel servo diaphragm P/N AV2541801 or P/N AV2541803 from an affected production lot listed in AFS MSB No. AFS-SB6 revision 2, dated 6 April 2011 was installed in the fuel servo any time after 20 May 2010.

If the fuel servo is found fitted with an affected diaphragm, replace the fuel servo before further flight

2. Fuel servos with an affected AFS fuel servo diaphragm P/N AV2541801 or P/N AV2541803 from the production lots listed in AFS MSB No. AFS-SB6 revision 2 shall not be fitted to any aircraft.

(FAA AD 2012-03-06 refers)

Compliance:

1. Within the next 5 hours TIS unless previously accomplished.
2. From 24 February 2012.

Effective Date: 24 February 2012

From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the FAA web site is available on the CAA website at <http://www.caa.govt.nz/airworthiness-directives/states-of-design/> If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ they will be added to the list below.

2015-19-07 Fuel Injector Lines – Inspections

Effective Date: 3 November 2015

* DCA/LYC/224A Lycoming Parallel Valve Cylinder and Head Assemblies – Inspection

Applicability: All Lycoming engines fitted with parallel valve cylinder and head assemblies listed in Table 1 of Lycoming Mandatory Service Bulletin (MSB) 634, dated 11 October 2018, or later FAA approved revision.

Note: DCA/LYC/224A revised to introduce a repetitive inspection requirement for affected parallel valve cylinder and head assemblies, until replacement per requirement 2 of this AD. Affected cylinder and head assemblies were supplied in cylinder kits and installed on all parallel valve engines (except O-235 model engines), that were supplied by Lycoming Engines between 1 September 2013 and 30 April 2015. To identify affected cylinder and head assemblies refer to Lycoming MSB 634.

Requirement: To prevent loss of engine power due to a cracked cylinder assembly, accomplish the following:

1. Inspection:
Inspect affected parallel valve cylinder and head assemblies for visible discolouration/residue on the cylinder fins. If residue is found on the cylinder fins, then the cylinder may be cracked and further investigation is required. Accomplish a compression test on affected cylinders (refer to Lycoming Service Instruction 1191A). If the compression value does not meet OEM requirements, then the cylinder may be cracked and further investigation is required. Any loss of compression may be due to a cracked cylinder assembly. If a whistling sound is evident while accomplishing the compression test, then the cylinder may be cracked and further investigation is required. If a cracked cylinder assembly is found, then replace all affected parallel valve cylinder and head assemblies fitted on the engine, before further flight.
2. Replacement:
Remove and replace all parallel valve cylinder and head assemblies listed in Table 1 of MSB 634, dated 11 October 2018, or later FAA approved revision. Affected parallel valve cylinder and head assembly listed in Table 1 of MSB 634 shall not be overhauled, refurbished, or repaired and returned to service. From the effective date of this AD, an affected parallel valve cylinder and head assembly listed in Table 1 of MSB 634, shall not be installed on any engine.

Compliance:

1. Inspection:
Within the next 50 hours TIS and thereafter at intervals not to exceed 50 hours TIS until requirement 2 of this AD is accomplished.
2. Replacement:
Replace all affected cylinder and head assemblies at the next engine overhaul.

Effective Date: DCA/LYC/224 - 25 October 2018
DCA/LYC/224A - 28 February 2019