Airworthiness Directive Schedule

Engines

Lycoming AEIO-320, IO-320 and LIO-320 Series

26 March 2026

Notes:

1. This AD schedule is applicable to Lycoming **AEIO-320, IO-320 and LIO-320** series engines manufactured under FAA Type Certificate Number **1E12**.
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 can be obtained directly from the FAA website at: Dynamic Regulatory System (faa.gov)
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 *

Contents

The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at Links to state of design

DCA/LYC/109A FAA AD 64-16-05 Fuel and Oil Vent Restriction – Modification

Applicability: Model O-320, O-340, O-360 and O-540 series engines fitted with AC Fuel Pumps AC 5623-467 (Lycoming P/N 74082), AC 5656880 (Lycoming P/N 74082) and AC 6440152 (Lycoming P/N 74798), and

Model IO-320-B1A, IO-360-A1A, IO-360-B1B, HIO-360-B1A, HIO-360-B1B and IO-540-C-B5 engines fitted with AC Fuel Pumps, AC 5623466 (Lycoming P/N 73973) and AC 5656696 (Lycoming P/N 73870).

Note 1: No action required if already in compliance with DCA/LYC/109. This AD revised with Lycoming SB No. 298 no longer active. There is no change to the AD requirement.

Note 2: This AD is not applicable to remanufactured engines or new engines shipped from the manufacturer after 1 April 1964, or carburettor engines fitted with adapter P/N 75250 and AC fuel pump 6440152 (Lycoming P/N 74798), or fuel injected engines fitted with AC fuel pump P/N 5656696 (Lycoming P/N 73870) and Lycoming adapter 75250 or fuel injected engines fitted with AC fuel pump P/N 6440160 (Lycoming P/N 74999).

Requirement: To prevent failure of the fuel pump oil seal which could result in engine oil draining overboard, ensure the engine is fitted with an approved fuel pump.

(FAA AD 64-16-05 refers)

Compliance: Within the next 100 hours TIS or annual inspection whichever occurs sooner, unless previously accomplished.

Effective Date: DCA/LYC/109 - 31 July 1964
DCA/LYC/109A - 27 November 2008

DCA/LYC/120A FAA AD 66-20-04 AC Oil Filter Adaptor Gasket – Replacement

Applicability: Model O-320, IO-320, O-340, O-360, IO-360, O-540, and IO-540 series engines fitted with AC oil filters,

Except model O-320-A, O-320-E series engines, S/N 16128-27 onward, model O-320-B, O-320-C and O-320-D series engines, S/N 6217-39 onward, model IO-320 series engines, S/N 2110-55A and 2113-55A onward, model O-360 series engines, S/N 9346-36A onward, model O-540 series engine, S/N 9770-40, 9800-40 and 9803-40 onward, and model IO-540 series engines, S/N 2831-48, 2835-48 and 2840-48 onwards.

Note: No action required if already in compliance with DCA/LYC/120. This AD revised with Lycoming SB No. 307 no longer active. There is no change to the AD requirement.

Requirement: To prevent failure of the oil filter adapter gasket P/N 74904 which could result in loss of engine oil, replace gasket with P/N 76691 or an alternate approved part and inspect the stud, cap screws and tapped holes in the accessory housing mounting pad for proper length or depth, as applicable.

Replace studs and cap screws of improper length and retap holes of insufficient depth as required.

(FAA AD 66-20-04 refers)

Compliance: Within the next 100 hours TIS or annual inspection whichever occurs sooner, unless previously accomplished.

Effective Date: DCA/LYC/120 - 30 September 1968
DCA/LYC/120A - 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/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/164 FAA AD 79-04-05 Bendix Fuel Injector Assembly - Inspection

Applicability: All AEIO-320, IVO-360, HIO-360, IO-540, AEIO-540, TIO-540, LTIO-540, TIGO-541 and IO-720 series engines detailed in Avco Lycoming SB 433A

Requirement: Inspect fuel diaphragm, and renew as necessary, per Bendix SB RS-57.
(FAA AD 79-04-05 refers)

Compliance: Within next 50 hours TIS

Effective Date: 9 February 1979

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/181 FAA AD 87-10-06R1 Rocker Arm Assembly - Inspection and Rework

Applicability: O-320-A, -B, -D, -E, series IO-320 series, O-360 series, IO-360-B series, AEIO-360-B series, O-540 series, IO-540-C4B5, -C4D5D, -D4A5, -V4A5D, -W1A5D, -W3A5D, AEIO-540-D series, TIO-540-AA1AD, -AB1AD.

With S/N's detailed in Avco Lycoming SB 477A including supplement 1.

Also any engines detailed in SB 477A that were remanufactured or overhauled between 1 July 1985 and 8 October 1986 inclusive and had P/N LW-18790 rocker arm assembly installed

Requirement: To preclude possible rocker arm failure and loss of engine power inspect and rework or replace rocker arm assembly P/N LW-18790 per Avco Lycoming SB 477A.
(FAA AD 87-10-06R1 refers)

Compliance: Within next 100 hours TIS for all applicable engines, unless already accomplished, and prior to installation for all P/N LW-18790 rocker arm assemblies not installed in engines

Effective Date: 30 March 1990

DCA/LYC/182 FAA AD 90-04-06 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 the next engine overhaul

Effective Date: 30 March 1990

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/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/191 FAA AD 96-23-03 High Pressure Fuel Pump - Inspection

Applicability: Model IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, O-540-L, LIO-540 and AEIO-540 series engines with high pressure fuel pumps P/N LW-15473 that have manufacturing date codes 154739506, 154739507 or 154739510.

Requirement: To prevent an in-flight engine stoppage due to fuel starvation, accomplish the following:-

Determine if the engine is fitted with a high pressure fuel pump P/N LW-15473 with manufacturing date codes 154739506, 154739507 or 154739510 per Textron Lycoming SB 525A. If any of these high pressure fuel pumps is found fitted, inspect and if necessary repair or replace with a serviceable high pressure pump per SB 525A before further flight.

(FAA AD 96-23-03 refers)

Compliance: Within next 5 hours TIS.

Effective Date: 4 November 1996

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

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 remanufacture 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/194 FAA AD 98-17-11 Repaired Crankshafts - Inspection

Applicability: Models O-235, O-235-C1, O-235-C2C, O-235-L2C, O-235-N2C, O-290, O-290-D2, O-320, O-320-A, O-320-A1A, O-320-A2B, O-320-B2B, O-320-B2C, O-320-D2J, O-320-D3G, O-320-E2A, O-320-E2D, O-320-E2G, O-320-E3D, O-320-H2AD, O-360, O-360-A1A, O-360-A1D, O-360-A3A, O-360-A4A, O-360-A4K, O-360-B1B, IO-360-F1A6, AEIO-320-E1B, HIO-360-C1A, IO-320, IO-320-B1A, IO-360, IO-360-A1A, IO-360-A1B6, IO-360-B1E, IO-360-C, IO-360-CIC, IO-360-C1C6, IO-360-C1D6, IO-360-D, O-540-A1B5, O-540-A1D5, O-540-R2AD, IO-540, IO-540-C4B5, IO-540-S1A5, TIO-540-A2, LIO-320-C1A, LIO-360-C1E6, and IO-720 reciprocating engines; engines, with installed crankshafts repaired by Nelson Balancing Service, Bedford, Massachusetts, USA, Repair Station Certificate No. NB7R820J, between February 1, 1995, and December 31, 1997, inclusive, as listed (by work order (W/O)) in Table 1 of this AD.

Table 1

MODEL	W/O	DATE	ENGINE S/N
AEIO-320-E1B	1134	2/17/96	L-5653-55A
HIO-360-C1A	1155	2/7/96	L-12126-51A
IO-320	1141	1/17/96	
IO-320-B1A	1525	11/14/97	
IO-360	1314	12/17/96	
IO-360	IN6137	8/7/97	
IO-360-A1A	1230	6/10/96	L-474-51

IO-360-A1A	1289	10/23/96	L-4085-5174
IO-360-A1A	1415b	5/23/97	RL-3920-51A
IO-360-A1B6	1463	7/31/97	
IO-360-B1E	1312	12/12/96	L-4453-51A
IO-360-C	1146	1/23/96	R-51448-9-C
IO-360-C1C	1336	2/10/97	
IO-360-C1C	1518	12/9/97	
IO-360-C1C6	1530	11/25/97	
IO-360-C1C6	1537	12/9/97	L-19294-51A
IO-360-C1D6	1286	4/28/97	
IO-360-D	1540	12/2/97	
IO-360-F1A6	1176	3/7/96	L-27423-36A
IO-540	1014	2/8/95	
IO-540	1056	6/13/95	
IO-540	1302	12/5/96	
IO-540-C4B5	1313	12/17/96	L-19547-48
IO-540-S1A5	1513	10/27/97	L-19597-48A
IVO-435-G1A	1271	10/1/96	
LIO-320-C1A	1158	2/8/96	
LIO-360-C1E6	1280	10/7/96	
LIO-360-C1E6	1281	10/9/96	
O-235	1013	2/21/95	
O-235	1051	6/2/95	
O-235	1054	6/9/95	
O-235	1057	6/14/95	L-9041-15
O-235	1058	6/29/95	
O-235	1060	6/30/95	
O-235	1069	8/10/95	
O-235	1110	2/20/96	
O-235	1145	1/23/96	
O-235	1151	1/25/96	
O-235	1160	2/9/96	RL-24636-15
O-235	1305	12/5/96	L-22542-15
O-235	1329	2/11/97	
O-235	1332	2/11/97	
O-235	1481	9/2/97	
O-235-C1	1089	10/8/95	L-6475-15
O-235-C1	1188	4/2/96	L-7143-15
O-235-C1	1335	3/12/97	L-5569-15
O-235-C1	1367	3/24/97	
O-235-C2C	1019	2/24/95	L-12284-15
O-235-C2C	1040	5/8/95	
O-235-C2C	1105	12/1/95	L-12273-15
O-235-L2C	1030	4/6/95	L-14545-15
O-235-L2C	1036	4/24/95	
O-235-L2C	1037	4/24/95	L-23012-15
O-235-L2C	1050	6/2/95	L-15542-15
O-235-L2C	1062	7/5/95	L-18306-15
O-235-L2C	1067	8/8/95	
O-235-L2C	1070	8/10/95	L-16005-15
O-235-L2C	1095	11/14/95	RL-023227-15
O-235-L2C	1101	11/4/95	L-15300-15
O-235-L2C	1102	11/15/95	L-20183-15
O-235-L2C	1162	2/14/96	L-16114-15
O-235-L2C	1251	8/22/96	
O-235-L2C	1219	5/16/96	L-21215-15
O-235-L2C	1365	3/24/97	
O-235-L2C	1285	10/19/96	
O-235-L2C	1414	8/5/97	
O-235-L2C	1400	4/28/97	
O-235-L2C	1433	6/26/97	L-17074-15
O-235-L2C	1417	12/5/97	

O-235-L2C	1504	10/31/97	
O-235-L2C	1435	6/9/97	
O-235-L2C	1524	11/12/97	
O-235-L2C	1508	11/18/97	
O-235-L2C	2010	11/19/97	
O-235-L2C	1536	11/24/97	
O-290	1257	9/4/96	
O-235-N2C	1511	10/29/97	L-23857-15
O-290-D2	1082	9/26/95	L-6019-21
O-290	1326	3/26/97	
O-320	1024	3/17/95	
O-320	1018	2/22/95	
O-320	1038	5/3/95	L-39272-27A
O-320	1045	5/24/95	
O-320	1084	9/28/95	
O-320	1116	1/8/96	
O-320	1125	1/8/96	
O-320	1169	2/28/96	
O-320	1175	3/7/96	
O-320	1184	3/28/96	
O-320	1189	8/27/96	
O-320	1202	4/30/96	
O-320	1212	5/10/96	
O-320	1283	10/17/96	
O-320	1316	12/21/96	
O-320	1340	2/25/97	L-24367
O-320	1347	2/18/97	
O-320	1360	3/10/97	
O-320	1361	3/10/97	
O-320	1436	5/29/97	
O-320	1468	8/14/97	
O-320	1474	8/22/97	L-13130-39A
O-320	1477	9/13/97	
O-320	1519	11/21/97	
O-320	1507	11/18/97	
O-320	1171	3/1/96	
O-320	1546	12/7/97	
O-320-A	1194	4/13/96	
O-320-A	1192	4/13/96	
O-320-A1A	1244	8/13/96	L-5270-27
O-320-A	1196	4/13/96	
O-320-A2B	1461	9/9/97	L-12626-27
O-320-A2B	1081	9/22/95	
O-320-B2C	1315	12/17/96	
O-320-B2B	1452	7/10/97	L-2977-39
O-320-D2J	1173	3/7/96	L-123412-39A
O-320-D2J	1172	3/4/96	L-13039-39A
O-320-D2J	1534	11/25/97	
O-320-D2J	1253	9/4/96	
O-320-D3G	1077	9/17/95	
O-320-D2J	1539	12/3/97	
O-320-D3G	1354	2/25/97	
O-320-D3G	1114	1/8/96	L-10983-39A
O-320-D3G	1544	12/3/97	
O-320-D3G	1370	3/26/97	H45247
O-320-E2A	1191	4/13/96	L-19377-27A
O-320-E2A	1103	11/10/95	L-26363-27A
O-320-E2A	1439	6/9/97	L-38003-55A
O-320-E2A	1317	12/21/96	L-15219-27A
O-320-E2D	1078	9/17/95	
O-320-E2D	1068	8/10/95	L-35528-27A
O-320-E2D	1181	3/14/96	

O-320-E2D	1177	3/9/96	L-44732-27A
O-320-E2D	1245	8/13/96	L-40483-27A
O-320-E2D	1241	8/9/96	L-42691-27A
O-320-E2D	1343	2/17/97	
O-320-E2D	1260	9/9/96	L-15300-15
O-320-E2D	1385	4/16/97	
O-320-E2D	1346	3/2/97	L-44320-27A
O-320-E2D	1533	11/25/97	
O-320-E2D	1458	7/18/97	
O-320-E2G	1338	3/10/97	L-38264-27A
O-320-E2D	1549	12/12/97	
O-320-E3D	1074	8/24/95	L-29495-27A
O-320-E3D	1034	4/18/95	L-29668-27A
O-320-E3D	1444	6/13/97	
O-320-E3D	1431	6/9/97	L-33770-27A
O-320-H2AD	1322	1/22/97	L-1530-78T
O-320-E3D	1500	10/7/97	L-33841-27A
O-360	1157	2/7/96	
O-360	1025	3/17/95	
O-360	1362	3/10/97	
O-360	1199	4/18/96	
O-360	1394	5/6/97	
O-360	1386	4/17/97	
O-360-A1A	1170	2/28/96	L-20677-36A
O-360	1528	11/19/97	
O-360-A1A	1239	8/5/96	
O-360-A1A	1214	5/14/96	L-20190-36A
O-360-A3A	1531	11/25/97	
O-360-A1D	1411	5/5/97	
O-360-A4A	1464	7/30/97	L-24796-36A
O-360-A4A	1270	9/27/96	L-14008-36A
O-360-A4A	1529	11/25/97	
O-360-A4A	1486	9/6/97	
O-360-B1B	1262	9/9/96	L-5261-51A
O-360-A4K	1166	2/22/96	L-26455-36A
O-540-A1B5	1132	1/9/96	L-1165-40
O-540-A1B5	1129	12/29/95	
IO-720	1510	10/26/97	
O-540-A1D5	1462	7/28/97	L-5661-40
TIO-540-A2	1111	1/10/96	
TIO-540-A2	1064	7/13/95	
TIO-540-R2AD	1106	11/27/95	L-5949-61A

Note: Blank spaces indicate unknown data. Where the engine S/N is blank in this table, it is either unknown or the crankshaft may not be installed in an engine.

Requirement: To prevent crankshaft failure due to cracking, which could result in an inflight engine failure and possible forced landing, accomplish the following:

a) Determine if this AD applies, as follows:

1. Determine if any repair was conducted on the engine that required crankshaft removal during the February 1, 1995, to December 31, 1997, time frame; if the engine was not disassembled for crankshaft removal and repair in this time frame, no further action is required.

2. If the engine and crankshaft was repaired during this time frame, determine from the maintenance records (engine log book), and Table 1 of this AD if the crankshaft was repaired by Nelson Balancing Service, Repair Station Certificate No. NB7R820J, Bedford, Massachusetts, USA. The maintenance records should contain the Return to Service (Yellow) tag for the crankshaft that will identify the company performing the repair. Also the work order number contained in Table 1 of this AD was etched on the crankshaft propeller flange, adjacent to the closest connecting rod journal. Because some etched numbers will be difficult to see, if necessary, use a 10X magnifying

glass with an appropriate light source to view the work order number. In addition, the propeller spinner, if installed, will have to be removed in order to see this number.

3. If it cannot be determined who repaired the crankshaft, compliance with this AD is required.

4. If the engine and crankshaft were not repaired during the time frame specified in a) 1, or if it is determined that the crankshaft was not repaired by Nelson Balancing Service, no further action is required.

b) Accomplish the following:

1. Perform a visual inspection as defined in paragraph b) 2 of this AD, magnetic particle inspection, and a dimensional check of the crankshaft journals, or remove from service affected crankshafts and replace with serviceable parts.

2. For the purpose of this AD, a visual inspection of the crankshaft is defined as the inspection of all surfaces of the crankshaft for cracks which include heat check cracking of the nitrided bearing surfaces, cracking in the main or aft fillet of the main bearing journal and crankpin journal, including checking the bearing surfaces for scoring, galling, corrosion, or pitting.

Note: Further guidance on all inspection and acceptance criteria is contained in applicable Overhaul or Maintenance Manuals.

3. Replace any crankshaft that fails the visual inspection, magnetic particle inspection, or the dimensional check with a serviceable crankshaft, unless the crankshaft can be reworked to bring it in compliance with:

i) All the overhaul requirements of the appropriate Overhaul/Maintenance Manuals; or

ii) All of the approved requirements for any repair station which currently has approval for limits other than those in the appropriate Overhaul/Maintenance Manuals.

4. For the purpose of this AD, a serviceable crankshaft is one which meets the requirements of paragraph b) 3 i) or b) 3) ii) of this AD.
(FAA AD 98-17-11 refers)

Compliance: By 31 October 1998

Effective Date: 25 September 1998

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: <u>For all remanufacturered and overhauled engines fitted with affected piston pin end plugs</u>:

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

<u>For all other engines in service fitted with affected piston pin end plugs</u>:

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/210 FAA AD 2006-12-07 ECI Classic Cast Cylinders – Inspection and Replacement

Applicability: Models 320, 360 and 540 series parallel valve engines, specified in table 1 fitted with ECi cylinder assemblies P/N AEL65102 series "Classic Cast" having casting head markings EC 65099-REV- 1 and with S/Ns 1 through to 9879.

Note 1: The set of numbers appearing on the cylinder below and to the left of the S/N in the form of "12345-67" is not used for determining applicability.

TABLE 1.

Cylinder head P/N	Installed on engine models
AEL65102–NST04	O–320–A1B, A2B, A2C, A2D, A3A, A3B, B2B, B2C, B2D, B2E, B3B, B3C, C2B, C2C, C3B, C3C, D1A, D1AD, D1B, D1C, D1D, D1F, D2A, D2B, D2C, D2F, D2G, D2H, D2J, D3G, E1A, E1B, E1C, E1F, E1J, E2A, E2B, E2C, E2D, E2E, E2F, E2G, E2H, E3D, E3H. IO–320–A1A, A2A, B1A, B1B, B1C, B1D, B1E, B2A, D1A, D1AD, D1B, D1C, E1A, E1B, E2A, E2B. AEIO–320–D1B, D2B, E1A, E1B, E2A, E2B. AIO–320–A1A, A1B, A2A, A2B, B1B, C1B. LIO–320–B1A.
AEL65102–NST05	IO–320–C1A, C1B, C1F, F1A. LIO–320–C1A.
AEL65102–NST06	O–320–A1A, A2A, A2B, A2C, A3A, A3B, A3C, E1A, E1B, E2A, E2C, (also, an O–320 model with no suffix). IO–320–A1A, A2A.
AEL65102–NST07	IO–320–B1A, B1B. LIO–320–B1A.
AEL65102–NST08	O–320–B1A, B1B, B2A, B2B, B3A, B3B, B3C, C1A, C1B, C2A, C2B, C3A, C3B, C3C, D1A, D1B, D2A, D2B, D2C.
AEL65102–NST10	O–360–A1A, A1C, A1D, A2A, A2E, A3A, A3D, A4A, B1A, B1B, B2A, B2B, C1A, C1C, C1G, C2A, C2B, C2C, C2D, D1A, D2A, D2B. IO–360–B1A, B1B, B1C. HO–360–A1A, B1A, B1B. HIO–360–B1A, B1B. AEIO–360–B1B. O–540–A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1D5, B2A5, B2B5, B2C5, B2C5D, B4A5, B4B5, B4B5D, D1A5, E1A, E4A5, E4B5, E4C5, F1A5, F1B5, G1A5, G2A5. IO–540–C1B5, C1C5, C2C, C4B5, C4B5D, C4C5, D4A5, D4B5, N1A5, N1A5D.

Cylinder head P/N	Installed on engine models
AEL65102–NST12	O–360–A1A, A1AD, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1J, A1LD, A1P, A2A, A2D, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4JD, A4K, A4M, A4N, A4P, A5AD, B1A, B2C, C1A, C1C, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, C4F, C4P, D2A, F1A6, G1A6. HO–360–C1A. LO–360–A1G6D, A1H6. HIO–360–B1A, B1B, G1A. LTO–360–A1A6D. TO–360–A1A6D. IO–360–B1B, B1BD, B1D, B1E, B1F, B1F6, B1G6, B2E, B2F, B2F6, B4A, E1A, L2A, M1A, M1B. AEIO–360–B1B, B1D, B1E, B1F, B1F6, B1G6, B1H, B2F, B2F6, B4A, H1A, H1B. O–540–A4D5, B2B5, B2C5, B2C5D, B4B5, B4B5D, E4A5, E4B5, E4B5D, E4C5, G1A5, G1A5D, G2A5, H1A5, H1A5D, H1B5, H1B5D, H2A5, H2A5D, H2B5D. IO–540–C4B5, C4B5D, C4D5, C4D5D, D4A5, D4B5, D4C5, N1A5, N1A5D, T4A5D, T4B5, T4B5D, T4C5D, V4A5, V4A5D. AEIO–540–D4A5, D4B5, D4C5, D4D5.
AEL65102–NST26	IO–540–J4A5, R1A5. TIO–540–C1A, E1A, G1A, H1A.
AEL65102–NST38	IO–360–F1A. TIO–540–AA1AD, AB1AD, AB1BD, AF1A, AG1A, AK1A, C1A, C1AD, K1AD. LTIO–540–K1AD.
AEL65102–NST43	O–360–J2A. O–540–F1B5, J1A5D, J1B5D, J1C5D, J1D5D, J2A5D, J2B5D, J2C5D, J2D5D, J3A5, J3A5D, J3C5D. IO–540–AB1A5, W1A5, W1A5D, W3A5D.
AEL65102–NST44	O–540–L3C5D.

Requirement: To prevent loss of engine power due to cracks in the cylinder assemblies and possible engine failure caused by separation of a cylinder head. If your engine was overhauled or repaired since new, do the following:

1. Determine if ECi cylinder assemblies, P/N AEL65102 series "Classic Cast", with casting P/N EC 65099-REV-1 and S/Ns 1 through 9879 are installed on your engine.

Note 2: Serial numbers may have an "L" prefix for a long reach spark plug.

If the cylinder assemblies are not ECi, P/N AEL65102 series "Classic Cast", with casting P/N EC 65099-REV-1, no further action is required.

2. If any cylinder assembly is an ECi P/N AEL65102 series "Classic Cast", with casting P/N EC 65099-REV-1 and a S/Ns 1 through 9879, replace the cylinder assembly.
(FAA AD 2006-12-07 refers)

Compliance: 1. By 29 July 2006.

2. Before the cylinder assembly exceeds 800 hours TIS or within 50 hours TIS, whichever occurs later.

Effective Date: 29 June 2006

DCA/LYC/204B FAA AD 2004-10-14 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/213A FAA AD 2007-04-19R1 Superior Air Parts Cylinders – Replacement

Applicability: Superior Air Parts (SAP) cast cylinder assemblies P/Ns SL32000W-A1, SL32000W-A20P, SL32000W-A21P, SL32000WH-A1, SL32000WH-A20P, SL32006W-A1, SL32006W-A20P, SL32006W-A21P, SL36000TW-A1, SL36000TW-A20P, SL36000TW-A21P, SL36000TW-A22P, SL36000W-A1, SL36000W-A20P, SL36000W-A21P, SL36006W-A1, SL36006W-A20P and SL36006W-A21P. These SAP cast cylinder assemblies may be fitted to the following Lycoming engines:

AEIO-320 -D, -E	IO-360 -B, -L, -M
AEIO-360 -B, -H	IO-540 -A, -C, -D, -N, -T, -V, -W
AEIO-540 –D	LIO-320 -B
AIO-320 -A, -B, -C	LO-360 -A
HIO-360 -B	O-320 -A, -B, -C, -D, -E, -H
HO-360 -C	O-360 -A, -B, -C, -D, -F, -G, -J
IO-320 -B, -D, -E	O-540 -A, -B, -E, -F, -G, -H, -J

Note 1: The affected cylinder assembly S/N range in this AD has been revised to narrow the applicability even further. Accomplishment of DCA/LYC/213 satisfies the requirements of this AD.

Requirement: To prevent cylinder head fatigue failure and separation at the head-to-barrel threaded interface that could lead to engine failure, accomplish the following:

1. Inspect the aircraft log books to determine which cast cylinder assemblies are fitted. If the aircraft log books do not list the P/Ns of the cylinders fitted to the engine, then visually inspect the engine to determine which cylinders are fitted.

Replace cylinder assemblies S/N 47LE053559 through to 47LF053643, and 47SE054212 through to 47SF054251, and 52D0531708 through to 52H0532197, and 55E05223 through to 55G05289, and 32WE059006 through to 32WF059067, and 32WHE05379 through to 32WHE05392, and 326WF055517 through to 326WF055532, and 36TWF05430 through to 36TWG05453, and 36WF058058 through to 36WG058124, and 366WE056944 through to 366WF057061, and 366WF057150 through to 366WF057232, and 366WF057259 through to 366WG057534, and 366WG057556, 366WG057569, 366WG057598, 366WG057616, 366WG057621, 366WG057624, and 366WJ057770 through to 366WJ057776, and 366WL058131, per Superior Air Parts Mandatory SB B06-01, revision E, dated 24 January 2007.

Note 2: These affected S/Ns were manufactured between April 2005 and November 2005.

Note 3: The affected SAP cylinder head flanges are marked: SA47000L-A1, SA47000L-A20P, SA47000S-A1, SA47000S-A20P, SA47000S-A21P, SA52000- A1, SA52000-A20P, SA52000-A21P, SA52000-A22P, SA52000-A23P, SA55000-A1, SA55000-A20P, SL32000W-A1, SL32000W-A20P, SL32000W-A21P, SL32000WH-A1, SL32000WHA20P, SL32006W-A1, SL32006W-A20P, SL32006W-A21P, SL36000TW-A1, SL36000TW-A20P, SL36000TW-A21P, SL36000TW-A22P, SL36000W-A1, SL36000W-A20P, SL36000W-A21P, SL36006W-A1, SL36006W-A20P or SL36006W-A21P.

2. Affected Superior Air Parts cast cylinder assemblies listed in Requirement 1 of this AD may not be installed on any engine.
(FAA AD 2007-04-19R1 refers)

Compliance: 1. At 150 hours TTIS (on affected SAP cylinders), or within the next 10 hours TIS, whichever is the later.
2. From the effective date of this AD.

Effective Date: DCA/LYC/213 - 12 March 2007
DCA/LYC/213A - 26 April 2007

DCA/LYC/218 FAA AD 2009-26-12 ECI Titan Cylinders – Inspection and Replacement

Applicability: Model 320, 360 and 540 series parallel valve engines listed in table 1 of this AD, fitted with Engine Components Incorporated (ECi) Titan cylinder assembly P/N AEL65102, S/N 1138-02 through to 35171-22 and 35239-01 through to 42179-30 and cylinder head P/N AEL85099.

Note 1: This AD supersedes DCA/LYC/216. Since the issue of that AD there have been another 10 cylinder head separations of cylinder S/N not listed in that AD. The applicability of this AD revised to expand the affected cylinder assembly S/N range through to 42179-30.

Note 2: If the engine has not been overhauled since new, or a cylinder assembly has not been replaced since new, no further action is required.

Note 3: All affected cylinder assemblies are fitted with a cylinder head P/N AEL85099. The cylinder head P/N is located near the intake and exhaust valve springs at the top of the cylinder head. The cylinder assembly P/N which is difficult to see is located at the crankcase end of the cylinder assembly.

Note 4: The set of numbers appearing on the cylinder above and to the left of the S/N in the form of "123456" is not used for determining applicability.

Table 1:

Cylinder Assembly P/N:	Installed on Engine Models:
AEL65102-NST04	**O-320**-A1B, A2B, A2C, A2D, A3A, A3B, B2B, B2C, B2D, B2E, B3B, B3C, C2B, C2C, C3B, C3C, D1A, D1AD, D1B, D1C, D1D, D1F, D2A, D2B, D2C, D2F, D2G, D2H, D2J, D3G, E1A, E1B, E1C, E1F, E1J, E2A, E2B, E2C, E2D, E2E, E2F, E2G, E2H, E3D, E3H. **IO-320**-A1A, A2A, B1A, B1B, B1C, B1D, B1E, B2A, D1A, D1AD, D1B, D1C, E1A, E1B, E2A, E2B. **AEIO-320**-D1B, D2B, E1A, E1B, E2A, E2B. **AIO-320**-A1A, A1B, A2A, A2B, B1B, C1B. **LIO-320**-B1A
AEL65102-NST05	**IO-320**-C1A, C1B, C1F, F1A. **LIO-320**-C1A
AEL65102-NST06	**O-320**-A1A, A2A, A2B, A2C, A3A, A3B, A3C, E1A, E1B, E2A, E2C, (also, an O-320 model with no suffix). **IO-320**-A1A, A2A.
AEL65102-NST07	**IO-320**- B1A, B1B. **LIO-320**- B1A.
AEL65102-NST08	**O-320**-B1A, B1B, B2A, B2B, B3A, B3B, B3C, C1A, C1B, C2A, C2B, C3A, C3B, C3C, D1A, D1B, D2A, D2B, D2C.
AEL65102-NST10	**O-360**-A1A, A1C, A1D, A2A, A2E, A3A, A3D, A4A, B1A, B1B, B2A, B2B, C1A, C1C, C1G, C2A, C2B, C2C, C2D, D1A, D2A, D2B. **IO-360**-B1A, B1B, B1C. **HO-360**-A1A, B1A, B1B. **HIO-360**-B1A, B1B. **AEIO-360**-B1B. **O-540**-A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1D5, B2A5, B2B5, B2C5, B4A5, B4B5, D1A5, E1A, E4A5, E4B5, E4C5, F1A5, F1B5, G1A5, G2A5. **IO-540**-C1B5, C1C5, C2C, C4B5, C4B5D, C4C5, D4A5, D4B5, N1A5.

Cylinder Assembly P/N:	Installed on Engine Models:
AEL65102-NST12	**O-360**- A1A, A1AD, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1J, A1LD, A1P, A2A, A2D, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4JD, A4K, A4M, A4N, A4P, A5AD, B1A, B2C, C1A, C1C, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, C4F, C4P, D2A, F1A6, G1A6. **HO-360** –C1A. **LO-360**-A1G6D, A1H6. **HIO-360**-B1A, B1B, G1A. **LTO-360**-A1A6D. **TO-360**-A1A6D. **IO-360**-B1B, B1BD, B1D, B1E, B1F, B1F6, B1G6, B2E, B2F, B2F6, B4A, E1A, L2A, M1A, M1B. **AEIO-360**-B1B, B1D, B1E, B1F, B1F6, B1G6, B1H, B2F, B2F6, B4A, H1A, H1B. **O-540**-A4D5, B2B5, B2C5, B2C5D, B4B5, B4B5D, E4A5, E4B5, E4C5, G1A5, G2A5, H1A5, H1A5D, H1B5, H1B5D, H2A5, H2A5D, H2B5D. **IO-540**-C4B5, C4B5D, C4D5, C4D5D, D4A5, D4B5, D4C5, N1A5, N1A5D, T4A5D, T4B5, T4B5D, T4C5D, V4A5, V4A5D **AEIO-540**-D4A5, D4B5, D4C5, D4D5.
AEL65102-NST26	**IO-540**-J4A5, R1A5. **TIO-540**-C1A, E1A, G1A, H1A.
AEL65102-NST38	**IO-360**-F1A. **TIO-540**-AA1AD, AB1AD, AB1BD, AF1A, AG1A, AK1A, C1A, C1AD, K1AD. **LTIO-540**-K1AD.
AEL65102-NST43	**O-360**-J2A. **O-540**-F1B5, J1A5D, J1B5D, J1C5D, J1D5D, J2A5D, J2B5D, J2C5D, J2D5D, J3A5, J3A5D, J3C5D. **IO-540**-AB1A5, W1A5, W1A5D, W3A5D.
AEL65102-NST44	**O-540**-L3C5D.

Requirement: To prevent loss of engine power due to cracks in the cylinder assembly head-to-barrel interface and possible engine failure caused by separation of a cylinder head, accomplish the following:

1. Inspect the aircraft logbooks and/or the aircraft and determine if the engine has been overhauled since new, or if a cylinder assembly has been replaced since new.

No further action is required if the engine has not been overhauled since new, or a cylinder assembly has not been replaced since new.

If the engine has been overhauled since new, or a cylinder assembly has been replaced since new, determine if any ECi Titan cylinder assemblies P/N AEL65102, S/N 1138-02 through to 35171-22 and 35239-01 through to 42179-30 and cylinder head P/N AEL85099 is fitted to the aircraft engine.

No further action is required if an ECI cylinder assembly P/N AEL65102 is not fitted to the engine.

No further action is required if an ECI cylinder assembly P/N AEL65102 is fitted to the engine, and the S/N is not an affected S/N.

If an affected S/N cylinder assembly is fitted to the engine, accomplish requirement 2 of this AD.

2. Visual Inspection:

Inspect the area around the exhaust valve side of the cylinder for cracks and any signs of black or white residue. Replace cracked cylinder assemblies before further flight. Information on cylinder assembly visual inspection can be found in ECi MSB No. 08-1.

Compression test:

Accomplish a standard cylinder differential compression test. If the cylinder pressure is below 70 lbs/square inch, apply a water and soap solution to the side of the leaking cylinder near the head-to-barrel interface.

If air leaks and bubbles are observed on the side of the cylinder assembly near the head-to-barrel interface, replace the cylinder assembly before further flight.

For cylinder assemblies P/N AEL65102, S/N 1138-02 through to 35171-22 only, if the low cylinder pressure reading is as a result of leaking inlet or exhaust valves, or leaking piston rings, repair or replace the engine cylinder assembly before further flight.

3. Cylinder assemblies P/N AEL65102, S/N 35239-01 through to 42179-30 shall not be fitted to any engine, and shall not be repaired or reused.

(FAA AD 2009-26-12 refers)

Compliance: 1. Before further flight.

2. For cylinders with S/N 1138-02 through to 35171-22:

Accomplish a visual inspection and compression test before exceeding 350 hours TTIS on the cylinder, or within the next 10 hours TIS for a cylinders with between 350 hours TTIS and 2000 hours TTIS whichever occurs sooner, unless previously accomplished and thereafter at intervals not to exceed 50 hours TIS.

Replacement of cylinder assemblies fitted to helicopter engines: Before exceeding 1500 hours TTIS for cylinders that pass the visual inspection and compression tests, or within the next 25 hours TIS for cylinders with more than 1500 hours TTIS, whichever occurs sooner.

Replacement of cylinder assemblies fitted to aeroplane engines: Before exceeding 2000 hours TTIS for cylinders that pass the visual inspection and compression tests, or within the next 25 hours TIS for cylinders with more than 2000 hours TTIS, whichever occurs sooner.

For cylinders with S/N 35239-01 through to 42179-30:

Within the next 10 hours TIS accomplish a visual inspection and compression test.

Replace cylinders that pass the initial visual inspection and compression tests before exceeding 350 hours TTIS, and for cylinders with 350 or more hours TTIS replace within the next 25 hours TIS.

3. From 4 February 2010

Effective Date: 4 February 2010

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

Effective Date: 3 November 2015

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

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

The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at:
Links to state of design airworthiness directives | aviation.govt.nz
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.

2015-02-07 Propeller Governor – Inspection

Effective Date: 11 March 2015

2015-10-06 Exhaust System – Inspection

Effective Date: 2 July 2015

2015-19-07 Fuel Injector Lines – Inspections

Effective Date: 3 November 2015

2017-16-11 Connecting Rod Small End Bushings – Inspection

Applicability: All Lycoming engines listed in Table 1 of Lycoming Engines Mandatory Service Bulletin (MSB) No. 632B, dated 4 August 2017, and

All Lycoming engines that were overhauled or repaired using any replacement part listed in Table 2 of Lycoming Engines MSB No. 632B, dated 4 August, 2017, which was shipped from Lycoming Engines during the dates listed in Table 2 of Lycoming Engines MSB No. 632B, dated 4 August 2017.

Effective Date: 15 August 2017

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

*** 2024-21-02 Cancelled – FAA AD 2026-04-11 refers**

Effective Date: 8 April 2026

*** 2026-04-11 Connecting Rod Assemblies and Bushing - Inspection**

Applicability: Lycoming engines that have an affected P/N part fitted, and were assembled within the ship date range specified in Table 1 to paragraph (c) of FAA AD 2026-04-11.

Note 1: Since the issue of FAA AD 2024-21-02, the shipping date range for potentially affected parts that may be subject to connecting rod failure has been expanded, and additional parts that are eligible for installation have been identified.
FAA AD 2026-04-11 retains the requirements in superseded FAA AD 2024-21-02 and expands the AD applicability.

Note 2: Affected P/N parts are known to be installed on AEIO-320 series, AEIO-360 series, AEIO-390 series, AEIO-540 series, AEIO-580-B1A, AIO-320 series, AIO-360 series, HIO-360 series, HIO-390-A1A, HIO-540-A1A, HO-360 series, IO-320 series, IO-360 series, IO-390 series, IO-540 series, IO-580 series, IO-720 series, IVO-360-A1A, IVO-540-A1A, LHIO-360 series, LIO-320 series, LIO-360 series, LO-360 series, LTIO-540 series, LTO-360 series, O-233-A1, O-235 series, O-290 series, O-320 series, O-340 series, O-360 series, O-435 series, O-540 series,SO-580 series, TEO-540 series, TIGO-541 series, TIO-360 series, TIO-540 series, TIO-541 series,TIVO-540-A2A, TO-360 series, TVO-435 series, TVO-540-A1A, VO-360 series, VO-435 series, VO-540 series, and VSO-580-A1A engines.

Effective Date: 8 April 2026