LUFTFARTSDIREKTORATET
Avd. for Luftfartsinspeksjon
FORNEBU-OSLO [illegible]
[illegible]

LUFTDYKTIGHETSPABUD

(LDP)

AVCC
LYCOMING
SAMMENDRAG
1946 - 1970

Med hjemmel i lov om luftfart av 16. desember [illegible] § 47, 2. ledd og § 214, kgl. res av 8. desember [illegible], jfr. K og Samferdselsdepartementets brev datert 23. mars 1964, fastsetter Luftfartsdirektoratet følgende forskrift.

6/59 LUFTLEDEPLATER PÅ LYCOMING MOTORER

På motorene av typene Lycoming 0-320, 0-340, 0-360, GO-480, GSO-480, IGSO-480 og 0-540, er ledeplatene for kjøleluften holdt på plass med en skrue og et tverrstykke ("Baffle Clamp"), som ligger an mot sylindrene. Det har vist seg at når sylindrene utvider seg av varmen, kan tverrstykket bli klemt mellom to sylindre, slik at disse deformeres. Dette kan føre til at sylindren og stemplet blir ødelagt.

Luftfartsdirektoratet har derfor bestemt at festet for luftledeplatene på de ovenfor nevnte motorer skal forandres snarest mulig og senest før 1. oktober 1959. Forandringen er nærmere beskrevet i Lycoming Service Bulletin nr. 254A. Det er to alternativer:

1. Å bytte ut tverrstykket med en annen type som ikke så lett setter seg fast. Samtidig byttes skruen med en S-formet krok.

2. Å file av tverrstykkene, slik at klaringene blir bedre.

Den siste forandring kan bare brukes midlertidig og ikke på alle motortyper.

FAA "Airworthiness Directive" No. 59-10-7 handler om samme sak.

6/63 KONTROLL AV DRIVAKSEL FOR OLJEPUMPE PÅ LYCOMING 0-540 OG IO-540

Drivaksel for oljepumpen på Lycoming motorer av typene 0-540 med serienr. 101/40 - 6129/40, og IO-540 med serienr. 101/48 - 551/48 har tendens til å briste i kanten av drivsporet. Dette kan medføre at oljepumpen stopper og oljetrykket blir borte. Følgende kontroll skal derfor utføres på alle ovenfornevnte motorer som har oppnådd 275 timers gangtid:

A. Inspiser oljepumpens drivaksel P/N 67512 så snart som mulig og senest ved første 25 timers ettersyn. Inspeksjonen skal gjentas siden ved hvert 100 timers ettersyn inntil drivakselen er skiftet ut med modifisert aksel med samme P/N eller med ny aksel P/N 74641.

B. For å kunne kontrollere drivakselen må først høyre magnet med pakning tas av og deretter tas magnetdrevet ut av motoren. Gjennom åpningen kan man lyse inn på oljepumpens drivaksel. Hvis akselen er tilsølet av olje må den renses med en ren klut som ikke loer eller har løse tråder.

C. Inspiser området omkring drivsporet i akselen for brist eller brukne ører. Tørn motoren inntil hele omkretsen av drivakselen er kontrollert. Hvis det oppdages sprekker eller annen skade på

akselen må denne skiftes ut før neste flyging.

D. Pass på at magnetdrevet kommer i riktig stilling etter merkingen av drevene når det settes inn i motoren igjen og kontroller til slutt riktig tenning.

Alle motorer som er sendt ut fra fabrikken etter 1. april 1963 har fått installert den nye drivaksel for oljepumpen.

Inspeksjonen må bare utføres av autorisert mekaniker eller godkjent verksted og Lycoming S.B. No. 295 angir nøye hvordan inspeksjonen skal utføres.

FAA AD. 63-14-3 omhander samme sak.

5/66 UTSKIFTNING AV PAKNING OG PINNESKRUER FOR OLJEFILTER PÅ LYCOMING O-320, IO-320, O-340, O-360, IO-360, O-540 OG IO-540

Lycoming har sendt ut Service Bulletin No. 307, som påbyr forandring av feste for oljefilter på de ovenfor nevnte motortyper.

Motorer som er unntatt fra forandring er:

O-320 serie A og E	med motornr.	høyere	enn	16128-27
O-320 " B, C og D	"	"	"	"	6217-39
IO-320-No. 2110-55A og	"	"	"	"	2113-55A
O-360	"	"	"	"	9346-36A
O-540-No. 9770-40 og	"	"	"	"	9800-40
IO-540-No. 2831-48, 2835-48 og	"	"	"	"	2840-48

Luftfartsdirektoratet bestemmer at forandringen skal utføres i løpet av neste 50 timer gangtid, dog senest den 31. desember 1966, på alle Lycoming-motorer som er montert i norsk-registrerte fly og som kommer inn under bestemmelsen i Service Bulletin No. 307.

Forandringen går ut på:

A. Skift ut pakning P/N 74904 med pakning P/N 76691.

B. Kontroller at pinneskruer eller bolter og gjengede hull i monteringsflensen for oljefilteret har de riktige lengder og dybder som er angitt i Service Bulletin No. 307. Hvis ikke dette stemmer, må skruene skiftes ut med nye av riktig lengde og hvis hullene er for grunne, må disse bores og gjenges opp til riktig dybde etter anvisning i Lycoming Service Bulletin No. 307 (eller senere revisjon).

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LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer
Avco Lycoming-1

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

11/71 VENTILLØFTER PÅ LYCOMING

Påbudet gjelder:

IO-360-A og -C, serienr. 1734-51A til og med 4412-51A.
IO-360-A og -C som er fabrikkoverhalt i perioden 1. september 1965 til 11. oktober 1967.

Påbudet omfatter:

Det rapporteres at motorer som har installert hydrauliske ventilløftere med begrenset vandring (P/N 76290) i enkelte tilfeller får stor slitasje på ventiler og ventilseter.

For å unngå skade på ventilene skal derfor ventilløfterenhet P/N 76290 byttes ut med P/N 78290. Dette gjøres ved å installere "Avco Lycoming valve lifter replacement kit P/N LW-11829" ifølge instrukser gitt i Lycoming Service Bulletin No. 328. Her inngår også er kontroll av ventiler og ventilseter. Hvis det oppdages deler med skader ved denne kontroll, skal også "Avco Lycoming valve replacement kit P/N LW-11832" installeres.

Tid for utførelse:

1. Motorer med mindre enn 400 timers gangtid: Innen 450 timers gangtid.

2. Motorer med over 400 timers gangtid: Innen 50 timers gangtid regnet fra 11. november 1971.

Referanser:

FAA AD 71-11-2 og Lycoming Service Bulletin No. 328 omhandler samme sak.

16/71 INSPEKSJON AV BENSINLEDNINGER, SAMT MONTERING AV OPPHENGINGSKLAMMERE

Påbudet gjelder:

Lycoming TIO-540-A med serienr. inntil 1931-61.

Påbudet omfatter:

Bensinledningene mellom bensininnsprøytningsmanifolden og dysene kan få skader og lekkasje dersom de blir for mye bøyd under ettersyn på motoren. Trykk fra kjøleluft, samt vibrasjon fra motor og skrog kan også forårsake skade.

For å minske faren for lekkasje skal følgende utføres:

1. Foreta en visuell inspeksjon av hvert enkelt rør, og kontroller om det finnes bensinfarge, sprekker, hakk eller bend med innvendig radius under 5/8".

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Før neste flyging skal rør med sprekker eller hakk byttes ut, og skarpe bend skal rettes ut til krumning med over 5/8" innvendig radius.

Pass på at det ikke oppstår knekk eller bukter når bensinrøret bøyes.

2. Installer ekstra opphengingsklammere ifølge Lycoming Service Bulletin No. 335 med deler fra "Avco Lycoming Fuel Line Support Kit P/N LW-12181".

Tid for utførelse:

Innen 50 timers flygetid regnet fra 23. desember 1971.

Referanser:

FAA AD 71-13-1 og Lycoming Service Bulletin No. 335 omhandler samme sak.

49/72 SPREKKONTROLL AV SYLINDERHODE

Påbudet gjelder:

Alle Avco Lycoming bokser motorer

Påbudet omfatter:

Det er kjent at mange sylindere må kasseres ved motoroverhaling på grunn av sprekker i sylindertoppen. I ett tilfelle har slike sprekker ført til motorstopp og havari med et norsk registrert fly.

For å sikre at brukte sylindere som monteres ikke har sprekker, skal følgende utføres:

1. Bruk fluoriserende lys for å kontrollere om sylindertoppen har sprekker i de områder som er angitt i Service Instruction No. 1135A.

   Dersom sprekker oppdages i gjengepartiet for pluggene, i ventilsetene eller fra plugghullene i retning mot ventilsetene, skal sylinderen kasseres.

   Bare små sprekker som angitt i Service Instruction No. 1135A, side 1 og fig. 3, kan tillates.

2. Kontroller om kanten på tennplugghullene er avrundet innvendig. Dersom dette ikke er gjort, skal tennplugghullene avrundes ifølge Service Instruction No. 1135A.

Tid for utførelse:

Ved motoroverhaling og ved montering av brukte sylindere som ikke er kontrollert tidligere.

Referanser:

Avco Lycoming Service Instruction No. 1135A, datert 12. april 1968.

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer
Avco Lycoming-2

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

66/72 INSPEKSJON OG UTSKIFTING AV FORINGEN I MAGNETFORDELERENE PÅ HIO-360-D1A MOTORER

Påbudet gjelder:

Avco Lycoming HIO-360-D1A motorer, installert i Hughes 269C og 300C helikoptere.

Påbudet omfatter:

Mangelfull smurning kan føre til uakseptabel slitasje på foringen i magnetfordelerne, (Bendix S4LN-1208 magneter med P/N 10-349285-5 "distributor block bushing") og følgende påbys derfor:

1. Inspiser og smør foringen i magnetfordelerne som beskrevet i Lycoming Service Bulletin No. 336 B.

2. Skift ut deler i den venstre magneten med de deler som følger med Bendix Kit No. 10-391320. Instruksjon for utskiftingen (Form L-1006) følger med utstyret.

   NB! Dette arbeidet tillates bare utført av flyverksted med autorisasjon for elektrisk tilbehør, eller av autorisert flymekaniker med X-sertifikat.

Tid for utførelse:

Pkt. 1: Innen 50 flytimer regnet fra 4. desember 1972 og deretter med et intervall på 50 flytimer.

Pkt. 2: Innen 100 flytimer regnet fra 4. desember 1972 og deretter med et intervall på 100 flytimer.

Referanser:

FAA AD 72-21-4 og Lycoming Service Bulletin No. 336 B omhandler samme sak.

17/73 UTSKIFTING AV VEIVSTENGER

Påbudet gjelder:

Avco Lycoming VO-, IVO-, TVO- og TIVO-540 motorer med serienr. som angitt nedenfor:

VO-540	: serienr.	fra	101-43	til	og med	2299-43
IVO-540	: "	"	101-60	"	"	" 150-60
TVO-540	: "	"	101-53	"	"	" 103-53
TIVO-540	: "	"	101-57	"	"	" 163-57

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Alle motorer av ovenstående typer som er blitt heloverhalt ("remanufactured") av Lycoming før 2. januar 1974.

Unntak fra påbudet er følgende:
Motorer med serienr.: RL-376-43, RL-483-43, RL-693-43, RL-695-43, RL-1091-43, RL-1205-43, RL-1429-43, RL-1753-43, RL-1960-43, RL-2017-43, RL-2032-43, RL-2125-43, RL-2139-43, RL-2244-43, RL-2245-43, RL-2275-43.

Motorer som har fått installert rådelager, P/N LW13212 ("higher crush bearing") i samsvar med Lycoming Service Bulletin No. 303E eller 303F.

Påbudet omfatter:

For å forhindre motorhavari på grunn av feil i veivstangsinstallasjonen i berørte motorer, skal disse modifiseres som beskrevet nedenfor. Risiko for feil finnes for veivstenger med P/N 71947, 73174, 75548, LW 10776 og veivstang P/N 77450 installert sammen med rådelager, P/N 75547. Beskrivelse er gitt i Lycoming Service Bulletin No. 303B, 303C eller 303D. Følgende skal derfor utføres:

Modifikasjon:

Veivstenger og rådelagere i berørte motorer skal skiftes ut med nye enheter, som har P/N LW13422 for veivstang og P/N LW13212 for rådelager.

Dersom motoren er blitt modifisert i samsvar med Lycoming Service Bulletin No. 303B, 303C eller 303D, gjelder som unntak at veivstenger med P/N 77450 kan brukes som erstattning for P/N LW13422. Vilkåret for dette er at veivstengene er frie for slitasje ("galling") og monteres med rådebolter, P/N LW12596. Veivstang P/N 77450 med rådebolter P/N LW12596, kan identifiseres som veivstangsenhet P/N LW13422.

Merk! Lycoming Service Bulletin No. 371A omhandler denne modifikasjonen.

Tid for utførelse:

Motorer som har veivstangsinstallasjon med mer enn 400 timers gangtid siden ny eller overhalt: Innen 50 flytimer regnet fra 16. september 1974.

Motorer som har veivstangsinstallasjon med mindre enn 400 timers gangtid siden ny eller overhalt: Innen 450 timers gangtid på veivstanginstallasjonen.

Referanser:

FAA AD 73-05-01 og Avco Lycoming Service Bulletin No. 371A omhandler samme sak.

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LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer
Avco Lycoming-3

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23 mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

22/73 KONTROLL AV VEIVAKSELLAGER PÅ LYCOMING

Påbudet gjelder:

IO-360-A og -C inntil serienr. 7100-51A. Av motorer som er fabrikkoverhalt etter 26. januar 1970, gjelder påbudet bare S/N 354-51, 1049-51A, 3003-51A, 3281-51A, 6526-51A.

Påbudet omfatter:

Det har forekommet en del skader på lager og styrepinner for lagerskålene på IO-360-A og -C motorer.
Årsaken til dette er slitasje av veivkassens anleggsflater i nærhet av lagerne. Slitasjen har forårsaket at lagerskålene har forskjøvet seg, og at de gjennomgående boltene i veivkassen har gradvis løsnet. Om dette forhold ikke oppdages ved overhaling av motoren, kan lagerne få feil passning til veivakselen, noe som i verste tilfelle fører til motorhavari.
Følgende skal derfor utføres:

1. Kontroll av smøresystem.

   Smøresystemet skal undersøkes visuelt for å konstatere eventuell forekomst av metallspon eller metallpartikler. Olje, oljesil og oljefilter skal undersøkes. Om en finner metall i smøresystemet, skal pkt. 2 eller 3 nedenfor utføres før motoren settes i drift.

2. Kontroll av midtre veivlager.

   Sylinder nr. 2 skal fjernes og midtre lager skal kontrolleres visuelt for å se om lagerskålene er forskjøvet. Inspeksjonen skal utføres etter anvisning gitt i Avco Lycoming Service Bulletin No. 327 C. Om lagerskålene er forskjøvet, skal pkt. 3 nedenfor utføres før motoren kan settes i drift. Om lagerskålen ikke er forskjøvet og en ikke finner metallspon i smøresystemet, kan motoren settes i drift, men smøresystemet skal da kontrolleres som anvist i pkt. 1 for hver 50 timers gangtid.

3. Modifisering eller reparasjon av veivkasse.

   Før motoren oppnår en gangtid som anvist nedenfor, skal veivkassen modifiseres etter de anvisninger som er gitt i Lycoming Service Instruction No. 1123A.

   Om motoren ikke tilfredstiller de krav som er satt i pkt. 1 og 2 ovenfor, skal veivkassen repareres etter de anvisninger som er gitt i Lycoming Service Instructions No. 1112C.

   Samtlige motorer skal modifiseres med rette styrepinner for lagerskålene, anvisning for modifisering finnes i Lycoming Service Bulletin No. 326.

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Inspeksjonskrav som er framsatt i denne LDP behøver ikke følges når reparasjon eller modifisering er utført tidligere ifølge ovenstående tekst.

Tid for utførelse:

Motorer med 500 timer eller mindre siden ny eller overhalt:
Utfør kontroll etter pkt. 1 innen 10 timers gangtid regnet fra 25. april 1973 og deretter ved hver 25 timers gangtid inntil 525 timer, da kontroll som i pkt. 2, skal utføres.

Motorer med 500 timer eller mer siden ny eller overhalt:
Utfør kontroll etter pkt. 1 innen 10 timers gangtid regnet fra 25. april 1973. Kontroll etter pkt. 2 skal utføres innen 25 timers gangtid fra 25. april 1973.

Motorer med 1150 timer eller mer siden ny eller overhalt:
Dersom ikke utført, skal motoren modifiseres ifølge pkt. 3 innen 50 timers gangtid fra 25. april 1973.

Referanser:

FAA AD 71-5-2 datert 13. februar 1973, Avco Lycoming Service Bulletin No. 327C, Lycoming Service Instructions No. 1123A, Lycoming Service Instructions No. 1112C og Lycoming Service Bulletin No. 326 omhandler samme sak.

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LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer

Avco Lycoming-4

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

56/73 KONTROLL AV STEMPELPINNER

Påbudet gjelder:

Avco Lycoming motorer med typebetegnelse og serienr. som angitt nedenfor.

O-320 Series

L-6798-39A thru L-6815-39A

IO-320 Series

L-4952-55

O-360 Series

L-17389-36A thru L-17408-36A, L-17410-36A thru L-17427-36A, L-17429-36A thru L-17452-36A, L-17454-36A thru L-17479-36A, L-17481-36A thru L-17495-36A, L-17497-36A thru L-17500-36A, L-17503-36A thru L-17505-36A, L-17516-36A thru L-17518-36A

RL-523-36A, RL-2030-36A, RL-3933-36A, RL-7173-36A, RL-11169-36A, RL-16937-36A

IO & HIO-360 Series

L-9409-51A, L-9410-51A, L-9415-51A thru L-9417-51A, L-9419-51A thru L-9427-51A, L-9438-51A thru L-9453-51A, L-9455-51A, L-9457-51A thru L-9498-51A, L-9500-51A thru L-9517-51A, L-9519-51A thru L-9564-51A, L-9566-51A thru L-9616-51A, L-9618-51A, L-9620-51A thru L-9640-51A, L-9642-51A thru L-9651-51A, L-9653-51A thru L-9713-51A, L-9715-51A, L-9716-51A, L-9718-51A thru L-9768-51A, L-9770-51A thru L-9774-51A, L-9776-51A thru L-9826-51A, L-9828-51A thru 9848-51A, L-9850-51A thru L-9930-51A, L-9932-51A thru L-9962-51A, L-9964-51A thru L-9995-51A,

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L-9997-51A thru L-10090-51A, L-10092-51A thru L-10113-51A, L-10115-51A thru L-10249-51A, L-10257-51A thru L-10261-51A, L-10263-51A thru L-10273-51A, L-10279-51A thru L-10281-51A, L-10284-51A thru L-10290-51A

RL-191-51A, RL-591-51A, RL-595-51A, RL-702-51A, RL-776-51A, RL-778-51A, RL-955-51A, RL-993-51A, RL-1267-51A, RL-1272-51A, RL-1435-51A, RL-1481-51A, RL-1515-51A, RL-1642-51A, RL-1769-51A, RL-1845-51A, RL-1847-51A, RL-2143-51A, RL-2227-51A, RL-2249-51A, RL-2464-51A, RL-2476-51A, RL-2508-51A, RL-2562-51A, RL-2629-51A, RL-2672-51A, RL-2923-51A, RL-3048-51A, RL-3113-51A, RL-3195-51A, RL-3235-51A, RL-3318-51A, RL-3344-51A, RL-3392-51A, RL-3427-51A, RL-3464-51A, RL-3540-51A, RL-3573-51A, RL-3738-51A, RL-3832-51A, RL-3868-51A, RL-3974-51A, RL-4787-51A, RL-4960-51A, RL-5082-51A, RL-5085-51A, RL-5652-51A, RL-5685-51A, RL-5751-51A, RL-5824-51A, RL-6331-51A, RL-6345-51A, RL-6350-51A, RL-6417-51A, RL-6469-51A, RL-6623-51A, RL-6652-51A, RL-6693-51A, RL-6724-51A, RL-6744-51A, RL-6950-51A, RL-7043-51A, RL-7201-51A, RL-7357-51A, RL-7422-51A, RL-7475-51A, RL-7806-51A, RL-7852-51A, RL-7886-51A, RL-8000-51A, RL-8354-51A, RL-8872-51A, RL-9611-51A, RL-9812-51A

AIO-360 Series

L-165-63A thru L-171-63A

TIO-360 Series

L-112-64A thru L-115-64A

LIO-360 Series

L-440-67A thru L-480-67A, L-487-67A thru L-512-67A, L-514-67A thru L-537-67A, L-545-67A thru L-591-67A, L-593-67A thru L-632-67A, L-634-67A thru L-648-67A, L-650-67A thru L-655-67A, L-660-67A

GO-480-G1D6 Series

RL-288-37, RL-482-37

IGSO-480-A1E6 Series

RL-829-44, RL-1258-44, RL-1508-44, RL-1509-44, RL-1518-44, RL-1586-44

IGO-540 Series

L-320-49

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LUFTDYKTIGHETSPÅBUD (LDP)

Motorer
Avco Lycoming-5

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet:

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VO-540 Series

L-2280-43, L-2281-43

RL-343-43, RL-376-43, RL-456-43, RL-485-43, RL-522-43, RL-564-43, RL-691-43, RL-694-43, RL-846-43, RL-849-43, RL-1125-43, RL-1148-43, RL-1186-43, RL-1333-43, RL-1452-43, RL-1571-43, RL-1700-43, RL-1731-43, RL-1828-43, RL-1900-43, RL-1913-43, RL-1929-43, RL-1931-43, RL-2041-43, RL-2125-43, RL-2142-43, RL-2208-43, RL-2224-43, RL-2245-43, RL-2269-43, RL-2275-43 thru RL-2279-43

O-540-A1C5, -A1D5, -B1A5, -B2B5, -B4B5, -B2C5, -E4A5, -E4B5, -E4C5, G1A5 Series

L-15062-40, L-15063-40, L-15108-40, L-15117-40, L-15132-40, L-15133-40, L-15161-40, L-15221-40, L-15222-40, L-15225-40 thru L-15227-40, L-15242-40 thru L-15249-40, L-15297-40, L-15300-40, L-15304-40 thru L-15320-40, L-15322-40 thru L-15367-40, L-15372-40

RL-1040-40, RL-1207-40, RL-3330-40, RL-6768-40, RL-7670-40, RL-9416-40, RL-10859-40, RL-11312-40, RL-11377-40, RL-11420-40, RL-11862-40, RL-13058-40, RL-13637-40, RL-14194-40

IO-540-A1A5, -B1A5, -C1A5, -C4B5, -D4A5, -E1A5, -E1B5, -G1D5, J4A5, -K1A5, -K1B5, -K1C5, -K1E5, -K1E5D Series

L-10118-48 thru L-10122-48, L-10124-48 thru L-10127-48, L-10144-48, L-10145-48, L-10209-48, L-10213-48, L-10221-48 thru L-10260-48, L-10263-48 thru L-10267-48, L-10303-48, L-10304-48, L-10306-48 thru L-10308-48, L-10317-48 thru L-10320-48, L-10398-48, L-10459-48, L-10487-48 thru L-10546-48, L-10548-48 thru L-10562-48, L-10564-48 thru L-10569-48, L-10571-48 thru L-10584-48

RL-113-48, RL-622-48, RL-918-48, RL-1170-48, RL-1606-48, RL-1640-48, RL-2015-48, RL-2050-48, RL-2210-48, RL-2271-48, RL-2276-48, RL-3610-48, RL-3614-48, RL-3732-48, RL-4057-48, RL-4103-48, RL-4506-48, RL-5778-48, RL-7116-48

TIO-540-A2B, -A2C, -C1A, TIO-540-J2BD Series

L-2412-61 thru L-2414-61, L-2416-61 thru L-2419-61, L-2489-61 thru L-2498-61, L-2501-61 thru L-2503-61, L-2550-61, L-2557-61, L-2562-61, L-2566-61, L-2567-61, L-2572-61 thru L-2583-61, L-2585-61 thru L-2588-61, L-2590-61, L-2591-61, L-2595-61 thru L-2597-61

forts.

56/73 forts. RL-122-61, RL-226-61, RL-759-61, RL-771-61, RL-1263-61, RL-1268-61, RL-1346-61, RL-1488-61, RL-1679-61, RL-1683-61, RL-2189-61

LIO-540 Series

L-102-68, L-105-68, L-109-68, L-113-68 thru L-117-68, L-125-68, L-128-68 thru L-130-68, L-147-68 thru L-152-68, L-154-68, L-155-68

RL-106-68

IGSO-540 Series

L-3060-50, L-3061-50, L-3070-50, L-3071-50, L-3074-50, L-3085-50 thru L-3087-50, L-3090-50, L-3093-50, L-3094-50

RL-315-50, RL-518-50, RL-528-50, RL-821-50, RL-1014-50, RL-1100-50, RL-1151-50, RL-1174-50, RL-1216-50, RL-1517-50, RL-1558-50, RL-1591-50, RL-1682-50, RL-1694-50, RL-1700-50, RL-1773-50, RL-1788-50, RL-1821-50, RL-2003-50, RL-2157-50, RL-2187-50, RL-2385-50, RL-2479-50, RL-2543-50, RL-2604-50, RL-2907-50

TIO-541 Series

L-866-59 thru L-873-59

TIGO-541 Series

L-343-62 thru L-352-62

RL-161-62

IO-720-A, -B and -C Series

L-505-54, L-506-54, L-508-54 thru L-529-54, L-532-54 thru L-538-54, L-540-54, L-541-54, L-546-54 thru L-549-54, L-551-54 thru L-554-54

Påbudet omfatter:

Avco Lycoming rapporterer at en del stempelpinner, P/N 69650, har feilet på grunn av sprekkdannelse som skyldes feilfabrikasjon. Da muligheten finnes for at et antall av samme type stempelpinner med feil er innmontert i ovenstående motorer, skal sprekkontroll som beskrevet i Avco Lycoming Service Bulletin No. 367F og Supplement No. 1 eller senere revisjoner utføres.

Tid for utførelse:

For motorer med serienr. som angitt i tidligere utgaver av denne LDP gjelder:
Innen 50 timers gangtid regnet fra 2. desember 1974 dersom ikke allerede utført.
For motorer med nye serienr. ifølge angivelsen ovenfor gjelder:
Innen 50 timers gangtid regnet fra 15. februar 1977, dersom ikke allerede utført.

Referanser:

FAA AD 73-23-01, Avco Lycoming Service Bulletin No. 367F og Supplement No. 1 omhandler samme sak.

LUFTFARTSVERKET
Hovedadministrasjonen
Avd. for Luftfartsinspeksjon
Postboks [illegible] OSLO
Telefon [illegible]

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer
Avco Lycoming-6

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, Nr. 6 K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

30/74 UTSKIFTING AV KOMPRESSORENS ROTORSKIVER OG SKOVLHJULSENHET I AVCO LYCOMING T5309C, T5311A OG T5311B MOTORER

Påbudet gjelder:

Avoc Lycoming T5309C, T5311A og T5311B "turboshaft" motorer.

Påbudet omfatter:

For å forhindre at mulige feil i kompressorens rotorskiver eller skovlhjulsenhet ("impeller") forårsaker helt eller delvis tap av motoreffekt, skal følgende utføres:

Kompressorens andre, tredje, fjerde og femte rotorskive ("rotor disc") og skovlhjulsenhet ("centrifugal impeller"), skal skiftes ut med nye enheter i samsvar med nedenforstående tabell.

COMPONENT - "2nd Stage Compressor Rotor Disc".
Fjern P/N 1-100-239-01. Installer P/N 1-1001239-04 eller senere FAA godkjent P/N.
COMPONENT - "3rd Stage Compressor Rotor Disc".
Fjern P/N 1-100-242-01 eller 1-100-242-06. Installer P/N 1-100-242-09 eller senere FAA godkjent P/N:
COMPONENT - "4th Stage Compressor Rotor Disc".
Fjern P/N 1-100-244-01 eller 1-100-244-02 eller 1-100-244-04 eller 1-100-244-06. Installer P/N 1-100-244-08 eller senere FAA godkjent P/N.
COMPONENT - "5th Stage Compressor Rotor Disc".
Fjern P/N 1-100-417-01 eller 1-100-417-02. Installer P/N 1-100-417-05 eller senere FAA godkjent P/N.
COMPONENT - "Centrifugal Impeller Assembly".
Fjern P/N 1-100-440-04 eller 1-100-440-07. Installer P/N 1-100-440-07 Rev. B eller senere FAA godkjent P/N.

Merk! Avco Lycoming Service Bulletin nr. 0033 omhandler samme sak.

Tid for utførelse:

Innen 100 timers flytid regnet fra 26. august 1974, dersom ikke allerede utført.

Referanser:

FAA AD 74-09-03 og Avco Lycoming Service Bulletin nr. 0033 omhandler samme sak.

36/74 UTSKIFTING AV VEIVSTENGER

Påbudet gjelder:

Avco Lycoming IGO-540 og IGSO-540 motorer.

Følgende motorer omfattes ikke av påbudet:
IGO-540 med serienr. 311-49 og høyere.
IGSO-540 med serienr. 2558-50 til og med 2563-50, 2565-50 til og med 2582-50, 2584-50 til og med 2589-50, 2591-50 til og med 2602-50, 2606-50 til og med 2631-50, 2637-50, 2640-50, 2547-50 til og med 2652-50, 2657-50 til og med 2692-50, 2694-50 til og med 2713-50, 2718-50 til og med 2727-50, 2730-50 til og med 2750-50, 2752-50 og høyere.

Motorer som er heloverhalt (re-manufactured) av Lycoming etter 29. oktober 1970.

Påbudet omfatter:

For å forhindre brudd på veivstenger ("connecting rod assemblies"), P/N 72606, 73174 og 75548, skal disse skiftes ut med veivstenger som har P/N 77450.

Tid for utførelse:

På motorer med veivstenger som har gangtid på 400 timer eller mer siden ny eller overhalt: Innen 50 timers gangtid regnet fra 26. august 1974.

På motorer med veivstenger som har mindre enn 400 timers gangtid siden ny eller overhalt: Innen 100 timers gangtid regnet fra 26. august 1974.

Referanser:

FAA AD 74-13-05 og Avco Lycoming Service Bulletin nr. 351A omhandler samme sak.

7/75 MODIFIKASJON AV LYCOMING T5313B TURBOSHAFT MOTORER

Påbudet gjelder:

Avco Lycoming T5313B turboshaft motorer.

Påbudet omfatter:

For å forhindre tap av motoreffekt på grunn av materialbrudd i "centrifugal compressor impeller vane", skal følgende utføres:

"Centrifugal compressor impeller" enheter med P/N 1-100-078-03, 1-100-078-04 og 1-100-078-10 skal skiftes ut med ny "compressor impeller" som har P/N 1-100-078-08.

Merk! Avco Lycoming Service Bulletin no. 0042 omhandler samme sak.

Tid for utførelse:

Innen 100 flytimer regnet fra 10. februar 1975.

Referanser:

FAA AD 75-01-05 og Avco Lycoming Service Bulletin no. 0042 omhandler samme sak.

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Tgr [illegible] OSLO
Telex [illegible]

LUFTDYKTIGHETSPÅBUD (LDP)

Motorer
Avco Lycoming-7

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

38/75 KONTROLL OG UTSKIFTING AV OLJEPUMPENS DRIVAKSEL OG PUMPEHJUL

Påbudet gjelder:

Lycoming modell O-235, O-290, O-320, IO-320, LIO-320, O-360, IO-360, HO-360, HIO-360, VO-360-IAI, VO-360-AIB, VO-360-BIA, IVO-360-AIA, LIO-360, TIO-360, AIO-360, AEIO-360, O-540 og IO-540 motorer, med serienummer som angitt i Lycoming Service Bulletin no. 381 B og 385 C eller senere utgaver.

Påbudet gjelder også motorer som er blitt overhalt/ombygd av Lycoming i tiden mellom 18. desember 1972 og 10. desember 1974 eller som er blitt overhalt av andre verksteder i tiden etter 18. desember 1972, og som er blitt modifisert i samsvar med Lycoming Service Instruction no. 1272.

Berørte serienummer for motorene er følgende:

Modell:	Berørte serienummer:	Serienummer unntatt fra påbudet:
O-235 serier	L-11268-15 t.o.m L-12098-15 og L-12100-15	L-12099-15, 12101-15 og høyere
O-290 serier	Alle motorer modifisert i henhold til Lycoming Service Instruction No. 1272.	Alle motorer som ikke er modifisert i henhold til Lycoming S.I. No. 1272.
O-320 serier	L-33329-27A t.o.m L-41054-27A	L-41055-27A og høyere O-320-E2D serier, L-41029-27A og høyere, O-320-E3D serier: L-41017-27A, L-41021-27A og høyere
O-320-B og -D	L-6809-39A t.o.m L-6971-39A	L-6972-39A og høyere
IO-320-B1A	L-4953-55A t.o.m 5270-55A	L-5271-55A og høyere
LIO-320 serier	L-292-66A t.o.m L-296-66A	L-297-66A og høyere
O-360, HO-360-B1A, -B1B serier	L-17440-36A t.o.m L-19846-36A og L-17427	L-19817-36A, L-19818-36A, L-19847 og høyere

forts.

Modell:	Berørte serienummer:	Serienummer unntatt fra påbudet:
VO-360, IVO-360 serier	Alle motorer modifisert i henhold til Lycoming S.I. 1272	Alle motorer som ikke er modifisert i henhold til Lycoming S.I. 1272
HIO-360-A1A, -B1A	L-10179-51A t.o.m L-13351-51A	L-12557-51A, L-12727-51A, L-12853-51A, L-12890-51A, L-13513-51A og høyere
HIO-360-D1A	L-10179-51A t.o.m L-13512-51A	L-12892-51A t.o.m L-12894-51A, L-12919-51A, L-12966-51A t.o.m L-12968-51A, L-12979-51A, L-13034-51A t.o.m L-13040-51A, L-13124-51A t.o.m L-13128-51A, L-13170-51A t.o.m L-13174-51A, L-13257-51A t.o.m L-13262-51A, L-13280-51A t.o.m L-13283-51A, L-13513-51A og høyere
HIO-360-C1A	L-10179-51A t.o.m L-13372-51A	L-11578-51A, L-12193-51A, L-12445-51A, L-12763-51A, L-12845-51A, L-12847-51A t.o.m L-12849-51A, L-12895-51A, L-12897-51A, L-12898-51A, L-12911-51A, L-12912-51A, L-12914-51A t.o.m L-12916-51A, L-12918-51A- L-12969-51A t.o.m L-12972-51A, L-13041-51A, L-13042-51A, L-13119-51A t.o.m L-13123-51A, L-13142-51A t.o.m L-13148-51A, L-13271-51A t.o.m L-13275-51A, L-13373-51A og høyere
HIO-360-C1B	L-10179-51A t.o.m L-13551-51A	L-13352-51A og høyere

forts.

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Tlg: CIVILAV OSLO
Telex 17011 civin

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer

Avco Lycoming-ß

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

38/75
forts.

Modell:	Berørte serienummer:	Serienummer unntatt fra påbudet:
AEIO-360 serier	L-10179-51A t.o.m. L-13616-51A	L-13617-51A og høyere
IO-360 serier	L-10146-51A t.o.m. L-13540-51A	L-13541-51A og høyere
O-360-A1B6D	L-10115-51A t.o.m L-13529-51A	L-13530-51A og høyere
AIO-360 serier	L-171-63A t.o.m L-208-63A	L-209-63A og høyere
LIO-360 serier	L-634-67A t.o.m L-1059-67A	L-1060-67A og høyere
TIO-360 serier	L-116-64A t.o.m L-145-64A	L-146-64A og høyere
O-540 serier unntatt O-540-H1A5D, -H1B5D, -H2A5D, -H2B5D serier	L-15327-40A t.o.m L-17105-40A	L-17098-40A, L-17103-40A, L-17106-40A og høyere
IO-540 serier unntatt IO-540-K1A5D, -K1B5D, -K1E5D, -K1F5D, -M2A5D, -P1A5, -S1A5, -T4A5D serier	L-10536-48 t.o.m L-12896-48	L-10623-48, L-10624-48, L-10813-48, L-10814-48, L-11246-48, L-11247-48, L-11266-48, L-11267-48, L-12144-48 t.o.m L-12147-48, L-12231-48, L-12287-48 t.o.m L-12298-48, L-12371-48 t.o.m L-12378-48, L-12463-48, L-12464-48, L-12636-48, L-12637-48, L-12684-48,

forts.

L-12685-48,
L-12711-48 t.o.m
L-12713-48,
L-12726-48 t.o.m
L-12729-48, L-12734-48 t.o.m
L-12739-48,
L-12744-48 t.o.m
L-12753-48,
L-12806-48,
L-12821-48 t.o.m
L-12823-48,
L-12840-48 t.o.m
L-12844-48,
L-12859-48 t.o.m
L-12868-48,
L-12888-48,
L-12897-48 og høyere

Tid for utførelse:

1) Modell O-360-C2D, HO-360, HIO-360, VO-360 og IVO-360:

Innen 10 flytimer regnet fra 11. august 1975, eller innen motoren oppnår en total gangtid på 400 timer, det som kommer senest, dersom ikke allerede utført.

2) Modell O-235, O-290, O-320, IO-320, LIO-320, O-360, IO-360 og AEIO-360, AIO-360, LIO-360, TIO-360, O-540, IO-540 motorer utstyrt med eksosventiler som har ventilstamme på ½" diameter og som ikke brukes til jordbruksflygning.

Innen 50 flytimer regnet fra 11. august 1975 eller innen motoren oppnår en total gangtid på 400 timer, det som kommer senest, dersom ikke allerede utført.

Referanse:

FAA AD-note 75-08-09, Lycoming Service Bulletin no. 381 B og 385 C eller senere utgaver omhandler samme sak.

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LUFTDYKTIGHETSPÅBUD (LDP)

Motorer
Avco Lycoming-9

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

40/75 UTSKIFTING AV PAKNING I "FUEL FLOW DIVIDER"

Påbudet gjelder:

Lycoming modell IO-320, AIO-320, IO-360, LIO-360, HIO-360-C, IVO-360, TIO-360, AIO-360, IGO-480, IO-540, TIO-540, IVO-540, IGO-540, IO-720 motorer utstyrt med Bendix Fuel Injector Flow Divider, som har følgende delnr.:

2524218-1 til og med 2524225-1, 2524227-1, 2524232-1, 2524240-1, 2524248-1, 2524265-1, 2524327-1, 2524342-1, 2524397-1, 2524416-1, 2524421-1, 2524571-1, 2524583-1, 2524610-1.

Påbudet omfatter:

For å forhindre utilstrekkelig bensintilførsel til motoren skal Bendix Fuel Flow Divider dekselpakning P/N 2537013 skiftes ut med ny pakning som har P/N 2538998. Utskiftingen skal utføres i samsvar med Lycoming Service Bulletin no. 382.

Anm.: Bendix Energy Controls Division Fuel System Bulletin no. RS 43 omhandler samme sak.

Tid for utførelse:

Innen 25 flytimer regnet fra 7. juli 1975.

Referanser:

FAA AD 75-09-15 og Lycoming Service Bulletin no. 382 omhandler samme sak.

45/75 MODIFIKASJON AV LYCOMING T5313A OG T5313B MOTORER

Påbudet gjelder:

Avco Lycoming modell T5313A og T5313B "turboshaft" motorer.

Påbudet omfatter:

For å forhindre feil i "second stage gas producer cylinder retaining bolts", skal følgende utføres:

"Retaining bolts" med P/N MS9060-08 og/eller P/N MS9705-08, skal skiftes ut med nye som har P/N 1-110-262-01 etter anvisning gitt i Avco Lycoming Service Bulletin, Product Support no. 0028, Revision 2.

Tid for utførelse:

Innen 100 flytimer regnet fra 20. juli 1975.

forts.

45/75
forts.

Referanser:

FAA AD 75-12-12 og Avco Lycoming Service Bulletin, Product Support no. 0028, Revision 2 omhandler samme sak.

:/75 SKIFTE AV "TORQUEMETER BOOST PUMP"

Påbudet gjelder:

Alle Avco Lycoming motorer i T 53 seriene.

Påbudet omfatter:

For å forhindre brudd i "N2 accessory driveshaft" som en følge av at "torquemeter boost pump" skjærer seg, skal følgende utføres:

"Torquemeter boost pump" P/N 1-300-221-01 eller P/N 1-300-221-02 skal skiftes ut med en pumpe med P/N 1-300-221-03 eller P/N 1-300-221-04 som angitt i Avco Lycoming Service Bulletin No. 0031.

Tid for utførelse:

Innen 200 flytimer regnet fra 10. november 1975.

Referanser:

FAA AD 75-22-02 og Avco Lycoming Service Bulletin No. 0031 omhandler samme sak.

49/76 KONTROLL AV KOMPRESSOR "AIR BLEED BAND"

Påbudet gjelder:

Alle Avco Lycoming T5508D motorer utstyrt med "Retaining Plate Spacers" delnr. 2-160-147-02 og kompressor "Air Bleed Bands" delnr. 2-161-182-01.

Påbudet omfatter:

For å unngå redusert motoreffekt på grunn av at kompressorens "Air Bleed Band" svikter, skal følgende utføres:

1. Kontroller kompressor "Air Bleed Band" for kantslitasje og sprekker og reparer eller skift som vist i Avco Lycoming Service Bulletin, Product Support No. 5508-0003, datert 30. november 1975 eller senere revisjoner.

2. Skift ut "Retaining Plate Spacers" delnr. 2-160-147-02 med delnr. 2-160-561-01 og kompressor "Air Bleed Band" delnr. 2-161-182-01 med delnr. 2-161-182-03 som vist i Avco Lycoming Service Bulletin, Product Support No. 5508-0007, datert 30. april 1976 eller senere revisjoner.

Tid for utførelse:

Pkt. 1: Innen første flyging hver dag etter mottakelsen av denne LDP.
Pkt. 2: Innen 14 dager fra 28. september 1976.

Referanser:

FAA AD 76-12-05, Avco Lycoming Service Bulletin, Product Support No. 5508-0003, datert 30. november 1976 og No. 5508-0007, datert 30. april 1976 omhandler samme sak.

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer

Avco Lycoming-10A
Erstatter
Avco Lycoming-10

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23 mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet

90/77 KONTROLL AV "FUEL REGULATOR P1 MULTIPLIER LEVER"

Påbudet gjelder:

Avco Lycoming T53 motorer utstyrt med brennstoffregulatorer med delnr. 1-170-240-52, 1-170-240-58 eller 1-170-240-59.

Påbudet omfatter:

For å unngå "Flame Out" på grunn av mulig svikt av "Fuel Regulator P1 Multiplier Lever", skal Avco Lycoming Service Bulletin No. 0048 revisjon 1 datert 15. mars 1978 eller senere revisjoner utføres.

Tid for utførelse:

Innen 15. juni 1978.

Referanse:

FAA AD 77-17-08.

98/77 KONTROLL AV HYDRAULISKE LØFTERE OG VENTILVIPPER PÅ O-320-H MODELLER

Påbudet gjelder:

Avco Lycoming O-320-H motorer med serienr. 101-76 til og med L-3829-76, L-3831-76, L-3843-76 til og med L-3859-76, L-3864-76, L-3866-76, L-3871-76, L-3902-76 til og med L-3907-76 samt alle O-320-H overhalt av Lycoming før 24. mars 1978.

Påbudet omfatter:

For å forhindre motorhavari under flyging pga. løse "Rocker Arm Retaining" muttere og svikt av de hydrauliske løfterne skal Avco Lycoming Service Bulletin no. 412 datert 8. juli 1977, no. 413 og no. 424 eller senere revisjoner utføres.

Tid for utførelse:

S.B. no. 412 og 413: Innen 500 timers gangtid etter 1. november 1977.

S.B. no. 424: " " " " " " " "

Referanser:

FAA AD 77-20-07

11. oktober 1978

Motorer
Avco Lycoming-10A
Erstatter
Avco Lycoming-10

41/78

UTSKIFTING AV "INNER BEVEL GEAR"

Påbudet gjelder:

Avco Lycoming T5508D motormodeller.

Påbudet omfatter:

For å forhindre svikt i "engine accessory inner bevel gear" med påfølgende motorstopp, skal "inner bevel gear" med delnr. 2-070-005-02 skiftes ut med "inner bevel gear" med delnr. 2-070-030-01 som vist i Avco Lycoming Service Bulletin No. 5508-0013 datert 15. mars 1978 eller senere revisjoner.

Tid for utførelse:

Innen 15. juni 1978.

Referanser:

FAA AD 78-07-04.

56/78 MODIFISERING AV OLJEPUMPEN PÅ O-320-H MOTORER

Påbudet gjelder:

Avco Lycoming motorer modell O-320-H med serienr.(dersom ikke tidligere utført):

L-101-76 til og med L-3829-76
L-3831-76
L-3843-76 " " " L-3859-76
L-3864-76, L-3866-67, L-3871-76
L-3902-76 til og med L-3907-73
samt alle O-320-H overhalt (Remanufactured by Lycoming) før 24. mars 1978.

Påbudet omfatter:

For å unngå svikt av oljepumpen, skal Avco Lycoming Service Bulletin No. 423 datert 24. mars 1978 eller senere revisjoner utføres.

Tid for utførelse:

Før første flyging etter mottakelsen av denne LDP.

Referanse:

FAA AD 78-12-08

25. august 1978

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer

Avco Lycoming-11a

Erstatter Avco Lycoming-11

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

57/78 UTSKIFTING AV VEIVAKSELEN PÅ O-320-H MOTORER

Påbudet gjelder:

Avco Lycoming motorer modell O-320-H med følgende serienr. dersom ikke tidligere utført.

L-103-76, L-104-76, L-272-76, L-283-76, L-288-76, L-290-76, L-336-76, L-337-76, L-341-76, L-404-76, L-431-76, L-468-76, L-469-76, L-471-76, L-494-76, L-548-76, L-589-76, L-590-76, L-592-76, L-650-76, L-684-76, L-689-76, L-698-76, L-736-76, L-737-76, L-738-76, L-743-76, L-754-76, L-763-76, L-768-76, L-769-76, L-772-76, L-774-76, L-777-76, L-778-76, L-802-76, L-824-76, L-834-76, L-846-76, L-903-76, L-904-76, L-929-76, L-940-76, L-945-76, L-948-76, L-949-76, L-1054-76, L-1115-76, L-1119-76, L-1122-76 t.o.m. L-1129-76, L-1131-76 t.o.m. L-1134-76, L-1144-76, L-1156-76, L-1181-76, L-1186-76, L-1191-76, L-1200-76, L-1205-76, L-1207-76, L-1237-76, L-1255-76, L-1304-76, L-1305-76, L-1352-76, L-1354-76, L-1374-76, L-1375-76, L-1379-76, L-1460-76, L-1476-76, L-1489-76, L-1492-76, L-1513-76, L-1568-76, L-1577-76, L-1626-76, L-1630-76, L-1639-76, L-1644-76, L-1657-76, L-1658-76, L-1665-76, L-1668-76, L-1678-76, L-1679-76, L-1687-76, L-1693-76, L-1694-76, L-1697-76, L-1795-76, L-1796-76, L-1824-76, L-1825-76, L-1826-76, L-1870-76, L-1885-76, L-1934-76, L-2002-76, L-2007-76, L-2016-76, L-2025-76 t.o.m. L-2032-76, L-2041-76, L-2047-76, L-2065-76 t.o.m. L-2068-76, L-2071-76 t.o.m. L-2077-76, L-2148-76, L-2157-76, L-2159-76 t.o.m. L-2163-76, L-2165-76, L-2167-76, L-2168-76, L-2171-76, L-2174-76 t.o.m. L-2182-76, L-2189-76, L-2190-76, L-2191-76, L-2192-76, L-2198-76, L-2260-76, L-2293-76, L-2294-76, L-2308-76, L-2338-76, L-2339-76, L-2340-76, L-2343-76, L-2344-76, L-2350-76, L-2365-76, L-2556-76, L-2596-76, L-2635-76, L-2636-76, L-2637-76, L-2644-76, L-2666-76, L-2697-76, L-2728-76, L-2731-76, L-2758-76, L-2762-76, L-2763-76, L-2774-76, L-2777-76, L-2782-76, L-2784-76, L-2790-76, L-2816-76, L-2832-76, L-2842-76, L-2843-76, L-2845-76, L-2857-76, L-2914-76, L-2922-76, L-2924-76, L-2930-76, L-2932-76 t.o.m. L-2938-76, L-2942-76, L-2947-76, L-2948-76, L-2962-76, L-2963-76, L-2966-76, L-2975-76, L-2980-76, L-2985-76, L-2987-76, L-2988-76, L-2989-76, L-2992-76, L-3004-76, L-3010-76, L-3016-76, L-3034-76, L-3035-76, L-3041-76, L-3047-76, L-3063-76, L-3067-76, L-3068-76, L-3155-76, L-3170-76, L-3172-76, L-3240-76, L-3262-76, L-3288-76, L-3289-76, L-3291-76, L-3292-

forts.

11. april 1979.

76, L-3293-76, L-3295-76, L-3296-76, L-3308-76, L-3313-76, L-3319-76, L-3384-76, L-3395-76 t.o.m. L-3400-76, L-3403-76, L-3404-76, L-3406-76, L-3412-76, L-3413-76, L-3414-76, L-3428-76, L-3467-76, L-3551-76, L-4311-76, RL-114-76, RL-124-76, RL-133-76, RL-162-76, RL-176-76, RL-186-76, RL-205-76, RL-249-76, RL-254-76, RL-328-76, RL-332-76, RL-351-76, RL-367-76, RL-384-76, RL-408-76, RL-416-76, RL-418-76, RL-419-76, RL-435-76, RL-442-76, RL-443-76, RL-477-76, RL-510-76, RL-543-76, RL-550-76 RL-612-76, RL-652-76, RL-673-76, RL-695-76, RL-832-76, R. 1022-76, RL-1082-76, RL-1173-76, RL-1218-76, RL-2141-76.

Påbudet omfatter:

For å unngå svikt av veivakselen skal Avco Lycoming Service Bulletin No. 422 datert 24. mars 1978 eller senere revisjoner utføres.

Tid for utførelse:

Før første flyging etter 11. april 1979.

Referanser:

FAA AD 78-12-09

11. april 1979

R. Ullstang

R. Jacobsen

LUFTDYKTIGHETSPÅBUD
(LDP)

Motorer

Avco Lycoming-12

Med hjemmel i lov om luftfart av 16 desember 1960 §§ 214 og 43 jfr kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

4/79 UTSKIFTING AV DELER I BENDIX INNSPRØYTINGSFORGASSER

Påbudet gjelder:

Alle Avco Lycoming motorer utstyrt med følgende Bendix innsprøytings-forgassere:

Modell	Delnummer
RSA-5AB1	2524254-5
	2524712-2
RSA-5AD1	2524054-5
	2524147-7
	2524213-5
	2524291-5
	2524359-4
	2524450-3
	2524550-2
	2524673-2
	2524682-2
	2524742-2
	2524752-1
RSA-7AA1	2524347-4
RSA-10AD1	2524163-8
	2524163-7A
	2524757-1
RSA-10DB1	2524275-9
	2524649-3
RSA-10DB2	2524708-1
RSA-10ED1	2524273-5A
	2524273-6
	2524298-6
	2524491-3
	2524500-2A
	2524500-3
	2524693-2
	2524709-1

Påbudet omfatter:

For å unngå motorsvikt pga. for rik blanding forårsaket av svikt på "center body bellows seal assembly", skal denne samt "tube bushing" skiftes ut som angitt i "Accomplishment and Identification instructions" i gjeldende Bendix Energy Controls Division Service Bulletin No. RS-52 Rev. 2 revidert 12. mai 1978, No. RS-53 Rev. 2 revidert 12. mai 1978 og No. RS-54 Rev. 2 revidert 10. mai 1978 eller senere revisjoner.

15. februar 1979

forts.

4/79
forts.

Tid for utførelse:

Innen 10 timers gangtid etter 15. februar 1979.

Referanser:

FAA AD 78-23-10

7/79

UTSKIFTING AV MAGNETER

Påbudet gjelder:

Lycoming motormodeller O-235-L2C montert på Piper PA-38-112 modeller.

Påbudet omfatter:

For å unngå motorstopp skal følgende utføres:

Skift ut slick magnetmodeller 4050, 4051, 4052 eller 4081 med magnetmodeller 4150, 4151, 4152 eller 4181 med serienr. 8100001 og høyere, eller en tilsvarende godkjent del.

Tid for utførelse:

Magneter med en total gangtid mindre enn 75 timer:
Innen første flyging etter 15. februar 1979..

Magneter med en total gangtid på 75 timer eller mer:
Innen 50 timers gangtid etter 15. februar 1979.

Referanser:

FAA AD 78-25-01 og Avco Lycoming Service Bulletin No. 432.

R. Ullaug
R. Jacobsen

15. februar 1979

Motorer

Avco Lycoming-13a
Erstatter
Avco Lycoming-13

Med hjemmel i lov om luftfart av 16 desember 1960 [illegible] og Samferdselsdepartementets [illegible] 23 mars [illegible] fastsettes [illegible] følgende [illegible]

21/79 KONTROLL AV BRENNSTOFFMEMBRAN PÅ BENDIX BRENNSTOFFINJEKTOR

Påbudet gjelder:

Alle Lycoming motorer med Bendix brennstoffinjektor med nedenstående modell- og delnr.
Merk: thru leses som til og med.

Modell:	Delnr.:	Serienr.:
RSA-5AB1	2524254-4	63758 thru 65862
	2524712-1	63503 thru 66027
RSA-5AD1	2524054-4	62999 thru 66249
	2524147-6	65988 thru 65997
	2524171-4	64961 thru 65060
	2524213-4	61032 thru 66290
	2524291-4	63678 thru 65867
	2524297-3	64428 thru 64432
	2524307-3	64828 thru 66854
	2524335-3	65721 thru 66920
	2524359-3	62401 thru 65412
	2524450-2	61392 thru 65987
	2524550-1	64635 thru 65887
	2524673-1	63643 thru 64265
	2524682-1	65071 thru 65499
	2524723-1	61928 thru 65231
	2524469(B)	64915 thru 65338
RSA-10AD1	2524163-7	63742 thru 65720
	2524175-3	63399 thru 66941

Påbudet gjelder også alle brennstoffinjektorer modeller RSA-5AD1, RSA-5AB1 og RSA-10AD1 montert på Lycomingmotorer uansett delnr eller serienr og som er overhalt av Bendix godkjente verksteder eller av Lycoming i tidsrommet 1. april 1977 til 14. august 1978. Dessuten gjelder det også alle brennstoffinjektorer modeller RSA-5AB1, RSA-5AD1 og RSA-10AD1 montert på Lycomingmotorer overhalt etter 31. mars 1977 av andre verksteder enn de ovenfor nevnte og hvor brennstoffmembranet er skiftet ut med nytt med delnr 2529471.

Påbudet omfatter:

For å unngå motorstopp under flyging skal Bendix Energy Controls Division Service Bulletin No. RS-57 revisjon 1 og Avco Lycoming Service Bulletin No. 433A eller senere revisjoner utføres.

Forts
7-11-79

21/79 Tid for utførelse:

Innen 10 timers gangtid etter 29-10-79.

Referanseŕ:

FAA AD 79-04-05 Amendment 39-3570

22/79 MONTERING AV PERFORERT HYLSE I OLJEPÅFYLLINGSRØRET

Påbudet gjelder:

Lycomingmotorer modell 0-320-H2AD med serienr L-101-76 til og med L-1049-76.

Påbudet omfatter:

For å unngå feil montering av oljepeilepinnen med delnr LW-14784 eller LW-15481 skal oljepåfyllingsrørets forlengelse modifiseres som vist i Avco Lycoming Service Bulletin No 407A eller senere revisjoner.

Tid for utførelse:

Innen 50 timers gangtid etter 11. april 1979.

Referanser:

FAA AD 77-07-07 Amendment 39-3415 og Avco Lycoming Service Bulletin No 407A omhandler samme sak.

R. Ulltang

7-11-79

R. Jacobsen

LUFTDYKTIGHETSPÅBUD

(LDP)

Motorer

Avco Lycoming - 14a
Erstatter
Avco Lycoming-14

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 (fr. kgl res av 8 desember 1961 litra K og Samferdselsdepartementets bemyndigelse av 23 mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet

CANCELLED

23/80 UTSKIFTING AV ØVRE EKSOSFJÆRSETER OG HYDRAULISKE LØFTERE

Påbudet gjelder:

Avco Lycoming motormodell O-320-H

Påbudet omfatter:

For å unngå faren for motorhavari under flyging forårsaket ved bøyde støtstenger og skadede løftere, skal følgende utføres:

1. Skift øvre fjærseter på eksosventilene på motorer med serienr. til og med L-6182-76 og alle overhalt (remanufactured) av Lycoming før 19. mars 1979 som angitt i Avco Lycoming Service Bulletin no. 435 datert 14. mars 1979 eller senere revisjoner.

2. Foreta en visuell kontroll av oljesystemet for metallpartikler med særlig vekt på sugefilteret og det utvendige (full flow) oljefilteret. Det utvendige filteret skal åpnes og filterelementet brettes ut for kontroll.
Dersom metallpartikler blir funnet, skal løftere og kamaksel kontrolleres for skader og eventuelt skiftes ut.

Tid for utførelse:

Pkt. 1: Innen 50 timers gangtid etter 24. mars 1980.

Pkt. 2: Innen 50 timeres gangtid etter 24. mars 1980og deretter med 100 timers mellomrom.

Referanser:

FAA AD 80-04-03 Amendment 39-3692 og Avco Lycoming Service Bulletin No 435 omhandler samme sak.

24/80 KONTROLL AV KOPLING VEIVAKSEL - GEARKASSE

Påbudet gjelder:

Avco Lycoming motormodeller VO og TVO-435 og VO, IVO,TVO og TIVO-540.

forts.

18. april 1980

Motorer
Avco Lycoming-14a
Erstatter Avco Lycoming-14

forts.

24/80

Påbudet omfatter:

For å forhindre brudd på veivakselens flensbolter skal følgende utføres:

1. Kontroller at boltene mellom veivakselflensen og "transmission drive coupling" er trukket til med 15 ft-lbs i tiltrekkingsretningen. Dersom noen av boltene er trukket til med lavere moment, må anleggsflatene på de to flenser kontrolleres for sprekker, gnissing, sår, avlange bolthull og for overføring av metall fra den ene flaten til den andre. Veivakselen og "drive couplings" med ovenstående feil skal skiftes ut før første flyging.

2. Skift ut alle flensbolter. Mål alle bolthull i veivakselen og om nødvendig reparer som angitt i Avco Lycoming Service Instruction No 1209A eller senere revisjoner. Monter boltene som angitt i paragraf 5 i Service Instruction.

Tid for utførelse:

Motorer med en total gangtid på 550 timer eller mer, siden ny eller overhalt:

Innen 50 timers gangtid etter 18. april 1980 og deretter med 600 timers mellomrom.

Bolter som er kontrollert iflg. pkt. 1 uten at feil er funnet skal kontrolleres på nytt med 600 timers mellomrom til pkt. 2 er utført.

Referanser:

FAA AD 80-04-04 Amendment 39-3691, Emergency AD datert 13. mars 1980 og Avco Lycoming Service Instruction No. 1209A omhandler samme sak.

R. Ultang

18. april 1980

LUFTFARTSVERKET
(LDP)

Med hjemmel i lov om luftfart av 16. desember 1960 nr. 214 og 43 jfr. kgl. res. av 8. desember 1961, Ltra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

64/80 KONTROLL OG UTSKIFTING AV VENTILFJÆRSETER.

Påbudet gjelder:

Avco Lycoming motorer modell O-320-H med serienr.L-101-76 til og med L-7608-76, O-360-E med serienr. L-101-77 til og med L-455-77, LO-360-E med serienr. L-101-72 til og med L-451-72 samt alle fabrikkoverhalte motorer sendt fra fabrikken før 16. november 1979.

Påbudet omfatter:

For å forhindre ventilsvikt p.g.a. tidligere innmonterte ventilfjærseter utsatt for feil herding skal følgende utføres:

1. Dersom øvre fjærseter er merket med bokstavene "KLI" som vist i Service Bulletin No.447 er ingen tiltak nødvendig.

2. Dersom fjærsetene ikke er merket i henhold til pkt. 1, skal disse skiftes ut med fjærseter merket med delnr. LW-16475 og bokstavene"KLI" som vist i Service Bulletin No 447 og monteres i henhold til SB 435 eller senere revisjoner eller Lycoming Overhaul Manual delnr. 60294-9.

Dersom LDP 23/80 pkt. 1. eller Avco Lycoming S.B.447 datert 11. januar 1980 er utført tidligere, gjelder ikke denne LDP.

Tid for utførelse:

Innen 25 timers gangtid etter 7.11.1980.

Referanser:

FAA AD 80-14-07 Amendment 39-3826

105/80 KONTROLL AV STØTSTENGER

Påbudet gjelder:

Avco Lycoming modell O-235 montert på Piper PA-38-112, Cessna 152, Gulfstream American AA-1 C, Beech 77, Bellanca 7ECA, men ikke begrenset til disse. Påbudet gjelder serienr. L-12500-15 til og med L-20676-15 samt alle motorer "remanufactured" mellom 10.12.76 og 8.11.79 og motorer hvor støtstengene er skiftet ut etter 10.12.76 ved overhaling eller av andre grunner. Untatt er støtstenger med delnr. 73806 som kan identifiseres ved at bokstaven K eller etterfølgende bokstaver, koden T-T, -85 eller symbolet # er stemplet på støtstangen som vist i Lycoming Service Bulletin No.453 eller senere revisjoner. Forts.

Motorer
Avco Lycoming-15b
Erstatter Avco
Lycoming-15a

Forts..
105/80 Påbudet omfatter:

For å forhindre motorbortfall pga sviktende støtstenger skal motoren kontrolleres som følger:

1. Kontroller støtstengene for løse kuleendestykker og tegn til buling eller revning av støtstanghylsene. Kontroller at den totale lengde ikke er mindre enn 11 17/32 tommer. Dersom feil blir funnet, skal disse rettes før første flyging. Luftdyktige støtstenger monteres som vist i Lycoming Service Instruction nr. 1388A og 1068A eller senere revisjoner.

2. Kontroller ventilklaringene som vist i ovennevnte Service Instructions. Dersom klaringene har øket mer enn .015 tomme siden siste kontroll skal støtstengene tas ut og kontrolleres for skader og riktig lengde som vist i pkt 1.

Tid for utførelse:

Pkt 1: Innen første flyging etter 22-12-80.
Revisjoner gjort i denne utgave gjelder fra
Pkt 2: Innen 25 timers gangtid etter at pkt 1 er utført og deretter med 25 timers mellomrom inntil støtstengene er skiftet ut som angitt i avsnitt "Påbudet gjelder".

Referanser:

FAA emergency AD mottatt 1.12.80

18-2-81

R. Ullang

LUFTFARTSVERKET
Hovedadministrasjonen
Avd. for luftfartsinspeksjon
Postboks 18, 1330 Oslo lufthavn

Telefon: Oslo (02) ~~12 13 40~~
AFTN : ENFBYE
Tlgr. : CIVILAIR OSLO
Telex : 17011 ldal n

LUFTDYKTIGHETSPÅBUD (LDP)

Motorer

Avco Lycoming-16

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

65A/81 MODIFIKASJON AV OLJEPUMPEN

Påbudet gjelder:

Avco Lycoming modeller O-235, O-290-D, -D2, O-320, IO-320, AIO-320, AEIO-320, LIO-320, O-340, O-360, IO-360, AIO-360, AEIO-360, HIO-360, HO-360, LO-360, LIO-360, TIO-360, TO-360, VO-360, IVO-360, O-540 og IO-540.

Følgende modeller er unntatt:

O-320-H2AD, O-360-E1A6D, LO-360-E1A6D, TO-360-E1A6D, LTO-360-E1A6D, IO-540-K1A5, IO-540-R1A5, IO-540-S1A5 og O-540/IO-540 med oljepumpe med stor kapasitet og dobbelmagnet påstemplet "5D" etter modellnummeret.

Påbudet omfatter:

For å forhindre svikt av oljepumpen som har "Sintered Iron Impeller" skal Avco Lycoming Service Bulletin No 454 datert 10. april 1981 og 455A datert 24. april 1981 eller senere revisjoner utføres.

Tid for utførelse:

Innen 25 timers gangtid etter 15.12.81. For motorer i avsnittet "Påbudet gjelder" som ikke er tatt med i SB 454 og 455A og som har "Sintered"impeller skal modifikasjonen utføres som vist i SB 456 datert 21. august 1981 eller senere revisjoner innen en total gangtid på 2000 timer siden ny eller overhalt eller innen 100 timers gangtid etter 31.12.81 for motorer med høyere gangtid mellom overhaling enn 2000 timer siden ny eller overhalt.

Anmerkning: Opplysninger om hva slags impeller oljepumpen har, finnes i SB 381C og 385C (LDP 38/75). Motorer som ble produsert før 1970 har ikke "Sintered" tannhjul.

Referanser:

FAA AD 81-18-04 R2 og Avco Lycoming SB 454 og 455A omhandler samme sak.

13.9.82.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

9/84 *UTSKIFTING AV MEMBRANSTAMME I "FUEL INJEKTOR"*

Påbudet gjelder.

Avco Lycoming motorer: IO-540-G1B5, -G1C5, -G1D5, -K1A5, -K1A5D, -K1B5, -K1C5, -K1D5, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1J5, -K1J5D, -M1B5D, -S1A5, -AA1A5.

AEIO-540-L1B5D

TIO-540-F2BD, -J2BD, -N2BD, -S1AD, -U2A, -V2AD

LTIO-540-F2BD, -J2BD, -N2BD, -U2A, -V2AD

TIO-541-E1A4, -E1B4, -E1C4

TIGO-541-E1A

Utstyrt med: RSA-10DB1, RSA-10DB2, RSA-10ED1 og RSA-10ED2 "fuel injektor", nærmere identifisert i Bendix Service Bulletin RS-88, inkludert tillegg 1, avsnitt 1.A.(1), (2) og (3).

Påbudet omfatter:

For å unngå motorsvikt pga materialtretthet i "fuel injektorens" membranstamme, skift ut membransett (delnr. 2539806) med nytt sett (delnr. 2541803). Kalibrer dernest drivstofftilførselen og korriger identifikasjonsplaten i henhold til avsnitt 2 i "Accomplishment Instructions" i Bendix Controls Division Service Bulletin RS-85.

Tid for utførelse:

Innen 50 timers gangtid etter 10.11.84.

Referanse:

FAA AD 83-22-04

LUFTFARTSVERKET
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

AVCO LYCOMING - 17

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

2/86 KONTROLL AV VEIVAKSELENS PROPELLFLENS

Påbudet gjelder:

Avco Lycoming AIO-360-A1A, -A2A, -A1B, -A2B, -B1B motorer med serienr. opp til, og med, L-257-63A.

AEIO-360-A1A, -A1B, -A1B6, -A2A, -A1C, -A2C, -A1D, -A1E, -A2B, -B1B, -B1D, -B1F, -B1F6, -B2F, -B2F6, -B4A, -H1A motorer med serienr. opp til, og med, L-23521-51A.

Anm.: Påbudet gjelder også alle ovennevnte motortyper levert 0-stilt fra AVCO Lycoming 1.6.83, eller tidligere; uansett serienummer.

Påbudet omfatter:

For å unngå separasjon av veivakselens propellflens under flyging skal følgende utføres:

1. Kontroller veivakselflensen som beskrevet i Inspection Procedure I i AVCO Lycoming Service Bulletin nr. 465A, eller senere revisjoner. Bruk forstørrelsesglass med minst 10x forstørrelse.

2. Foreta magnafluxkontroll som beskrevet i Inspection Procedure II i SB 465A, eller senere revisjoner.

3. Kontrollene påkrevet i pkt. 1 og 2 faller bort dersom veivakselen skiftes ut med modifisert type som beskrevet i Procedure III i SB 465A.

Tid for utførelse:

Pkt. 1: Innen 25 timers gangtid etter 15.1.86, og deretter gjentatte kontroller med 25 timers mellomrom.

Pkt. 2: Innen 25 timers gangtid etter 15.1.86, og deretter gjentatte kontroller med 100 timers mellomrom.

Pkt. 3: Før første flyging dersom sprekker oppdages.

Referanser:

FAA 84-13-05

15.1.86

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

55/86 *KONTROLL AV REDUKSJONSGEAR*

Påbudet gjelder:

Lycoming GO-435-C2A, GO-480,GSO-480 og IGSO-480 med "Spline" reduksjonsgear 72875 og 72879.

GO-480 og GSO-480 med "Flange" reduksjonsgear 69346, 70412 og 71803.

IGO-540 og IGSO-540 med reduksjonsgear 72782, 74900, 75679, 76494 og 77731.

Påbudet omfatter:

Kontroll av reduksjonsgear skal foretas i henhold til Lycoming Service Bulletin nr. 319B og Service Instruction nr. 1210B eller senere revisjoner av disse.

Tid for utførelse:

For GO-435, IGO-540 og IGSO-540:

Dersom ikke allerede utført; innen 600 timers total gangtid eller innen 100 timers gangtid etter 30.3.86, det som kommer sist.

For GO-480, GSO-480 og IGSO-480:

Dersom ikke allerede utført; innen 700 timers total gangtid eller innen 100 timers gangtid etter 30.3.86, det som kommer sist.

Referanser:

FAA AD 69-25-08, revidert 1.7.85.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON
LYCOMING - 18

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

34A/88 VENTILMEKANISME

Påbudet gjelder:

Textron Lycoming stempelmotorer av følgende modeller og serienumre:

MODELL	SERIENUMMER
O-320-A og -E	L-50154-27A t.o.m. L-50175-27A, L-50177-27A t.o.m. L-50188-27A.
O-320-B og -D	L-13971-39A, L-13972-39A, L-13975-39A, L-13976-39A, L-13980-39A, L-13983-39A t.o.m. L-14235-39A, L-14242-39A, L-14243-39A, L-14249-39A t.o.m. L-14415-39A, L-14421-39A, L-14428-39A.
IO-320	L-5890-55A t.o.m. L-5897-55A.
O-360	L-31144-36A t.o.m. L-31146-36A, L-31150-36A t.o.m. L-31357-36A, L-31363-36A t.o.m. L-31507-36A.
IO-360-B	L-24152-51A, L-24163-51A, L-24170-51A, L-24248-51A, L-24337-51A t.o.m. L-24344-51A, L-24352-51A.
AEIO-360-B	L-24168-51A, L-24195-51A, L-24337-51A t.o.m. L-24344-51A, L-24357-51A.

De O-540 serienummer som følger har eller har ikke bokstaven "A" som del av "suffix" i serienummeret på motorens dataplate.

O-540	L-23946-40A, L-23949-40A t.o.m. L-24059-40A, L-24061-40A.
IO-540-C4B5	L-22974-48A, L-22975-48A, L-23010-48A t.o.m. L-23016-48A, L-23038-48A, L-23039-48A, L-23050-48A t.o.m. L-23052-48A, L-23118-48A, L-23138-48A, L-23193-48A, L-23195-48A, L-23196-48A, L-23328-48A, L-23331-48A, L-23348-48A, L-23349-48A, L-23352-48A, L-23353-48A, L-23372-48A, L-23375-48A, L-23376-48A.

forts;

5.2.90

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utføreisen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

34A/88 forts;		
	IO-540-C4D5D	L-22920-48A, L-22923-48A, L-22924-48A L-22958-48A t.o.m. L-22963-48A, L-23022-48A t.o.m. L-23027-48A, L-23079-48A t.o.m. L-23082-48A, L-23088-48A, L-23095-48A t.o.m. L-23099-48A, L-23148-48A t.o.m. L-23153-48A, L-23165-48A t.o.m. L-23180-48A, L-23237-48A t.o.m. L-23239-48A, L-23264-48A t.o.m. L-23273-48A, L-23307-48A t.o.m. L-23316-48A, L-23358-48A, L-23359-48A.
	IO-540-D4A5	L-23089-48.
	IO-540-V4A5D	L-22943-48A t.o.m. L-22945-48A, L-22953-48A t.o.m. L-22957-48A, L-23061-48A t.o.m. L-23063-48A.
	IO-540-W1A5D	L-22964-48A, L-22965-48A, L-22976-48A t.o.m. L-22979-48A, L-23020-48A, L-23021-48A, L-23033-48A, L-23034-48A, L-23036-48A, L-23040-48A t.o.m. L-23042-48A, L-23056-48A, L-23057-48A, L-23067-48A, L-23074-48A, L-23090-48A t.o.m. L-23094-48A, L-23139-48A, L-23154-48A, L-23181-48A, L-23192-48A, L-23197-48A t.o.m. L-23199-48A, L-23223-48A, L-23326-48A, L-23327-48A, L-23346-48A, L-23347-48A.
	IO-540-W3A5D	L-22918-48A, L-22966-48A, L-22967-48A, L-23350-48A, L-23351-48A.
	AEIO-540-D	L-22927-48A, L-22994-48A, L-22995-48A, L-23035-48A, L-23037-48A, L-23043-48A, L-23044-48A, L-23065-48A, L-23066-48A, L-23075-48A t.o.m. L-23077-48A, L-23100-48A, L-23101-48A, L-23108-48A t.o.m. L-23110-48A, L-23114-48A, L-23127-48A, L-23135-48A, L-23143-48A t.o.m. L-23147-48A, L-23159-48A t.o.m. L-23164-48A, L-23189-48A t.o.m. L-23191-48A, L-23200-48A, L-23201-48A, L-23232-48A, L-23233-48A, L-23245-48A, L-23259-48A, L-23260-48A, L-23274-48A t.o.m. L-23294-48A, L-23329-48A, L-23330-48A, L-23343-48A, L-23344-48A, L-23368-48A, L-23369-48A, L-23373-48A.
	TIO-540-AA1AD	L-8753-61A, L-8782-61A, L-8783-61A, L-8837-61A, L-8845-61A.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON LYCOMING - 19

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

134A/88

forts; TIO-540-AB1AD L-8751-61A, L-8752-61A, L-8758-61A, L-8763-61A t.o.m. L-8765-61A, L-8777-61A t.o.m. L-8779-61A, L-8784-61A, L-8785-61A, L-8788-61A t.o.m. L-8790-61A, L-8798-61A t.o.m. L-8800-61A, L-8803-61A t.o.m. L-8806-61A, L-8813-61A t.o.m. L-8816-61A, L-8821-61A t.o.m. L-8824-61A, L-8833-61A t.o.m. L-8836-61A.

Påbudet gjelder også alle følgende stempelmotorer av parallellventil type gjenoppbygd eller overhalt i tidsrommet f.o.m. 1.juli 1985 t.o.m. 8.oktober 1986, eller motorer som har fått installert et P/N LW-18790 "Rocker arm assembly" sendt fra AVCO Lycoming Textron Williamsport Division i det samme tidsrom:

MODELL

O-320 serien unntatt O-320-H, IO-320 serien, AIO-320 serien, AEIO-320 serien, LIO-320 serien, O-340 serien, O-360 serien unntatt O-360-E, IO-360-B, -E, -F serien, AEIO-360-B, -H serien, HO-360 serien, HIO-360-B serien, VO-360 serien, IVO-360 serien, O-540 serien, IO-540-C, -D, -J, -N, -R, -T, -V, -W serien, AEIO-540-D serien, TIO-540-C, -E, -G, -H, -K, -AA, -AB serien og LTIO-540-K.

Anm.: Ventilmekanismer som omfattes av denne LDP er identifisert med bokstaven "B". (Ref. AVCO Lycoming Textron Service Bulletin (SB) No. 477A, side 4, paragraf 6.) Alle nye og gjenoppbygde motorer send fra AVCO Lycoming Textron, Williamsport division, og alle overhalte motorer sendt fra AVCO Lycoming Textron Service Center Montoursville, etter 8.10.86, omfattes ikke av denne LDP.

Påbudet omfatter:

For å unngå mulig svikt i vippearmer skal "Rocker arm assembly" P/N LW-18790 inspiseres, repareres eller skiftes ut i henhold til instruksjoner gitt i AVCO Lycoming Textron SB No. 477A, Section 1 til og med 9, datert 16.02.87, eller senere revisjoner.

Anm.: Textron Lycoming SB No. 477A, Supplement No. 1, datert 12.10.88, endrer de berørte modeller i samsvar med denne LDP, inspeksjons- og bearbeidingsprosedyrer er ikke endret.

forts;

5.2.90

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

|34A/88
forts;

Tid for utførelse:

Dersom ikke allerede utført:

Innen 25 flytimer etter 5.2.90.

Anm: For "Rocker arm assemblies" som enda ikke er installert i en motor, skal påbudet utføres før installering.

Referanse:

FAA AD 87-10-06 R1

LUFTFARTSVERKET
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LUFTDYKTIGHETSPÅBUD
(LDP)

MOTORER

AVCO LYCOMING - 20

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

135/88 VENTILLØFTERE

Påbudet gjelder:

AVCO Lycoming Textron motorer:

O-320-H serienummer t.o.m. L-6182-76, samt alle motorer overhalt (gjenoppbygd av Lycoming) før 19.03.79.

LO-360-E, TO-360-E og LTO-360-E, alle serienummer og ventilløfterutførelser.

Påbudet omfatter:

1. For å forebygge motorsvikt p.g.a. bøyde støtstenger på O-320-H serien skal tiltak utføres i samsvar med instuksjoner gitt i AVCO Lycoming Textron Service Bulletin No. 435, datert 17.03.79, eller senere revisjoner.

2. For å motvirke unormalt stor slitasje og forurensing av oljesystemet p.g.a. avskalling i de hydrauliske ventilløftere på O-320-H, O-360-E, LO-360-E, TO-360-E og LTO-360-E motorer skal følgende tiltak utføres:

   a) Tilsett Lycoming P/N LW-16702 oljetilsetning i samsvar med instruksjoner gitt i Lycoming Service Bulletin No. 446B.

   b) Inspisér oljesystemet etter metallpartikler.
   Visuell kontroll etter metallpartikler i oljen, undersøk motoroljens "Suction screen" etter metallpartikler. Kontroller det utvendige "Full flow" oljefilter ved å kutte det åpent slik at filterinnsatsen kan brettes ut og undersøkes.
   Hvis metallpartikler blir funnet ved denne undersøkelsen, skal kamakselens kammer og alle hydrauliske løftere undersøkes for slitasje eller avskallet metall.
   Kamaksler og løftere som har slike indikasjoner skal skiftes ut.
   Eventuelle funn av metallpartikler skal føres inn i "Engine Log Book".

Anm.: Hvis motoren har "T mod" modifikasjon (hydrauliske ventilløftere med større diameter) skal funn av metallpartikler rapporteres til Luftfartsverket, Avd. for luftfartsinspeksjon, Normkontoret, inneholdende følgende opplysninger:

Motormodell og serienummer,
Total gangtid og gangtid etter overhaling,
Total gangtid på kamaksel og ventilløftere,

forts;
22.10.88

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP s nummer.

35/88 forts:

Total gangtid etter at oljetilsetning først ble brukt, samt Visuell tilstand på kammens og Ventilløfternes kontaktflater

Motorer med "T mod" modifikasjon kan identifiseres ved at bokstaven "T" er slått inn som "suffix" på motorens dataplate. (Eksempel: L-6005-76T).

Denne LDP erstatter og opphever LDP 23/80.

Tid for utførelse:

1. Innen 50 flytimer etter 22.10.88.

2. a) Ved neste oljeskift, eller innen 50 flytimer etter 22.10.88., det som inntreffer først.

   b) Innen 50 flytimer etter 22.10.88, og deretter ved hvert oljeskift med intervaller ikke overstigende 100 flytimer.

Referanse:

FAA AD 80-04-02 R2

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON
LYCOMING - 21

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

36/89 SVIKT I DRIVSTOFFINNSPRØYTNINGSUTSTYR

Påbudet gjelder:

Textron Lycoming HIO-360-D1A motorer som har Bendix modell RSA-7AA Servo Fuel Injectors, delnr. 2524347, med følgende serienr.:

70001101	*t.o.m. 70001110*	
70001401	*t.o.m. 70001404*	
70001602	*t.o.m. 70001604*	
70001701	*t.o.m. 70001710*	
70007001	*t.o.m. 70007010*	
70007101	*t.o.m. 70007110*	*(unntatt 70007107 og 70007108)*
70010104	*t.o.m. 70010110*	*(unntatt 70010107)*
70013701	*t.o.m. 70013710*	*(unntatt 70013706)*
70013802	*t.o.m. 70013810*	*(unntatt 70013803 og 70013809)*
70013903	*t.o.m. 70013910*	*(unntatt 70013909)*
70014001	*t.o.m. 70014009*	*(unntatt 70014002, 70014005, 70014007 og 70014008)*
70014101	*t.o.m. 70014104*	*(unntatt 70014102 og 70014103)*

Serienr. etterfulgt av bokstaven "P" er unntatt fra denne LDP.

Anm.: *Motorer med denne type drivstoffinnsprøytning er installert i Schweizer (Hughes) 269C, men ikke nødvendigvis begrenset til denne helikoptertype.*

Påbudet omfatter:

For å unngå tap av motorkraft eller total motorsvikt skal følgende utføres:

1. Skift de berørte innsprøytningsenheter med luftdyktige enheter som har annet serienr. eller som er kontrollert og reparert i henhold til Precision Airmotive Service Information Letter nr. 31 rev. 1, datert 26.5.89.

   Anm.: *Innsprøytningsenheter kan retureneres til Precision Airmotive Corp. eller til verksteder spesielt autorisert av denne*

   Kopi av Precision Airmotive Service Information Letter nr. 31 rev. 1, samt oversikt over de spesielt autoriserte verksteder kan fås ved henvendelse til Luftfartsverket, Avd. for luftfartsinspeksjon, LF2N.

forts:

15.10.89

|36/89
forts;

2. Installer reparerte eller ikke berørte enheter i henhold til Precision Airmotive Service Information Letter nr. 31 rev. 1, som følger:

   a) Løs rørene fra innsprøytningsdysene (fuel injection nozzles).

   b) Løs innmaten (insert) forsiktig fra dysene og identifiser slik at disse senere blir montert korrekt.

   c) Bruk REN trykkluft til å renspyle alle rør, innmat og dyser (fortsatt installert i sylinderen).

   d) Kontroller visuelt at innmaten til dysene er ren.

   e) Monter "fuel injektor" og koble til innsprøytningsrørene til "injektor", uten å tilkoble dysene.

   f) Gjennomspyl innsprøytningssystemet med drivstoff gjennom rørene i 10 sekunder ved å slå på tankpumpen med "injector" i full rik og full "throttle".

   g) Monter innleggene korrekt i munnstykkene og trekk til rør-mutrene med 40-50 in. lbs moment.

   h) Foreta justering av blandingsforhold og tomgang i henhold til luftfartøyfabrikantens Maintenance Manual og/eller aktuelle servicemeddelelser.

   Anm.: Precision Airmotive Service Bulletin (SB) PRS-92; Precision Airmotive SIL nr. 31 Rev. 1, datert 26.5.89; Schweizer Aircraft Corp. Special Advisory, datert 26.5.89; Schweizer Aircraft Corp. Service Notice -N-202; og Textron Lycoming Service Bulletin nr. 485; omhandler samme sak.

Tid for utførelse:

Innen 5 timers gangtid etter 15.10.89, dersom ikke allerede utført.

Referanse:

FAA AD 89-13-02

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LUFTDYKTIGHETSPÅBUD
(LDP)

MOTORER

TEXTRON
LYCOMING - 22

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

022A/90 KONTROLL AV OLJERØR

Påbudet gjelder:

Textron Lycoming: Alle firesylindrede motorer, produsert før 1.1.90 med bakmontert propellregulator og utvendig oljerør.

Påbudet omfatter:

Grunnet tilfeller der det utvendige oljerøret har revnet, skal følgende tiltak utføres:

1.1 Kontroller det utvendige oljerøret for propellens "Governor" for gnissingsskader, sprekker og oljelekkasje langs hele rørets lengde samt tilkoblingene i begge ender. Verifiser at de to forede klamre eller klips er på plass som vist i figur 1 i Bilag 1 til denne LDP.

1.2 Dersom røret er i spenn, ligger an mot andre komponenter, klamrene ikke er korrekt installert, eller det er lekkasjer eller skader på røret, skal oljerøret med tilkoblinger skiftes ut med nye deler selv om delene ikke har synlige skader. Referer til figur 1 i Bilag 1 til denne LDP for identifikasjon av deler, "routing" av røret og plasseringen av klammer. Festene på veivkassen og propellregulatoren må skiftes ut dersom de er skadet eller laget av aluminium.

2.1 Fjern enhver oljerørsenhet som har integrerte festemutre i aluminium, og installér en oljerørsenhet med tilsvarende deler i rustfritt stål. Skift ut alle aluminiumsfester på veivkassen og propellregulatoren med nye av stål, som vist på figur 1 i Bilag 1 til denne LDP.

Anm.: Festemutrene er komponenter som inngår i regulatorens oljerørsenhet. Disse er blitt endret av Textron Lycoming fra aluminium til stål uten at oljerørenhetens delnummer er blitt endret. Aluminiumsmutre kan identifiseres ved at de har en blåfarvet, anodisert overflate. Festemutrene såvel som "Elbows/Nipples" kan også identifiseres ved hjelp av en magnet for å skille aluminium fra stål.

3. Alternativt til pkt. 1.2 og 2.1 i denne LDP kan det installeres "fittings" av stål og brannsikker (fire resistant) fleksibel slange som tilfredstiller kravene i FAA Technical Standard Order TSO-C53a Type D. Disse må installeres i henhold til Bilag 2 til denne LDP.

forts; 05.07.91

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

022A/90
forts;

Anm.: Ytterligere veiledning om installasjon i henhold til pkt. 3 i denne LDP finnes i FAA AC 43.13-1A, Chapter 10.

Tid for utførelse:

Dersom ikke allerede utført:

Pkt.1 : Innen 25 flytimer etter 10.05.90.

Pkt.2 evt. 3: Ved neste motoroverhaling eller demontering av regulatorens oljerørsenhet , det som kommer først. Dog ikke senere enn 1.5.92.

Referanse:

FAA AD 90-04-06 R1

APPENDIX 1

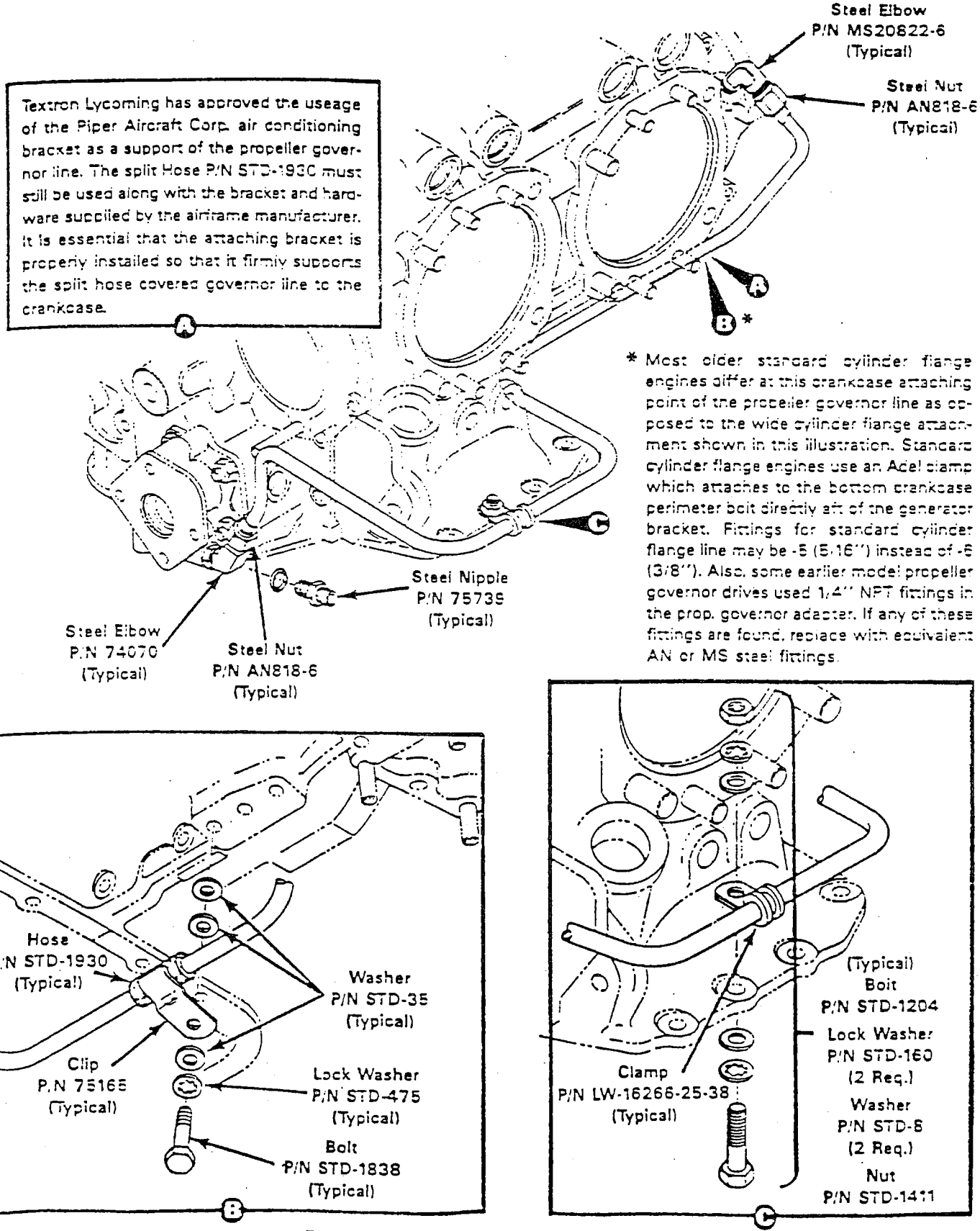

Figure 1. Propeller Governor Line Support

4 90-04-06 R1

ADDENDIX 2

If -5 (5/16") fittings have been installed on some standard cylinder flange crankcase model engines. the propeller governor drive fitting and front crankcase fitting must be changed to the appropriate steel fitting to accommodate the new -6 (3/8") line. When re-installing new stainless steel tube assembly, appropriate -5 steel fittings must be re-installed.

CAUTION

IT IS MANDATORY THAT THIS FLEXIBLE HOSE BE REPLACED AT EACH OVERHAUL.

When this engine modification is accomplished, Textron Lycoming recommends that a copy of the approved FAA Form 337 — plus the proper logbook entry become a permanent part of the aircraft records.

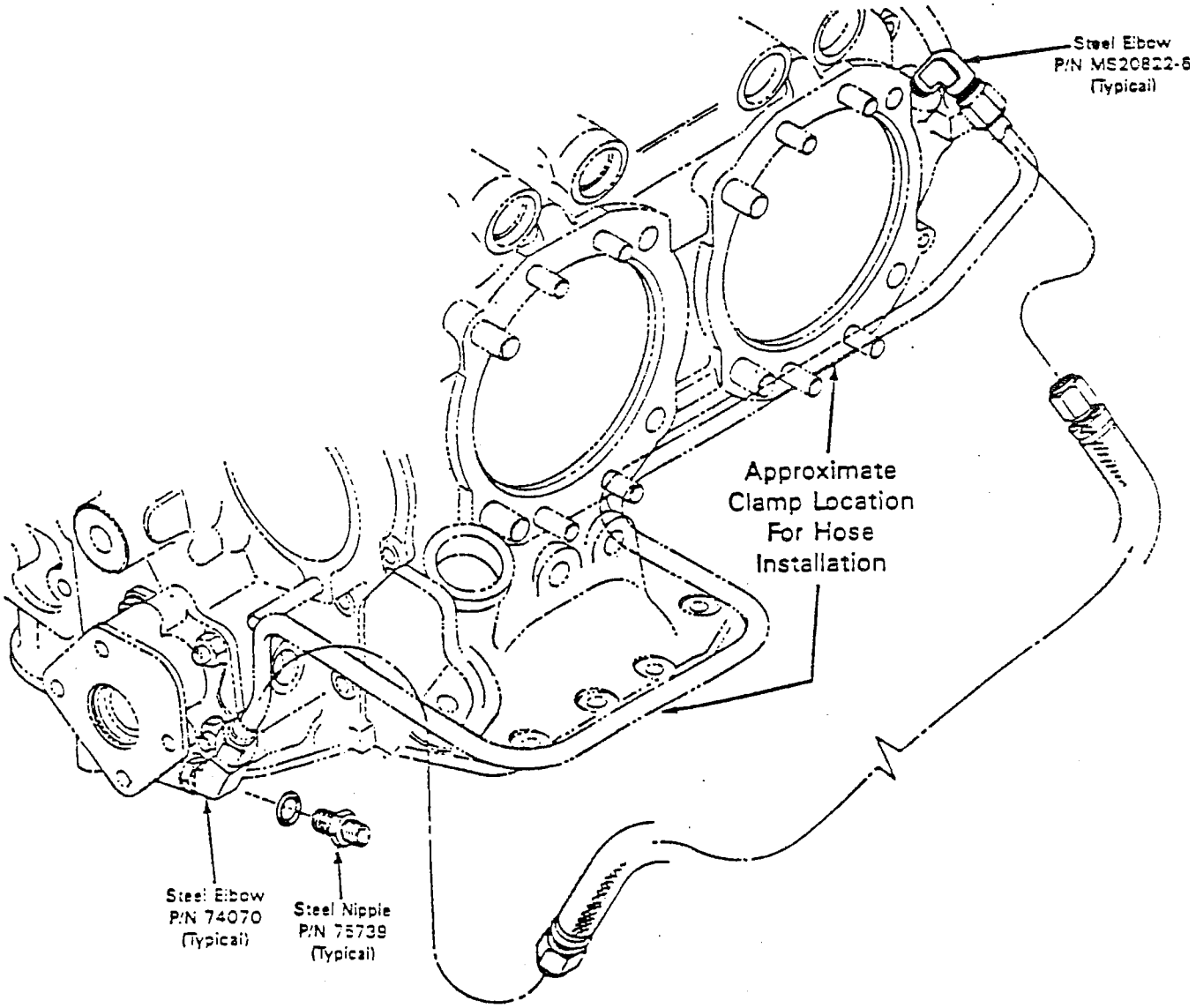

Figure 1. Routing, Fittings and Clamping Detail

INSTALLASJONSBESKRIVELSE:

1. Fastslå korrekt lengde på slangen for hver enkelt installasjon.

2. Skarpe bøyer er ikke tillatt. Sikre at det ikke oppstår "knekker" når slangen legges og klamres.

3. Slangen må ikke legges nær varmekilder, så som deler av eksossystemet.

4. Slangen skal klamres kun til motoren (og ikke til noen skrogdeler) på minst to steder.

5. Slangen må ikke klamres til "drain back tubes" på sylinderhodet.

6. Påse at ikke slangen kan komme i klem eller bli strukket etter at installasjonen er utført. Start opp motoren og stans den igjen. Påse at motorbevegelsene ikke forårsake at slangen klemmes eller strekkes.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORDREVNE LUFTFARTØY

TEXTRON LYCOMING - 23

Med hjemmel om lov om luftfart av 11. juni 1993 kap. IV § 4-1 og kap. XV § 15-4, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

91-015A DRIVSTOFFPUMPENS UTLUFTING

Påbudet gjelder:

Følgende Textron Lycoming-motorer:

TIO-360 serien; til og med serienr. L-215-64

TIO-540 serien; til og med L-9245-61/61A (unntatt TIO-540-AE2A motorer hvor FAA AD 89-15-10, eller tilsvarende myndighetspåbud er utført).

LTIO-540 serien; til og med serienr. L-2911-68A

TIGO-541 serien; til og med serienr. L-780-62

Alle motorer i TIO-541 serien

Alle motorer i TIVO-541 serien

Påbudet gjelder også alle ovennevnte motorer som er overhalt eller totalrestaurert, og levert fra fabrikken før 15.11.90.

Påbudet omfatter:

Svikt i drivstoffpumpens membran kan føre til stor drivstofflekkasje til motorens induksjonssystem. Spesielt ved bruk av luftfartøyets boosterpumpe(r) kan dette medføre over-rikt blandingsforhold som igjen resulterer i reduksjon av motoreffekten, eller motorsvikt.

Derfor skal lekkasjekontroll av drivstoffpumpen og utskifting av «fuel pump vent fitting» utføres i henhold til Textron Lycoming Service Bulletin 497 (datert 15.11.90), eller Service Bulletin 494 (datert 01.11.90) eller senere revisjoner utføres.

Dersom utskifting av drivstoffpumpen er påkrevet i henhold til pkt. A.2. i servicemeddelelsen, skal følgende utføres i tillegg:

1. Repeter lekkasjekontrollen beskrevet i pkt. A.2. på den nye pumpen før slangen kobles til drivstoffpumpens utlufting.

01.12.94

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

Anm.: Textron Service Instruction 1446 omhandler samme sak.

Tid for utførelse:

Dersom ikke allerede utført:

Lekkasjekontroll: Innen 15 timers gangtid etter 05.07.91.

Utskifting av «vent fitting»: Innen 50 timers gangtid etter 05.07.91

Referanse:

FAA AD 91-08-07.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON
LYCOMING - 24

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43 jfr. kgl. res. av 8. desember 1961, litra K og Samferdselsdepartementets bemyndigelse av 23. mars 1964 fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

92-001 KONTROLL OG MODIFIKASJON AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming; alle direktedrevne stempelmotorer. Unntatt: ~~O-xxx-H~~, O-320-H, O-360-E, LO-360E, TO-360-E, LTO-360-E og TIO-541 seriene.

Påbudet omfatter:

For å hindre at festebolten til tannhjulsdrevet i bakre ende på veivakselen løsner eller svikter, skal følgende tiltak utføres:

1. Kontroller forsenkningen for drevets styreflens i bakre ende på veivakselen, styrepinnen, festebolten, låseplaten, gjengene i og veivakseldrevet for slitasje, "galling", "fretting" og korrosjon. Dette skal skje i samsvar med Textron Lycoming Service Bulletin (SB) Nr. 475, revisjon A, datert 16.07.90.

   Anm.: Galling: Tilstedeværelse av metall fra en del som sitter igjen på en annen del; oppstår ved dårlig smurte overflater som er i glidekontakt. Resultater fra lokale områder der smøring er forsvunnet og det oppstår friksjon, høy varme og sammensmelting.
   Fretting: Metall som på grunn av periodisk friksjon er slitt i et bølgete mønster.

2. Reparer, bearbeid eller bytt ut de deler som er nevnt i punkt 1 i denne LDP før første flyging etter 03.03.92 dersom disse er ødelagte eller utslitte.

2.1 Reparer og bearbeid diameteren på forsenkningen i bakre ende av veivakselen i overensstemmelse med Textron Lycoming SB Nr. 475, revisjon A, datert 16.07.90. Dessuten skal styrepinnen byttes ut med en luftdyktig i riktig størrelse som beskrevet i tabell 1 i ovennevnte SB.

2.2 Kontroller at gjengene i hullet for festebolten er rene og hele. Dersom gjengene er skadd skal veivakselen byttes ut med en luftdyktig eller repareres på et verksted som er godkjent for å utføre slike reparasjoner.

2.3 Kontroller at den forsenkede flaten der drevet er montert til veivakselen er helt; uten "galling" og "fretting". Skader som dette lar seg ikke reparere.

2.4 Dersom diameteren på forsenkningen i bakre ende av veivakselen er for stor, skal den modifiseres i samsvar med Textron Lycoming SB Nr. 475, revisjon A, datert 16.07.90, seksjon 3.

03.03.92

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDP's nummer.

e s trykk-Oslo

92-001
forts;

2.5 Kontroller at veivakseldrevets styreflens har tre bueformede skår med 0.75 inches radie slik som vist på figur 5 i Textron Textron Lycoming SB Nr. 475, revisjon A, datert 16.07.90. Monter drevet på veivakselen og bruk ny festebolt og låseplate. Kontroller at drevets styreflens seter mot veivakselen som beskrevet i Textron Lycoming SB Nr. 475, revisjon A, datert 16.07.90, seksjon 6 og figur 6.

Tid for utførelse:

- Ved hver motoroverhaling.
- Etter "propeller strike".
- Etter plutselige motorstopp.
- Ved hver gang det kreves "gear train repair".

Anm.: I denne LDP defineres "propeller strike" som plutselige motorstopp, tap av blad eller tap av bladtipp.

Referanse:

FAA AD 91-14-22.

03.03.92

e s trykk-Oslo

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON LYCOMING - 25

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43, jfr. kgl. res. av 8. desember 1961, litra K, og Samferdselsdepartementets bemyndigelse av 23. mars 1964, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

92-057 KONTROLL AV STEMPELBOLT

Påbudet gjelder:

Textron Lycoming: O-320 serien, IO-320 serien, LIO-320 serien, HO-360 serien, AIO-320 serien, AEIO-320 serien, O-340 serien, O-360 serien, LO-360 serien, VO-360 serien, IVO-360 serien, IO-360 serien, AIO-360 serien, HIO-360 serien, LHIO-360 serien, LIO-360 serien, AEIO-360 serien, TO-360 serien, LTO-360 serien, TIO-360 serien, O-480 serien, GSO-480 serien, IGSO-480 serien, IGO-480 serien, GO-480 serien, O-540 serien (bortsett fra modell O-540-J og O-540-L), VO-540 serien,
IO-540 serien (bortsett fra modell IO-540-W), HIO-540 serien, AEIO-540 serien, IGSO-540 serien, IGO-540 serien, TVO-540 serien, TIVO-540 serien, IVO-540 serien, TIO-540 serien, LTIO-540 serien,
TIO-541 serien, TIGO-541 serien og IO-720 serien.

Dessuten alle modeller og serienummer som er listet i Textron Lycoming Service Bulletin (SB) Nr. 501, revisjon B, datert 15.11.91, eller senere revisjoner.

Påbudet omfatter:

For å hindre svikt i stempelbolten, skal følgende tiltak utføres:

1. For motorer med de serienummer som er listet i Textron Lycoming SB Nr. 501, revisjon B, datert 15.11.91, som har mer enn 75 flytimer (etter 20.08.92) siden ny, siden omarbeidet eller siden overhaling av fabrikanten, skal alle stempelbolter, (P/N) LW-14077, fjernes og erstattes med luftdyktige.

2. For motorer med de serienummer som er listet i Textron Lycoming SB Nr. 501, revisjon B, datert 15.11.91, som har 75 flytimer eller mindre (etter 20.08.92) siden ny, siden omarbeidet eller siden overhaling av fabrikanten, skal alle stempelbolter, (P/N) LW-14077, fjernes og erstattes med luftdyktige.

3. For de motorer som ikke er listet i Textron Lycoming SB Nr. 501, revisjon B, datert 15.11.91, gjelder følgende:

   3.1 Kontroller og gjennomgå vedlikeholds- og innkjøpsdokumenter for å finne ut om stempelbolt, P/N LW-14077, er mottatt fra Textron Lycoming eller andre distributører i tidsrommet fra 18.06.91 til og med 05.08.91.

   3.2 For installerte stempelbolter, P/N LW-14077, mottatt fra Textron Lycoming eller andre distributører i tidsrommet fra 18.06.91 til og med 05.08.91, gjelder følgende:

      3.2.1 Fjern alle stempelbolter, P/N LW-14077,som er mottatt fra Textron Lycoming eller andre distributører i tidsrommet fra 18.06.91

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

92-057

til og med 05.08.91, fra de motorer som har mer enn 75 flytimer (etter 20.08.92) siden stempelbolten er installert, og erstatt dem med luftdyktige.

3.2.2 Fjern alle stempelbolter, P/N LW-14077, som er mottatt fra Textron Lycoming eller andre distributører i tidsrommet fra 18.06.91 til og med 05.08.91, fra de motorer som har 75 flytimer eller mindre (etter 20.08.92) siden stempelbolten er installert, og erstatt dem med luftdyktige.

4. Stempelbolter, P/N LW-14077, som er mottatt fra Textron Lycoming eller andre distributører i tidsrommet fra 18.06.91 til og med 18.08.91 anses som ikke luftdyktige og skal ikke tas i bruk under noen omstendigheter.

Tid for utførelse:

Dersom ikke allerede utført:

1. Innen 25 flytimer etter 20.08.92.

2. Innen 100 flytimer, etter 20.08.92, siden ny, siden omarbeidet eller siden stempelbolten er overhalt av fabrikanten.

3.1 Innen 15 dager etter 20.08.92.

3.2.1 Innen 25 flytimer etter 20.08.92.

3.2.2 Innen 100 flytimer, etter 20.08.92, siden installasjon av stempelbolt.

Referanse:

FAA AD 92-12-05.

20.08.92

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

TEXTRON LYCOMING - 26

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43, jfr. kgl. res. av 8. desember 1961, litra K, og Samferdselsdepartementets bemyndigelse av 23. mars 1964, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

93-056 KONTROLL AV "FUEL INJECTOR" INNSPRØYTNINGSRØR

Påbudet gjelder:

Textron Lycoming boxermotorer med utstyr for drivstoffinnsprøytning, som er listet i Textron Lycoming Service Bulletin (SB) No. 342A, datert 29.05.92, bortsett fra modell TIO-540-S1AD.

Anm.: Motorer med drivstoffinnsprøytning indikeres med en "I" i prefixet på modellbetegnelsen.

Påbudet omfatter:

For å hindre svikt i "fuel injector" innsprøytningsrørene, som kan føre til drivstofflekkasje inn til motorrommet med fare for motorbrann, skal følgende tiltak utføres:

1. Kontroller "fuel injector" innsprøytningsrørene mellom drivstoffmanifolden og innsprøytningsdysene (fuel injection nozzle) i samsvar med Textron Lycoming Service Bulletin (SB) No. 342A, datert 26.05.92.

2. Skift ut alle innsprøytningsrør som ikke tilfredstiller luftdyktighetskravene spesifisert i SB No. 342A, datert 26.05.92.

3. Kontroller "fuel injector" innsprøytningsrørene i samsvar med Textron Lycoming SB No. 342A, datert 26.05.92, og skift ut alle innsprøyningsrør som ikke tilfredstiller luftdyktighetskravene spesifisert i forannevnte SB.

Tid for utførelse:

1. Innen 25 flytimer etter 01.07.93.

2. Før videre flyging.

3. Ved hvert årlige ettersyn, ved hvert 100-timers ettersyn, ved hver motoroverhaling, samt etter alt arbeid som har blitt utført på motoren når "fuel injector" innsprøytningsrør har vært avmontert, flyttet eller løsnet.

Referanse:

FAA AD 93-02-05.

01.07.93

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 27

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43, jfr. kgl. res. av 8. desember 1961, litra K, og Samferdselsdepartementets bemyndigelse av 23. mars 1964, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

93-075 MOTOROPERASJON UNDER 33.0 in Hg

Påbudet gjelder:

Lycoming IO-360-A1B6D og IO-360-A3B6D som er modifisert i henhold til STC SE4757NM og installert på Mooney M20J som er modifisert i henhold til STC SA4758NM.

Påbudet omfatter:

Ved operasjon på 38.5 in Hg "manifold pressure" tar motoren ut mer effekt enn det den er sertifisert for. Dette kan forårsake motorsvikt. Følgende tiltak skal derfor utføres:

1. Tilvirk et skilt med følgende tekst;

   "DO NOT OPERATE ENGINE ABOVE 33.0 IN Hg",

   og installer dette på instrumentpanelet i cockpit.

2. Den røde radiale linjen ved 38.5 Hg på "manifold pressure gauge" skal fjernes og flyttes til 33.0 Hg.

3. Revider Limitations og Normal Procedure Sections i luftfartøyets Flight Manual Supplement som følger:

   3.1 Stryk ut alle "38.5 Hg" der dette fremkommer i ovennevnte dokumenter og sett inn "33.0 Hg".

   3.2 Stryk ut alle "36.0 Hg" der dette fremkommer i "Normal Climb Throttle" og sett inn "33.0 Hg".

4. Denne LDP skal være et permanent appendix til luftfartøyets Flight Manual.

Tid for utførelse:

Innen 30 dager etter 01.11.93.

Referanse:

FAA AD 93-14-15.

01.11.93

MERK! For at angjeldende flymateriell skal

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 28

Med hjemmel i lov om luftfart av 16. desember 1960 §§ 214 og 43, jfr. kgl. res. av 8. desember 1961, litra K, og Samferdselsdepartementets bemyndigelse av 23. mars 1964, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

93-081 UTSKIFTING/KONTROLL AV GASSGENERATORENS TURBINROTORDISK

Påbudet gjelder:

Textron Lycoming LTS 101 turbindrevne motorer og LTP 101 turboprop motorer.

Påbudet omfatter:

For å hindre svikt i gassgeneratorens turbinrotordisk, skal denne skiftes ut med luftdyktig del.

Tid for utførelse:

For LTS 101 motorer som har gassgenerator turbinrotordisk P/N 4-111-015-04 eller 4-111-015-09:

1. Skift ut disker som har 6800 landinger eller flere siden ny, innen 100 landinger eller innen 01.01.94 - det som kommer først, men innen oppnådde 7500 landinger.

2. Skift ut disker som har 6500 landinger eller flere siden ny, men mindre enn 6800 landinger siden ny, innen 200 landinger eller innen 01.02.94 - det som kommer først.

3. Skift ut disker som har 6000 landinger eller flere siden ny, men mindre enn 6500 landinger siden ny, innen 400 landinger eller innen 01.05.94 - det som kommer først.

4. Skift ut disker som har 5500 landinger eller flere siden ny, men mindre enn 6000 landinger siden ny, innen 600 landinger eller innen 01.08.94 - det som kommer først.

5. Skift ut disker som har 5000 landinger eller flere siden ny, men mindre enn 5500 landinger siden ny, innen 800 landinger eller innen 01.11.94 - det som kommer først.

6. Skift ut disker som har 4000 landinger eller flere siden ny, men mindre enn 5000 landinger siden ny innen 1000 landinger, eller innen 01.02.95 - det som kommer først.

7. Skift ut disker som har mindre enn 4000 landinger siden ny, men innen oppnådde 5000 landinger siden ny.

For LTP 101 motorer som har gassgenerator turbinrotordisk P/N 4-111-015-04 eller 4-111-015-09:

1. Skift ut disker som har 5000 landinger eller flere siden ny, innen 100 landinger eller innen 01.02.94 - det som kommer først, men innen 01.12.93

oppnådde 5500 landinger siden ny.

2. Skift ut disker som har 4000 landinger eller flere siden ny, men mindre enn 5000 landinger siden ny, innen 200 landinger eller innen 01.05.94 - det som kommer først.

3. Skift ut disker som har 3400 landinger eller flere siden ny, men mindre enn 4000 landinger siden ny, innen 300 landinger eller innen 01.08.94 - det som kommer først.

4. Skift ut disker som har 3000 landinger eller flere siden ny, men mindre enn 3400 landinger siden ny, innen 400 landinger eller innen 01.11.94 - det som kommer først.

5. Skift ut disker som har mindre enn 3000 landinger siden ny, innen oppnådde 3400 landinger siden ny.

For LTS 101 motorer som har gassgenerator turbinrotordisk P/N 4-111-015-14:

Skift ut disken innen oppnådde 6300 landinger siden ny.

Referanse:

FAA AD 93-13-11.

01.12.93

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 29

Med hjemmel om lov om luftfart av 11. juni 1993 kap. IV § 4-1 og kap. XV § 15-4, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

94-062 KONTROLL/UTSKIFTING AV CECO BRENNSTOFFPUMPE

Påbudet gjelder:

Alle Textron Lycoming LTS101-serie turboshaft og LTP101-serie turboprop motorer som har installert Chandler Evans (CECO) brennstoffpumper P/N 4-301-128-01, -02, -03, -04, -05, -06, -07, -08 og -10.

Påbudet omfatter:

For å hindre at brennstoffpumpen svikter, skal følgende tiltak utføres:

1. Fjern alle CECO brennstoffpumper som har mer enn 1300 flytimer, siden ny eller overhalt, i samsvar med Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94.

2. Fjern alle CECO brennstoffpumper som har mer enn 850 flytimer, men mindre enn eller lik 1300 flytimer, siden ny eller overhalt, i samsvar med Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94.

3. Fjern alle CECO brennstoffpumper som har mindre enn eller lik 850 flytimer, siden ny eller overhalt, i samsvar med Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94.

4. Fjern alle CECO brennstoffpumper i samsvar med Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94.

   Anm.: Brennstoffpumper som er slitt utover de grensene som er spesifisert i Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94, kan ikke monteres i noe luftfartøy på nytt.

Tid for utførelse:

1. Innen 100 flytimer etter 01.10.94.

2. Innen 150 flytimer etter 01.10.94.

3. Innen 300 flytimer etter 01.10.94, eller innen oppnådde 1000 flytimer siden ny eller overhalt, det som kommer først. 01.10.94

4. Intervaller ikke overstigende 900 flytimer siden siste kontroll utført i samsvar med Textron Lycoming Service Bulletin No. LT101-73-20-165, datert 01.09.94.

Referanse:

FAA AD 94-19-01.

LUFTFARTSVERKET
Hovedadministrasjonen
Luftfartsinspeksjonen
Postboks 8124 Dep., 0032 Oslo
Telefon : 22 94 20 00
Telefax : 22 94 23 91
Tlgr. : CIVILAIR
Telex : 71032 enfb n

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 30

Med hjemmel om lov om luftfart av 11. juni 1993 kap. IV § 4-1 og kap. XV § 15-4, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

94-072 UTSKIFTING AV LAGER

Påbudet gjelder:

Textron Lycoming LTS101 turboshaft- og LTP101 turbopropmotorer som har installert lager No. 2, P/N 4-301-362-01, som har serienummer 3-740 t.o.m. 3-839, 3-1288 t.o.m. 3-1361 og 4-534 t.o.m. 4-680.

Anm.: Berørte lager, eller kit P/N T05K21714, som inneholder disse lagrene, kan være levert fra Textron Lycoming eller et godkjent verksted etter 20.09.93.

Påbudet omfatter:

For å hindre svikt av motoren på grunn av at lager No. 2 svikter, skal følgende tiltak utføres:

1. Motorer installert på en-motors luftfartøy og motorer installert på to-motors luftfartøy hvor begge motorer har installert berørt lager:

   Skift ut lager No. 2 i samsvar med Textron Lycoming Alert Service Bulletin (ASB) No. A-LT101-72-50-0163, rev. 1, datert 08.03.94, og erstatt med luftdyktig lager.

2. Motorer installert på alle andre luftfartøy:

   Skift ut lager No. 2 i samsvar med Textron Lycoming Alert Service Bulletin (ASB) No. A-LT101-72-50-0163, rev. 1, datert 08.03.94, og erstatt med luftdyktig lager.

Tid for utførelse:

1. Før første flyging.

2. Innen 25 flytimer etter 01.12.94.

Referanse:

FAA AD 94-18-06.

01.12.94

LUFTDYKTIGHETSPÅBUD

LUFTFARTSVERKET
Hovedadministrasjonen
Luftfartsinspeksjonen
Postboks 8124 Dep., 0032 Oslo
Telefon : 22 94 20 00
Telefax : 22 94 23 91
Tlgr. : CIVILAIR
Telex : 71032 enfb n

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 32

Med hjemmel om lov om luftfart av 11. juni 1993 kap. IV § 4-1 og kap. XV § 15-4, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

95-029 KONTROLL/UTSKIFTING AV «CONNECTING ROD BOLTS»

Påbudet gjelder:

Textron Lycoming; alle modeller som listet i vedlagte kopi av FAA Priority Letter AD 95-07-01.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA Priority Letter AD 95-07-01.

Tid for utførelse:

Før første flyging

Referanse:

FAA Priority Letter AD 95-07-01.

Gyldighetsdato:

01.04.95.

BILAG TIL LDP 95-029

PRIORITY LETTER AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation
Administration

DATE: March 17, 1995
95-07-01

This priority letter Airworthiness Directive (AD) is prompted by reports of connecting rod bolt failures on Textron Lycoming 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 reciprocating engines. These connecting rod bolts failed with no particular pattern. The head of the bolt sheared off on some, while others failed at the threads and some at the shank. Examination of test specimens indicate that these connecting rod bolts were fabricated by machining bar stock material, including the head region, thus exposing end-grains in the head-to-shank radius. These connecting rod bolts exhibit extremely small fillet radii, numerous deep machining grooves, and inadequate material selection.

In a letter dated December 15, 1994, Superior Air Parts, Inc., advised the FAA that several connecting rod bolts had fractured in service on a Cessna 177RG on December 9, 1994. The pilot completed a power-off landing with no injuries. In a letter dated January 24, 1995, Textron Lycoming advised the FAA that their laboratory analysis indicated that the failed connecting rod bolts appeared to be suspected unapproved parts. A Superior Air Parts, Inc., report of their own laboratory analysis, dated January 3, 1995, was presented to the FAA in mid-February. Another connecting rod bolt failure was identified during maintenance on a Piper PA-60 on February 21, 1995. Superior Air Parts, Inc. advised the FAA of the second failure on the following day. The FAA had already initiated an independent laboratory analysis of a sample of suspect unapproved connecting rod bolts and received a report on February 23, 1995, which concluded that the connecting rod bolts did not meet material or design specifications. That report corroborated Superior Air Parts, Inc.'s and Textron Lycoming's earlier findings. Subsequent investigation revealed that of the 3,382 connecting rod bolts in the original Superior Air Parts, Inc. inventory, 2,473 had been shipped. The FAA considered all possible actions and concluded that the only prudent course of action was to issue this priority letter AD.

These connecting rod bolts were shipped from Superior Air Parts, Inc., between February 15, 1994, and December 20, 1994, as replacements for Textron Lycoming connecting rod bolts, Part Number (P/N) 75060, or Superior Air Parts, Inc., connecting rod bolts, P/N SL75060, or Aircraft Technologies, Inc. P/N AL75060. However, the failed parts have no markings to identify them. The traceability of these bolts is extremely difficult, and the FAA has determined that the vast majority of the bolts distributed cannot be recovered, nor can they be identified by a routine records search of engines which have been overhauled since February 15, 1994. The FAA has concluded that all engines which may have been overhauled using these connecting rod bolts must be visually inspected for the installation of unmarked connecting rod bolts. Further, since it is impossible to analytically determine how long these connecting rod bolts as installed may remain intact, this AD must be complied with before further flight. Therefore, all connecting rod bolts with no markings must be considered suspect unapproved parts. This condition, if not corrected, could result in engine failure due to connecting rod bolt failure, which could result in damage to or loss of the aircraft.

Also, during the investigation the FAA determined that only unmarked 75060 connecting rod bolts shipped from Superior Air Parts, Inc., between February 15, 1994, and December 20, 1994, are considered suspect unapproved parts. Approved serviceable parts can be readily identified by raised letters SPS, S, C, or FC, identifying them as Textron Lycoming parts, or SL75060 etched on the head identifying them as PMA parts manufactured by Superior Air Parts, Inc., or AL75060 forged into the head, identifying them as PMA parts manufactured by Aircraft Technologies, Inc.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of this same type design, this AD requires removal prior to further flight of suspect unapproved connecting rod bolts and replacement with serviceable connecting rod bolts. Suspect unapproved connecting rod bolts may be identified as those bolts that are not clearly marked on the head by raised letters SPS, S, C, or FC, identifying them as Textron Lycoming parts, or not clearly marked with SL75060 etched on the head, identifying them as PMA parts manufactured by Superior Air Parts, Inc., or not clearly forged into the head with AL75060, identifying them as PMA parts manufactured by Aircraft Technologies, Inc.

BILAG TIL LDP 95-029

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this priority letter.

95-07-01 Textron Lycoming: Priority Letter issued on March 17, 1995. Docket No. 95-ANE-14.

Applicability: The following Textron Lycoming reciprocating engine models, assembled on or after February 15, 1994, and that contain connecting rod bolts shipped directly or indirectly from Superior Air Parts, Inc., on or after February 15, 1994:

O-360-A1A, -A1AD, -A1C, -A1D, -A1F6, -A1F6D, -A1G6, -A1G6D, -A1LD, -A2A, -A2D, -A2E, -A2F, -A2G, -A3A, -A3AD, -A4A, -A4G, -A4J, -A4K, -A4M, -A4N, -A5AD, -B2A, -C1A, -C1C, -C1E, -C1F, -C1G, -C2A, -C2C, -C2D, -C2E, -D2A, -D2B, -F1A6; IO-360-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A2A, -A2B, -A3B6D, -B1A, -B1B, -B1D, -B1E, -B1F, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C6, -C1D6, -C1E6, -C1F, -J1A6D; AIO-360-A1A, -A1B, -B1B; LO-360-A1G6D; HO-360-B1A, -B1B; HIO-360-A1A, -B1A, -C1A, -C1B, -E1AD, -E1BD; LIO-360-C1E6; TIO-360-A1B; AEIO-360-A1E, -B1G6, -H1A; O-540-A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A3D5, -B1A5, -B1B5, -B2B5, -B2C5, -B4B5, -E4A5, -E4B5, -E4C5, -F1A5, -F1B5, -G1A5, -G2A5, -H1B5D, -H2B5D, -J1A5D, -J3A5D, -J3C5D, -L3C5D; IO-540-A1A5, -B1A5, -B1C5, -C1B5, -C4B5, -C4C5, -C4D5D, -D4A5, -E1A5, -E1B5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -J1A5, -K1A5D, -K1B5, -K1C5, -K1D5, -K1E5, K1K5, -M1A5, -N1A5, -P1A5, -R1A5, -T4C5D, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1J5D, -K1K5, -M1QA5, -M1B5D, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5D, -T4CTD, -V4A5D, -W1A5D, -W3A5D, -AA1A5; TIO-540-A1A, -A1B, -A2A, -A2B, -A2C, -C1A, -E1A, -G1A, -H1A, -J2B, -F2BD, -J2BD, -N2BD, -R2AD, -S1AD, -AA1AD, -AB1AD; LTIO-540-J2B, -F2BD, -J2BD, -N2BD, -R2AD; IVO-540-A1A; AEIO-540-D4B5; TIO-541-A1A, -E1A4, -E1B4, -E1C4; IO-720-A1A, -A1B, -B1B, -B1BD, -C1B, and -D1B.

These engines are installed on but not limited to the following aircraft:
Beech series 95, 23, 76,60; Piper series PA-24, PA-44, PA-28, PA-34, PA-23, PA-25, PA-32, PA-60, PA-31; Aero Commander (Intermountain, Callair, Aeronautical Agricola Mexicana, Twin Commander Aircraft Corp.) series A-6, A-9, 100, 500; Lake Aircraft Corporation (Consolidated Aero., Inc., REVO) series C-2, LA-4; Mooney Aircraft Corp. series M-20, M-22; Sud Aviation GY-180; Partenavia series P-68; Siai-Marchetti (Agusta S.p.A) series S.205, S.210, F.260, S.208; Procaer series F 15; SOCATA series TB10, MS-893, 235, TB20, TB21; Teal Aircraft Corporation (Bohica) TWC-1; Avions Mudry et Cie CAP 10; Augustair (Montanair, Inc.) 2150; Grumman American (American General Aircraft Holding Co., Inc.) AA-5 series; Fuji Heavy Industries, Ltd. FA-200 series; Bellanca (American Champion Aircraft Corp.) Aircraft 8GCBC, 8KCAB; Maule Aerospace Technology Corp. series MX-7, M5, M-6; Christen A-1, (Pitts) S1T; Schweizer Aircraft Corp.(Hughes, McDonnell Douglas) 269A series; Rockwell (Commander Aircraft Company) series 112, 114; Moravan ZLIN Z 242L; Slingsby Aviation Limited T67M; Enstrom F-28 series; Found Brothers Aviation Ltd. BA-2C, FBA Centennial "100"; Dornier Luftfahrt GmbH DO-28 series; Spinks Industries, M.H. Spinks, Sr. Rawdon T-1; Pilatus Britten-Norman BN-2 series; Omega Aircraft Corporation BS-12D1; Robinson R-44 series; Aerostar Aircraft Corp. (Piper, Ted Smith); Brantly Helicopters Industries U.S.A. Co., Ltd. 305; Pacific Aerospace Corp., Ltd. FU-24-954 series.

NOTE: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (g) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different action necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

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

(a) Prior to further flight, determine if the engine has been assembled on or after February 15, 1994. This AD does not apply to engines assembled prior to February 15, 1994.

(b) For the purpose of this AD, assembled is defined as the construction of an engine from its component parts for any purpose, such as, but not limited to, overhaul and inspection.

BILAG TIL LDP 95-029

(c) For engines assembled on or after February 15, 1994, prior to further flight, determine if any connecting rod bolts were replaced during assembly. This AD applies only to engines that had connecting rod bolts replaced on or after February 15, 1994.

(d) For engines that contain replacement connecting rod bolts installed on or after February 15, 1994, prior to further flight, determine if any of those replacement connecting rod bolts were purchased directly from Textron Lycoming or Aircraft Technologies, Inc. This AD does not apply to engines with replacement connecting rod bolts purchased directly from Textron Lycoming or Aircraft Technologies, Inc. In addition, this AD does not apply to engines that were manufactured or remanufactured at Textron Lycoming.

(e) For engines that contain replacement connecting rod bolts installed on or after February 15, 1994, that were not purchased directly from Textron Lycoming or Aircraft Technologies, Inc., prior to further flight, visually inspect to determine if the connecting rod bolts are clearly identified by raised letters SPS, S, C, or FC, identifying them as Textron Lycoming parts, or SL75060 etched on the head, identifying them as PMA parts manufactured by Superior Air Parts, Inc., or AL75060 forged into the head, identifying them as PMA parts manufactured by Aircraft Technologies, Inc. If the connecting rod bolts can be positively identified, as provided in this paragraph, then no further action is required.

(f) If the connecting rod bolts can not be positively identified in accordance with paragraph (e) of this AD, prior to further flight remove unapproved connecting rod bolts and replace with serviceable parts.

NOTE: Further information may be found in Superior Air Parts Service Bulletin No. 95-002, dated March 3, 1995, or by contacting Superior Air Parts, Inc., 14280 Gillis Rd., Dallas, TX 75244-3792; telephone (800) 487-4884.

(g) An alternative method of compliance that provides an acceptable level of safety may be used if approved by the Manager, Special Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Special Certification Office.

NOTE: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Special Certification Office.

(h) Special flight permits shall not be issued.

(i) Priority Letter AD 95-07-01, issued March 17, 1995, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: Richard D. Karanian, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Fort Worth, TX 76137-4298; telephone (817) 222-5195, fax (817) 222-5959; or Locke Easton, Aerospace Engineer, Engine and Propeller Standards Staff, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone (617) 238-7113, fax (617) 238-7199.

LUFTFARTSVERKET
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 33

Med hjemmel om lov om luftfart av 11. juni 1993 kap. IV § 4-1 og kap. XV § 15-4, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

96-020 KONTROLL/UTSKIFTING AV «PUSH RODS».

Påbudet gjelder:

Alle Textron Lycoming motorer I O-235 serien som beskrevet i vedlagte kopi av FAA AD 95-03-10.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 95-03-10.

Tid for utførelse:

Til de tider som angitt i vedlagte kopi av FAA AD 95-03-10, med virkning fra denne LDP`s gyldighetsdato.

Referanse:

FAA AD 95-03-10

Gyldighetsdato:

01.03.96.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

Bilag til LDP 96-020

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

95-03-10 Textron Lycoming: Amendment 39-9458. Docket 94-ANE-63.

Applicability: Textron Lycoming O-235 series reciprocating engines, shipped from the factory between February 22, 1993, and September 2, 1994, and identified by serial number in Textron Lycoming Mandatory Service Bulletin (MSB) No. 522, dated November 1, 1994; and all Textron Lycoming O-235 series reciprocating engines that have had push rods, part number (P/N) 73806, installed as service parts on or after February 22, 1993. These engines are installed on but not limited to the following aircraft: Piper PA-11, -12, -18, -22, -28, -38; Cessna 152, A152; Beech 77; Taylorcraft F-21; and Gulfstream American AA1 series aircraft.

NOTE 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (b) to request approval from the Federal Aviation Administration (FAA). This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

NOTE 2: This amendment **does not** supersede AD 80-25-02 R2, which also applies to pushrod P/N 73806. AD 80-25-02 R2 continues in effect and must be complied with.

Compliance: Required as indicated, unless accomplished previously.

To prevent engine roughness and power loss, which could result in loss of the aircraft, accomplish the following:

(a) Within 5 hours time in service (TIS) after the effective date of this AD, inspect push rods for P/N and revision letter. All push rods with P/N 73806 and revision letter "V" or "W" must be replaced with serviceable parts in accordance with Textron Lycoming MSB No. 522, dated November 1, 1994.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

NOTE: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the inspection required by this AD can be accomplished.

(d) The actions required by this AD shall be done in accordance with the following MSB:

DOCUMENT NO.	PAGE	DATE
Textron Lycoming MSB No. 522	1-2	November 1, 1994

Total Pages: 2.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver Street, Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective January 24, 1996, to all persons except those persons to whom it was made immediately effective by priority letter AD 95-03-10, issued February 7, 1995, which contained the requirements of this amendment.

FOR FURTHER INFORMATION CONTACT:
Nick Minniti, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7510, fax (516) 568-2716.

LUFTFARTSVERKET
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 34

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

96-061 MODIFIKASJON AV OLJEPUMPEN

Påbudet gjelder:

Textron Lycoming moterer ; typer og serienummer som beskrevet i vedlagte kopi av FAA AD 96-09-10.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 96-09-10.

Anm.: Denne LDP erstatter og opphever LDP 65A/81.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 96-09-10, med virkning fra denne LDP`s gyldighetsdato.

Referanse:

FAA AD 96-09-10.

Gyldighetsdato:

01.08.96.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

Bilag til LDP 96-061

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

96-09-10 Textron Lycoming: Amendment 39-9586. Docket 93-ANE-48. Supersedes AD 81-18-04 R2, Amendment 39-4395.

Applicability: Textron Lycoming O-235, O-290, O-320, IO-320, AIO-320, AEIO-320, LIO-320, O-340, O-360, IO-360, LIO-360, AIO-360, HO-360, HIO-360, LO-360, LIO-360, TIO-360, TO-360, LTO-360, VO-360, IVO-360, O-540, and IO-540 series reciprocating engines, except for the following models: O-320-H2AD, O-360-E1A6D, LO-360-E1A6D, TO-360-E1A6D, LTO-360-E1A6D, IO-540-P1A5, IO-540-R1A5, IO-540-S1A5, and O-540 and IO-540 series engines built with large capacity oil pumps and dual magnetos designated with "5D" in the model suffix; for example, IO-540-K1A5D. These engines are installed on but not limited to the following aircraft: various models of single and twin engine powered Cessna, Piper, Mooney, Beech, Gulfstream American, Maule, and Socata.

NOTE 1: This AD may not contain an exhaustive list of aircraft that utilize the affected engines because other aircraft may have an affected engine installed through, for example, approvals made by Supplemental Type Certificate, or FAA Form 337, "Major Repair and Alteration." It is the responsibility of each aircraft owner, operator, and person returning that aircraft to service to determine if that aircraft has an affected engine.

NOTE 2: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (f) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any engine from the applicability of this AD.

Compliance: Required as indicated, unless accomplished previously.

To prevent oil pump failure due to impeller failure, which could result in an engine failure, accomplish the following:

(a) For Textron Lycoming Model HIO-360-D1A, -E1AD, -E1BD, and -F1AD engines with serial numbers (S/N) of L-22579-51A or prior, except for the following: S/N L-22311-51A through L-22313-51A, L-22396-51A, L-22397-51A, L-22416-51A, L-22546-51A through L-22549-51A, L-22563-51A, L-22568-51A through L-22571-51A; for Textron Lycoming Model HIO-360-D1A, -E1AD, -E1BD, and -F1AD engines that were overhauled in the field or remanufactured prior to April 1, 1981, regardless of S/N; and for engines listed by S/N in Textron Lycoming Service Bulletin (SB) No. 455D, dated January 2, 1987; accomplish the following:

(1) Replace the sintered iron oil pump impeller and shaft with a hardened steel impeller and shaft in accordance with Avco Lycoming Textron SB No. 454B, dated January 2, 1987, or Avco Lycoming Textron SB No. 455D, dated January 2, 1987, as applicable, or Textron Lycoming SB No. 524, dated September 1, 1995, within 25 hours time in service (TIS) after the effective date of this AD.

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft. Engines that incorporate oil pumps fitted with an aluminum impeller and shaft must comply with paragraph (c) of this AD.

(b) For engines listed by S/N in Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, that incorporate a sintered iron impeller, accomplish the following:

(1) Replace any sintered iron oil pump impeller and shaft with a hardened steel impeller and shaft in accordance with Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, within 100 hours TIS after the effective date of this AD, or one year after the effective date of this AD, whichever occurs first. Total time on the sintered iron impeller must not exceed 2,000 hours TIS since new or overhaul, whichever occurs later

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft. Engines that incorporate oil pumps fitted with an aluminum impeller and shaft must comply with paragraph (c) of this AD.

(c) For all other affected engines, replace any aluminum oil pump impeller and shaft assembly with a hardened steel impeller and shaft assembly in accordance with Avco Lycoming Textron SB No. 455D, dated nuary 2, 1987, or Textron Lycoming SB No. 456F, dated February 8, 1993, or Textron Lycoming SB No. 524, dated September 1, 1995, as applicable, as follows:

(1) Replace at next engine overhaul (not to exceed the hours specified, for the particular engine model, in Textron Lycoming Service Instruction 1009AJ, dated July 1, 1992), at next oil pump removal, or 5 years after the effective date of this AD, whichever occurs first.

(2) No action is required if engines have complied with AD 81-18-04, 81-18-04 R1, or 81-18-04 R2, and have incorporated oil pumps with a hardened steel impeller and shaft.

NOTE: Engines originally manufactured prior to 1970 did not incorporate sintered iron impellers. For further information, refer to engine maintenance/overhaul logbook records, Lycoming build records, and the following SB's provide additional guidance: Avco Lycoming Division SB No. 381C, dated November 7, 1975, and Avco Lycoming Textron SB No. 385C, dated October 3, 1975, describe a method for determining if the early design oil pump with aluminum/steel impellers are installed. Avco Lycoming SB No. 455A, dated August 18, 1981, and Textron Lycoming SB No. 455B, dated January 2, 1987, and Avco Lycoming SB No. 456, dated August 21, 1981, introduced steel driving impeller, P/N 60746, and aluminum driven impeller, P/N LW13775. Textron Lycoming SB No. 524 includes information regarding engines which may incorporate aluminum impellers.

(d) Engines that are subject to AD 75-08-09 must have incorporated AD 75-08-09 before this AD can be accomplished.

(e) Sintered iron and aluminum impellers approved under FAA Parts Manufacturer Approval (PMA) are replacements for affected part numbers of Lycoming impellers and must also be replaced in accordance with ragraphs (a), (b), or (c), as applicable, of this AD.

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

NOTE: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York Aircraft Certification Office.

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(h) The actions required by this AD shall be done in accordance with the following service bulletins:

Document No.	**Pages**	**Date**
Avco Lycoming Division		
SB No. 381C	1-4	November 7, 1975
Total pages: 4.		
Avco Lycoming Textron		
SB No. 385C	1-4	October 3, 1975
pplement No. 1	1	March 18, 1977
Total pages: 5.		
Avco Lycoming Textron		
SB No. 454B	1-3	January 2, 1987
Total pages: 3.		
Avco Lycoming Textron		
SB No. 455D	1-3	January 2, 1987
Total pages: 3.		
Textron Lycoming		
SB No. 456F	1-3	February 8, 1993
Total pages: 3.		

Document No.	Pages	Date
Textron Lycoming		
SB No. 524	1-3	September 1, 1995
Attachment	1-4	

Total pages: 9.

Textron Lycoming		
SI No. 1009AJ	1-3	July 1, 1992

Total pages: 3.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, Reciprocating Engine Division, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on July 15, 1996.

FOR FURTHER INFORMATION CONTACT:
Richard Fiesel, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, Valley Stream, NY 11581; telephone (516) 256-7504, fax (516) 568-2716.

LUFTFARTSVERKET
Hovedadministrasjonen
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Postboks 8124 Dep., 0032 Oslo
Telefon : 22 94 20 00
Telefax : 22 94 23 91
Tlgr. : CIVILAIR
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING -35

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

96-106 KONTROLL/UTSKIFTING AV BENSINPUMPE

Påbudet gjelder:

Textron Lycoming motorer, følgende typer; IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, LIO-540, O-540-L og AEIO-540 serie, som har installert høytrykks bensinpumpe med P/N som beskrevet i kopi av FAA Priority Letter AD 96-23-03.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA Priority Letter AD 96-23-03.

Anm.: Kontroll av delenummer og datakode for å identifisere bensinpumpen, kan utføres av eier, bruker eller operatør som har A-sertifikat (PPL).

Tid for utførelse:

Innen 5 timer flytid (TIS).

Referanse:

FAA Priority Letter AD 96-23-03.

Gyldighetsdato:

31.10.96

THIS PRIORITY LETTER AIRWORTHINESS DIRECTIVE (AD) IS PROMPTED BY REPORTS OF INFLIGHT FAILURES OF HIGH PRESSURE FUEL PUMPS, INSTALLED ON TEXTRON LYCOMING IO-320, LIO-320, AEIO-320, IO-360, LIO-360, AEIO-360, HIO-360, TO-360, IO-540, LIO-540, O-540-L, AND AEIO-540 SERIES RECIPROCATING ENGINES. INVESTIGATIONS INTO THOSE INCIDENTS REVEALED THAT THE FUEL PUMP GASKET, PART NUMBER (P/N) 5621005, BECAME LODGED IN THE PUMP OUTLET PORT AFTER SEPARATING FROM THE PUMP DIAPHRAGM ASSEMBLY ON HIGH PRESSURE FUEL PUMPS, P/N LW-15473. FURTHER INVESTIGATION REVEALLED THAT THE HIGH PRESSURE FUEL PUMPS DEVELOPED DEFECTS DURING MANUFACTURING. THE ENGINES INVOLVED IN THOSE INCIDENTS HAD HIGH PRESSURE FUEL PUMPS WITH MANUFACTURING DATE CODES: 154739506, 154739507, OR 154739510. THE FIRST FIVE DIGITS OF THE MANUFACTURING DATE CODES REFER TO THE TEXTRON LYCOMING P/N AND THE LAST FOUR DIGITS REFER TO THE YEAR AND MONTH OF PUMP MANUFACTURE. THIS CONDITION, IF NOT CORRECTED, COULD RESULT IN AN INFLIGHT ENGINE FAILURE DUE TO FUEL STARVATION, WHICH COULD RESULT IN A FORCED LANDING.

THE FAA HAS REVIEWED AND APPROVED THE TECHNICAL CONTENTS OF TEXTRON LYCOMING SERVICE BULLETIN (SB) NO. 525A, DATED OCTOBER 7, 1996, THAT DESCRIBES PROCEDURES FOR IDENTIFYING THE MANUFACTURING DATE CODE. THIS SB ALSO INCLUDES PROCEDURES FOR INSPECTION OF INTERNAL PARTS OF HIGH PRESSURE FUEL PUMPS, REPLACEMENT OF SPECIFIC PARTS OR THE COMPLETE HIGH PRESSURE FUEL PUMP, IF NECESSARY, AND REASSEMBLY OF THE HIGH PRESSURE FUEL PUMP.

SINCE AN UNSAFE CONDITION HAS BEEN IDENTIFIED THAT IS LIKELY TO EXIST OR DEVELOP ON OTHER ENGINES OF THIS SAME TYPE DESIGN, THIS AD REQUIRES, WITHIN 5 HOURS TIME IN SERVICE (TIS) AFTER THE EFFECTIVE DATE OF THIS AD, A MAINTENANCE RECORDS CHECK TO DETERMINE IF SUSPECT HIGH PRESSURE FUEL PUMPS ARE INSTALLED, AND IF THE RECORDS CHECK INDICATES A SUSPECT HIGH PRESSURE FUEL PUMP MAY BE INSTALLED, INSPECTION, WHICH CAN BE PERFORMED BY THE OWNER/OPERATOR HOLDING AT LEAST A PRIVATE PILOT S CERTIFICATE, TO DETERMINE IF THE HIGH PRESSURE FUEL PUMP HAS ONE OF THE SUSPECT DATE CODES, THIS AD REQUIRES DISASSEMBLY AND INSPECTION OF THE HIGH PRESSURE FUEL PUMP, AND, IF NECESSARY, REMOVAL FROM SERVICE AND REPLACEMENT WITH A SERVICEABLE PART. IN ADDITION, THIS AD REQUIRES REPORTING FINDINGS OF UNSERVICEABLE HIGH PRESSURE FUEL PUMPS. THE ACTIONS ARE REQUIRED TO BE ACCOMPLISHED IN ACCORDANCE WITH THE SB DESCRIBED PREVIOUSLY.

THIS RULE IS ISSUED UNDER 49 U.S.C. SECTION 44701 (FORMERLY SECTION 601 OF THE FEDERAL AVIATION ACT OF 1958) PURSUANT TO THE AUTHORITY DELEGATED TO ME BY THE ADMINISTRATOR, AND IS EFFECTIVE IMMEDIATELY UPON RECEIPT OF THIS PRIORITY LETTER.

96-23-03 TEXTRON LYCOMING: DOCKET NO. 96-ANE-31.

APPLICABILITY: TEXTRON LYCOMING 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 RECIPROCATING ENGINES, WITH HIGH PRESSURE FUEL PUMPS, PART NUMBER (P/N) LW-15473 THAT HAVE MANUFACTURING DATE CODES: 154739506, 154739507, OR 154739510? AND THAT WERE EITHER INSTALLED ON ENGINES SHIPPED FROM TEXTRON LYCOMING BETWEEN JULY 18, 1995, AND AUGUST 14, 1996, INCLUSIVE? OR WERE PURCHASED AS REPLACEMENT HIGH PRESSURE FUEL PUMPS ON OR AFTER JULY 18, 1995. THESE ENGINES ARE INSTALLED ON BUT NOT LIMITED TO RECIPROCATING ENGINE POWERED AIRCRAFT MANUFACTURED BY AEROSPATIALE, AMERICAN CHAMPION, BELLANCA, CESSNA, THE NEW PIPER COMPANY, BEECH, MAULE, MOONEY, AND SCHWEIZER 269 SERIES HELICOPTERS.

NOTE: THIS AIRWORTHINESS DIRECTIVE (AD) APPLIES TO EACH ENGINE IDENTIFIED IN THE PRECEDING APPLICABILITY PROVISION, REGARDLESS OF WHETHER IT HAS BEEN MODIFIED, ALTERED, OR REPAIRED IN THE AREA SUBJECT TO THE REQUIREMENTS OF THIS AD. FOR ENGINES THAT HAVE BEEN MODIFIED, ALTERED, OR REPAIRED SO THAT THE PERFORMANCE OF THE REQUIREMENTS OF THIS AD IS AFFECTED, THE OWNER/OPERATOR MUST REQUEST APPROVAL FOR AN ALTERNATIVE METHOD OF COMPLIANCE IN ACCORDANCE WITH

PARAGRAPH (C) OF THIS AD. THE REQUEST SHOULD INCLUDE AN ASSESSMENT OF THE EFFECT OF THE MODIFICATION, ALTERATION, OR REPAIR ON THE UNSAFE CONDITION ADDRESSED BY THIS AD? AND, IF THE UNSAFE CONDITION HAS NOT BEEN ELIMINATED, THE REQUEST SHOULD INCLUDE SPECIFIC PROPOSED ACTIONS TO ADDRESS IT.

COMPLIANCE: REQUIRED AS INDICATED, UNLESS ACCOMPLISHED PREVIOUSLY.

TO PREVENT AN INFLIGHT ENGINE FAILURE DUE TO FUEL STARVATION, WHICH COULD RESULT IN A FORCED LANDING, ACCOMPLISH THE FOLLOWING:

(A) WITHIN 5 HOURS TIME IN SERVICE (TIS) AFTER THE EFFECTIVE DATE OF THIS AD, ACCOMPLISH THE FOLLOWING:

(1) PERFORM A MAINTENANCE RECORDS CHECK TO DETERMINE IF THE ENGINE WAS SHIPPED FROM TEXTRON LYCOMING BETWEEN JULY 18, 1995, AND AUGUST 14, 1996, INCLUSIVE, OR HAD A HIGH PRESSURE FUEL PUMP, P/N LW-15473, INSTALLED AS A REPLACEMENT HIGH PRESSURE FUEL PUMP ON OR AFTER JULY 18, 1995. THIS RECORDS CHECK MAY BE PERFORMED BY THE OWNER/OPERATOR HOLDING AT LEAST A PRIVATE PILOT S CERTIFICATE ISSUED UNDER PART 61 OF THE FEDERAL AVIATION REGULATIONS (14 CFR PART 61). IF THE ENGINE DOES NOT MEET THAT CRITERIA, THE OWNER/OPERATOR MAY SIGN THE MAINTENANCE RECORD TO INDICATE THAT THE AD IS NOT APPLICABLE, AND NO FURTHER ACTION IS REQUIRED.

(2) IF THE ENGINE DOES MEET THE CRITERIA STATED IN PARAGRAPH (A) (1) OF THIS AD, OR IF THE SHIPPING DATE OF THE ENGINE OR THE INSTALLATION DATE OF THE HIGH PRESSURE FUEL PUMP IS UNKNOWN, VISUALLY INSPECT THE FLANGE OF THE HIGH PRESSURE FUEL PUMP TO DETERMINE THE MANUFACTURING DATE CODE IN ACCORDANCE WITH TEXTRON LYCOMING SERVICE BULLETIN (SB) NO.525A, DATED OCTOBER 7, 1996. THIS INSPECTION MAY BE PERFORMED BY THE OWNER/OPERATOR HOLDING AT LEAST A PRIVATE PILOT S CERTIFICATE. HOWEVER, ANY DISASSEMBLY OF THE ENGINE OTHER THAN OPENING THE COWLING MUST BE ACCOMPLISHED BY A CERTIFICATED MECHANIC. IF THE MANUFACTURING DATE CODE IS NOT ONE OF THE FOLLOWING THREE CODES: 154739506, 154739507, OR 154739510, NO FURTHER ACTION IS REQUIRED, AND THE OWNER/OPERATOR MAY SIGN THE MAINTENANCE RECORD TO INDICATE THAT THE AD IS NOT APPLICABLE.

(3) FOR ENGINES WITH HIGH PRESSURE FUEL PUMPS THAT HAVE ONE OF THE FOLLOWING MANUFACTURING DATE CODES: 154739506, 154739507, OR 154739510, DISASSEMBLE THE HIGH PRESSURE FUEL PUMP, INSPECT, AND, IF NECESSARY, REPAIR OR REPLACE WITH A SERVICEABLE HIGH PRESSURE FUEL PUMP, IN ACCORDANCE WITH TEXTRON LYCOMING SB NO. 525A, DATED OCTOBER 7, 1996. ONLY CERTIFICATED MECHANICS MAY PERFORM THERE REQUIREMENTS.

(B) WITHIN 48 HOURS AFTER INSPECTION, REPORT THE FINDING OF UNSERVICEABLE HIGH PRESSURE FUEL PUMPS, THE TIS ON THE PUMP, AND A CONTACT TELEPHONE NUMBER TO THE MANAGER, NEW YORK AIRCRAFT CERTIFICATION OFFICE, FAA, ENGINE AND PROPELLER DIRECTORATE, 10 FIFTH ST., VALLEY STREAM, NY 11581? TELEPHONE (516) 256-7505, FAX (516) 568-2716. REPORTING REQUIREMENTS HAVE BEEN APPROVED BY THE OFFICE OF MANAGEMENT AND BUDGET AND ASSIGNED OMB CONTROL NUMBER 2120-0056.

(C) AN ALTERNATIVE METHOD OF COMPLIANCE OR ADJUSTMENT OF THE COMPLIANCE TIME THAT PROVIDES AN ACCEPTABLE LEVEL OF SAFETY MAY BE USED IF APPROVED BY THE MANAGER, NEW YORK AIRCRAFT CERTIFICATION OFFICE. THE REQUEST SHOULD BE FORWARDED THROUGH AN APPROPRIATE FAA MAINTENANCE INSPECTOR, WHO MAY ADD COMMENTS AND THEN SEND IT TO THE MANAGER, NEW YORK AIRCRAFT CERTIFICATION OFFICE.

NOTE: INFORMATION CONCERNING THE EXISTENCE OF APPROVED ALTERNATIVE METHODS OF COMPLIANCE WITH THIS AIRWORTHINESS DIRECTIVE, IF ANY, MAY BE OBTAINED FROM THE NEW YORK AIRCRAFT CERRTIFICATION OFFICE.

(D) COPIES OF THE APPLICABLE SERVICE INFORMATION MAY BE OBTAINED FROM TEXTRON LYCOMING, 652 OLIVER ST., WILLIAMSPORT, PA 17701? TELEPHONE (717) 327-7278, FAX (717) 327-7022. THIS INFORMATION MAY BE EXAMINED AT THE FAA, NEW ENGLAND REGION, OFFICE OF THE ASSISTANT CHIEF COUNSEL, 12 NEW ENGLAND EXECUTIVE PARK, BURLINGTON, MA.

(E) PRIORITY LETTER AD 96-23-03, ISSUED OCTOBER 28, 1996,

BECOMES EFFECTIVE UPON RECEIPT.
FOR FURTHER INFORMATION CONTACT: RAY O'NEILL, AEROSPACE ENGINEER, NEW YORK AIRCRAFT CERTIFICATION OFFICE, FAA, ENGINE AND PROPELLER DIRECTORATE, 10 FIFTH ST., VALLEY STREAM, NY 11581? TELEPHONE (516) 256-7505, FAX (516) 568-2716.

LUFTFARTSVERKET
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 36

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-003 KONTROLL/UTSKIFTING AV «CYLINDER ASSEMBLIES»

Påbudet gjelder:

Textron Lycoming motorer, følgende typer; TIO-540-A2C, -J2B, -F2BD, -J2BD, -N2BD, -R2AD, -S1AD, og LTIO-540-J2B, -F2BD, -J2BD, -N2BD, -R2AD, - og IO-540-M1B5D motorer, som er utstyrt med Superior Air Parts, Inc. Parts Manufacture Approval (PMA) med P/N som beskrevet i kopi av FAA Priority Letter AD 97-01-04.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA Priority Letter AD 97-01-04.

Tid for utførelse:

Innen 5 timer flytid (TIS). (Eiere informert).

Referanse:

FAA Priority Letter AD 97-01-04.

Gyldighetsdato:

27.12.96

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

PRIORITY LETTER AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

Bilag til LDP 97-003

DATE: December 27, 1996
97-01-04

Send to all U.S. owners and operators of Textron Lycoming Models TIO-540-A2C, -J2B, -F2BD, -J2BD, -N2BD, -R2AD, -S1AD, and LTIO-540-J2B, -F2BD, -J2BD, N2BD, -R2AD, and IO-540-M1B5D reciprocating engines, with Superior Air Parts, Inc. Parts Manufacture Approval (PMA) part number SL54000-A1, -A2, -A2P, -A20P, and A21P series replacement cylinder assemblies installed, with serial numbers 001 through 650. These engines are installed on but not limited to the following aircraft: Bellanca DW-1 (Eagle), The New Piper Aircraft Co. PA-31 and PA-32 series, Riley Aircraft Cessna 310 conversion, and Twin Commander Aircraft Corp. 700 series.

This priority letter Airworthiness Directive (AD) is applicable to Textron Lycoming Models TIO-540-A2C, -J2B, -F2BD, -J2BD, -N2BD, -R2AD, -S1AD, and LTIO-540-J2B, -F2BD, -J2BD, N2BD, -R2AD, and IO-540-M1B5D reciprocating engines, with Superior Air Parts, Inc. Parts Manufacture Approval (PMA) part numbers SL54000-A1, -A2, -A2P, -A20P, and A21P replacement cylinder assemblies installed, with serial numbers 001 through 650. This AD is prompted by a report from the Australian Civil Aviation Authority (CAA) of a New Piper Company Model PA31-350 aircraft, with a Textron Lycoming TIO-540 engine installed, that suffered an inflight engine failure. An examination of the engine revealed that a Superior Air Parts, Inc. PMA part numbers SL54000 series replacement cylinder assembly experienced a cylinder head separation. A soap leak check of the other 5 cylinders detected bubbles in 2 cylinders indicating a crack. Superior Air Parts has reported 12 fractured cylinders from the field. The cause of the cylinder head fractures and separations appears to be that the design of the PMA cylinder wall thickness is too thin. This condition, if not corrected, could result in cylinder head separation, inflight loss of power, possible engine failure, and fire.

The FAA has reviewed and approved the technical contents of Superior Air Parts, Inc. Mandatory Service Bulletin (MSB) No. 96-002, Revision A, dated December 17, 1996, that describes procedures for dye penetrant inspections of cylinder assemblies for cracking.

Since an unsafe condition has been identified that is likely to exist or develop on other engines of this same type design, this AD requires the removal of cylinders from engines with 300 or more hours Time in Service (TIS) since installation of the affected cylinder assemblies on the effective date of this AD within 5 hours TIS after the effective date of this AD, and replacement with serviceable parts. For engines with 245 hours or more TIS since installation of the affected cylinder assemblies on the effective date of this AD, this AD requires an initial dye penetrant inspection within 5 hours TIS after the effective date of this AD, followed by repetitive dye penetrant inspections at intervals not to exceed 25 hours TIS until reaching the 300 hours TIS limit, upon which the cylinder assemblies must be removed from service. Cylinder assemblies with less than 245 hours TIS since installation of the affected cylinder assemblies on the effective date of this AD must begin the dye penetrant inspections upon reaching 250 hours TIS since installation of the affected cylinder assemblies. All cylinder assemblies found cracked during the dye penetrant inspections must be removed from service. The actions are required to be accomplished in accordance with the Superior Air Parts Inc., MSB described previously.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this priority letter.

97-01-04 Textron Lycoming and Superior Air Parts, Inc.: Priority Letter issued on December 27, 1996. Docket No. 96-ANE-43.

Applicability: Textron Lycoming Models TIO-540-A2C, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, and LTIO-540-J2B, -F2BD, -J2BD, N2BD, -R2AD, and IO-540-M1B5D reciprocating engines, with Superior Air Parts, Inc. Parts Manufacture Approval (PMA) part numbers SL54000-A1, -A2, -A2P, -A20P, and A21P replacement cylinder assemblies installed, with serial numbers 001 through 650. These engines are installed on but not limited to the following aircraft: Bellanca DW-1 (Eagle), The New Piper Aircraft Co. PA-31 and PA-32 series, Riley Aircraft Cessna 310 conversion, and Twin Commander Aircraft Corp. 700 series.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent cylinder head separation, inflight loss of power, possible engine failure, and fire, accomplish the following:

(a) Within 5 hours Time in Service (TIS) after the effective date of this AD, for engines with 300 or more hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, remove from service affected cylinder assemblies and replace with serviceable parts.

(b) Within 5 hours TIS after the effective date of this AD, for engines with 245 hours but less than 300 hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, accomplish the following:

(1) Perform an initial dye penetrant inspection for cracks in accordance with Superior Air Parts, Inc. Mandatory Service Bulletin (MSB) No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(2) Thereafter, perform repetitive dye penetrant inspections for cracks at intervals not to exceed 25 hours TIS since last inspection, in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(3) Prior to further flight, remove from service cylinder assemblies found cracked during dye penetrant inspections and replace with serviceable parts.

(4) Upon accumulating 300 hours TIS since installation of the affected cylinder assemblies, prior to further flight remove from service affected cylinder assemblies and replace with serviceable parts.

(c) For engines with less than 245 hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, accomplish the following:

(1) Upon accumulating 250 hours TIS since installation of the affected cylinder assemblies, perform an initial dye penetrant inspection for cracks in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(2) Thereafter, perform repetitive dye penetrant inspections for cracks at intervals not to exceed 25 hours TIS since last inspection, in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(3) Prior to further flight, remove from service cracked cylinder assemblies and replace with serviceable parts.

(4) Upon accumulating 300 hours TIS since installation of the affected cylinder assemblies, prior to further flight remove from service affected cylinder assemblies and replace with serviceable parts.

(d) For the purpose of this AD, a serviceable part is defined as a cylinder assembly other than a Superior Air Parts, Inc. PMA part number SL54000-A1, -A2, -A2P, -A20P, and A21P replacement cylinder assembly, with serial numbers 001 through 650.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Special Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Special Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Special Certification Office.

(f) Special flight permits in accordance with Sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) may **not** be issued.

(g) Copies of the applicable service information may be obtained from Superior Air Parts, Inc., 14280 Gillis Road, Dallas, TX 75244-3792; telephone (800) 400-5949, fax (972) 702-8723. This information may be examined at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA.

(h) Priority Letter AD 97-01-04, issued December 27, 1996, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: M. Monica Merritt, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Ft. Worth, TX 76137-4298; telephone (817) 222-5196, fax (817) 222-5136.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING -37

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-006 KONTROLL/UTSKIFTING AV «PISTON PINS»

Påbudet gjelder:

Textron Lycoming motorer, følgende typer; O-320, TO-320, AEIO-320, O-360, LO-360, IO-360, LIO-360, VO-360, IVO-360, HO-360, HIO-360, AEIO-360, AIO-360, TIO-360, TO-360, O-540 (foruten O-540-J1A5D, -J1C5D, -J2A5D, -J3A5D, J3C5D, -L3C5D), IO-540 (foruten IO-540-W1A5D, -W3A5D, -AB1A5),AEIO-540, TIO-540, LTIO-540, TIO-541, TIGO-541 og IO-720 serie, som kommer under de krav som er listet i vedlagte kopi av FAA AD 97-01-03.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 97-01-03.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av FAA AD 97-01-03, med virkning fra denne LDP`s gyldighetsdato.

Referanse:

FAA AD 97-01-03

Gyldighetsdato:

01.02.97

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

Bilag til LDP 97-006

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

97-01-03 Textron Lycoming: Amendment 39-9874. Docket 96-ANE-37.

Applicability: Textron Lycoming O-320, IO-320, AEIO-320, O-360, LO-360, IO-360, LIO-360, VO-360, IVO-360, HO-360, HIO-360, AIO-360, AEIO-360, TIO-360, TO-360, O-540 (except O-540-J1A5D, -J1C5D, -J2A5D, -J3A5D, -J3C5D, -L3C5D), IO-540 (except IO-540-W1A5D, -W3A5D, -AB1A5), AEIO-540, TIO-540, LTIO-540, TIO-541, TIGO-541, and IO-720 series reciprocating engines, that meet any one of the following conditions:

1. Engines with serial numbers (S/Ns) listed in Textron Lycoming Mandatory Service Bulletin (SB) No. 527B, dated October 8, 1996; or
2. Engines that had Textron Lycoming cylinder kits installed after December 15, 1995; or
3. Engines that have been overhauled, or had cylinder head maintenance performed, by a repair facility other than Textron Lycoming after December 15, 1995.

These engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Aerospatiale, Bellanca, Cessna, The New Piper Company, Beech, Schweizer, Maule, and Mooney.

Note 1: A maintenance records check may allow an owner or operator to determine if this AD applies.

Note 2: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent piston pin failure, which could result in engine failure, accomplish the following:

(a) For engines with S/Ns listed in Textron Lycoming Mandatory SB No. 527B, dated October 8, 1996, accomplish the following:

(1) Check the piston pin code in accordance with Textron Lycoming SB No. 527B, dated October 8, 1996 in accordance with the following schedule:

(i) For engines with 45 hours or more time in service (TIS) since the engine was shipped from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish within 5 hours TIS after the effective date of this AD.

(ii) For engines with less than 45 hours TIS since the engine was shipped from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish prior to accumulating 50 hours TIS since the applicable date.

(2) Remove from service piston pins, Part Number (P/N) LW-14077, code 17328, and replace with serviceable piston pins.

(b) For all other affected engines, determine if a suspect piston pin, P/N LW-14077, code 17328 could have been installed, in accordance with Textron Lycoming Mandatory SB No. 527B, dated October 8, 1996, and accomplish the following:

(1) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could have been installed, accomplish paragraphs (a)(1) and (a)(2) of this AD.

(2) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could not have been installed, no further action is required.

(3) If it cannot be determined if the suspect piston pins, P/N LW-14077, code 17328 were installed, accomplish paragraphs (a)(1) and (a)(2) of this AD.

(c) For purposes of this AD a serviceable piston pin is a piston pin, P/N LW-14077, with a piston pin code of "BN" or "71238." Installation of a piston pin, P/N LW-14077, with a piston pin code of "17328" is prohibited after the effective date of this AD.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(f) The actions required by this AD shall be done in accordance with the following Textron Lycoming Mandatory SB:

Document No.	**Pages**	**Date**
527B	1-3	October 8, 1996
Attachment	1-6	October 8, 1996

Total pages: 9.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on January 21, 1997.

FOR FURTHER INFORMATION CONTACT:

Franco Pieri and Pat Perrotta, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516) 256-7534, fax (516) 568-2716.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 38

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-031 KONTROLL AV SYLINDERTOPPLOKK

Påbudet gjelder:

Textron Lycoming Modell TIO-540-A2C, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD og LTIO-540-J2B, -F2BD, -J2BD, -N2BD, -R2AD og IO-540-M1B5D motorer som har Superior Air Parts Inc. sylinder assembly P/N SL54000-A1, -A2, -A2P, - A20P og -A21P installert med serienummer 001 t.o.m 650.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 97-01-04.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av FAA AD 97-01-04, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 97-01-04.

Gyldighetsdato:

01.06.97.

BW 97-08

TEXTRON LYCOMING & SUPERIOR AIR PARTS
AIRWORTHINESS DIRECTIVE
FINAL RULE OF PRIORITY LETTER
ENGINE & APPLIANCE
LARGE AIRCRAFT

97-01-04 Textron Lycoming and Superior Air Parts, Inc.: Amendment 39-9977. Docket 96-ANE-43.

Applicability: Textron Lycoming Models TIO-540-A2C, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, and LTIO-540-J2B, -F2BD, -J2BD, N2BD, -R2AD, and IO-540-M1B5D reciprocating engines, with Superior Air Parts, Inc. Parts Manufacture Approval (PMA) part numbers SL54000-A1, -A2, -A2P, -A20P, and A21P replacement cylinder assemblies installed, with serial numbers 001 through 650. These engines are installed on but not limited to the following aircraft: Bellanca DW-1 (Eagle), The New Piper Aircraft Co. PA-31 and PA-32 series, Riley Aircraft Cessna 310 conversion, and Twin Commander Aircraft Corp. 700 series.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent cylinder head separation, inflight loss of power, possible engine failure, and fire, accomplish the following:

(a) Within 5 hours Time in Service (TIS) after the effective date of this AD, for engines with 300 or more hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, remove from service affected cylinder assemblies and replace with serviceable parts.

(b) Within 5 hours TIS after the effective date of this AD, for engines with 245 hours but less than 300 hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, accomplish the following:

(1) Perform an initial dye penetrant inspection for cracks in accordance with Superior Air Parts, Inc. Mandatory Service Bulletin (MSB) No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(2) Thereafter, perform repetitive dye penetrant inspections for cracks at intervals not to exceed 25 hours TIS since last inspection, in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(3) Prior to further flight, remove from service cylinder assemblies found cracked during dye penetrant inspections and replace with serviceable parts.

(4) Upon accumulating 300 hours TIS since installation of the affected cylinder assemblies, prior to further flight remove from service affected cylinder assemblies and replace with serviceable parts.

(c) For engines with less than 245 hours TIS since installation of the affected cylinder assemblies on the effective date of this AD, accomplish the following:

(1) Upon accumulating 250 hours TIS since installation of the affected cylinder assemblies, perform an initial dye penetrant inspection for cracks in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(2) Thereafter, perform repetitive dye penetrant inspections for cracks at intervals not to exceed 25 hours TIS since last inspection, in accordance with Superior Air Parts, Inc. MSB No. 96-002, Revision A, dated December 17, 1996, or remove and replace with a serviceable part.

(3) Prior to further flight, remove from service cracked cylinder assemblies and replace with serviceable parts.

(4) Upon accumulating 300 hours TIS since installation of the affected cylinder assemblies, prior to further flight remove from service affected cylinder assemblies and replace with serviceable parts.

(d) For the purpose of this AD, a serviceable part is defined as a cylinder assembly other than a Superior Air Parts, Inc. PMA part number SL54000 -A1, -A2, -A2P, -A20P, and A21P replacement cylinder assembly, with serial numbers 001 through 650.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Special Certification Office. The request should be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Special Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Special Certification Office.

(f) Special flight permits in accordance with Sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) may **not** be issued.

(g) The actions required by this AD shall be accomplished in accordance with the following Superior Air Parts, Inc. MSB:

Document No.	**Pages**	**Revision**	**Date**
96-002	1-4	A	December 17, 1996

Total pages: 4.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Superior Air Parts, Inc., 14280 Gillis Road, Dallas, TX 75244-3792; telephone (800) 400-5949, fax (972) 702-8723. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective April 22, 1997, to all persons except those persons to whom it was made immediately effective by priority letter AD 97-01-04, issued December 27, 1996, which contained the requirements of this amendment.

FOR FURTHER INFORMATION CONTACT:
M. Monica Merritt, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, 2601 Meacham Blvd., Ft. Worth, TX 76137-4298; telephone (817) 222-5196, fax (817) 222-5136.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 39

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

97-059 KONTROLL/UTSKIFTING AV «PISTON PINS»

Påbudet gjelder:

Avco Lycoming and Textron Lycoming motorer, følgende typer; O-320, IO-320, LII-320, AIO-320, AEIO-320, O-360, LO-360, IO-360, LIO-360, VO-360, IVO-360, HO-360, HIO-360, LHIO-360, AEIO-360, AIO-360, TIO-360, TO-360, LTO-360, LTIO-360, O-480, GO-480, IGO-480, GSO-480, IGSO-480, O-540 (foruten O-540-J1A5D, -J1C5D, -J2A5D, -J3A5D, J3C5D, -L3C5D), IO-540 (foruten IO-540-W1A5D, -W3A5D, -AB1A5),AEIO-540, TIO-540, LTIO-540, VO-540, IVO-540, TVO-540, TIVO-540, HIO-540, IGO-540, IGSO-540, TIO-541, TIGO-541 og IO-720 serie, som kommer under de krav som er listet i vedlagte kopi av FAA AD 97-01-03.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 97-15-11.

Anm.: Denne LDP erstatter og opphever LDP 97-006.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 97-15-11, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 97-15-11.

Gyldighetsdato:

01.09.97.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation
Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

97-15-11 Avco Lycoming and Textron Lycoming: Amendment 39-10085. Docket 97-ANE-26-AD. Supersedes AD 97-01-03, Amendment 39-9874.

Applicability: Avco Lycoming and Textron Lycoming O-320, IO-320, LIO-320, AIO-320, AEIO-320, O-360, LO-360, IO-360, LIO-360, VO-360, IVO-360, HO-360, HIO-360, LHIO-360, AIO-360, AEIO-360, TIO-360, TO-360, LTO-360, LTIO-360, O-480, GO-480, IGO-480, GSO-480, IGSO-480, O-540 (except O-540-J1A5D, -J1C5D, -J2A5D, -J3A5D, -J3C5D, -L3C5D), IO-540 (except IO-540-W1A5D, -W3A5D, -AB1A5), AEIO-540, TIO-540, LTIO-540, VO-540, IVO-540, TVO-540, TIVO-540, HIO-540, IGO-540, IGSO-540, TIO-541, TIGO-541, and IO-720 series reciprocating engines, that meet any one of the following conditions:

1. Engines with serial numbers (S/Ns) listed in Textron Lycoming Mandatory Service Bulletin (SB) No. 527C, dated April 18, 1997; or
2. Engines that had Textron Lycoming cylinder kits installed after December 15, 1995; or
3. Engines that have been overhauled, or had cylinder head maintenance performed, by a repair facility other than Textron Lycoming after December 15, 1995.

These engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Aerospatiale, Bellanca, Cessna, The New Piper Company, Beech, Schweizer, Maule, and Mooney.

Note 1: A maintenance records check may allow an owner or operator to determine if this AD applies.

Note 2: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent piston pin failure, which could result in engine failure, accomplish the following:

(a) No action is required for engines that have been inspected in accordance with AD 97-01-03.

(b) For engines that have not been inspected in accordance with AD 97-01-03, and with S/Ns listed in Textron Lycoming Mandatory SB No. 527C, dated April 18, 1997, accomplish the following:

(1) Check the piston pin code in accordance with Textron Lycoming SB No. 527C, dated April 18, 1997, in accordance with the following schedule:

(i) For engines with 45 hours or more time in service (TIS) since the engine was shipped from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish within 5 hours TIS after the effective date of this AD.

(ii) For engines with less than 45 hours TIS since the engine was shipped from Textron Lycoming, since overhaul, since installation of a cylinder kit, or since installation of a replacement piston pin, as applicable, accomplish prior to accumulating 50 hours TIS since the applicable date.

(2) Remove from service piston pins, Part Number (P/N) LW-14077, code 17328, and replace with serviceable piston pins.

(c) For all other affected engines that have not been inspected in accordance with AD 97-01-03, determine if a suspect piston pin, P/N LW-14077, code 17328 could have been installed, in accordance with Textron Lycoming Mandatory SB No. 527C, dated April 18, 1997, and accomplish the following:

(1) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could have been installed, accomplish paragraphs (b)(1) and (b)(2) of this AD.

(2) If it is determined that suspect piston pins, P/N LW-14077, code 17328 could not have been installed, no further action is required.

(3) If it can not be determined if the suspect piston pins, P/N LW-14077, code 17328 were installed, accomplish paragraphs (b)(1) and (b)(2) of this AD.

(d) For the purpose of this AD, a serviceable piston pin is a piston pin, P/N LW-14077, with a piston pin code of "BN" or "71238." Installation of a piston pin, P/N LW-14077, with a piston pin code of "17328" is prohibited after the effective date of this AD.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(g) The actions required by this AD shall be done in accordance with the following Textron Lycoming Mandatory SB:

Document No.	**Pages**	**Date**
527C	1-4	April 18, 1997
Attachment I	1-6	April 18, 1997
Attachment II	1	April 18, 1997

Total pages: 11.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7278, fax (717) 327-7022. Copies may be inspected at the FAA, New England Region, Office of the Assistant Chief Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(h) This amendment becomes effective on August 12, 1997.

FOR FURTHER INFORMATION CONTACT:

Franco Pieri and Pat Perrotta, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; telephone (516) 256-7526 and (516) 256-7534, fax (516) 568-2716.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 40

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

98-022 KONTROLL AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming motorer, som listet i vedlagte kopi av FAA AD 98-02-08.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 98-02-08.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av FAA AD 98-02-08, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 98-02-08.

Gyldighetsdato:

1998-03-01.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

98-02-08 Textron Lycoming: Amendment 39-10291. Docket 94-ANE-44.

Applicability: Textron Lycoming 320 series limited to 160 horsepower, and 360 series, four cylinder reciprocating engines with fixed pitch propellers; except for the following installed in helicopters or with solid crankshafts: HO-360 series, HIO-360 series, LHIO-360 series, VO-360 series, and IVO-360 series, and Models O-320-B2C, O-360-J2A, AEIO-360-B4A, O-360-A4A, -A4G, -A4J, -A4K, -A4M, and -C4F. In addition, engines with crankshafts containing "PID" stamped on the outside diameter of the propeller flange are exempt from the inspection requirements of this AD. The affected engines are installed on but not limited to reciprocating engine powered aircraft manufactured by Cessna, Piper, Beech, American Aircraft Corporation, Grumman American Aviation, Mooney, Augustair Inc., Maule Aerospace Technology Corporation, Great Lakes Aircraft Co., and Commander Aircraft Co.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent crankshaft failure, which can result in engine failure, propeller separation, forced landing, and possible damage to the aircraft, accomplish the following:

(a) 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 time in service (TIS) since remanufacture or overhaul, visually inspect the inside diameter (ID) of the crankshaft for corrosion pits within the next 100 hours TIS after the effective date of this AD, or 6 months after the effective date of this AD, whichever occurs first, in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) No. 505B, dated December 1, 1997.

(1) If corrosion pits are found during this inspection, prior to further flight, accomplish the following:

(i) If the crankshaft is installed in the engine such as during an on-wing inspection, perform a fluorescent penetrant inspection (FPI) in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(ii) If the crankshaft is removed from the engine at overhaul, perform a magnetic particle inspection (MPI) in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(2) Within 48 hours after these inspections, report the finding of the inspection in accordance with paragraph (e) of this AD.

(b) For engines shipped new from Textron Lycoming after December 31, 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, visually inspect the ID of the crankshaft for corrosion pits, at the earliest occurrence of any event specified in subparagraph (3) of this paragraph, and in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(1) If corrosion pits are found during this inspection, prior to further flight perform an FPI or MPI in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(2) Within 48 hours after these inspections, report the finding of the inspection in accordance with paragraph (e) of this AD.

(3) Visually inspect the ID of the crankshaft for corrosion pits at the earliest of the following:

(i) The next engine overhaul or disassembly.

(ii) Within 10 years of the original shipping date or 6 months from the effective date of this AD, whichever occurs later.

(iii) Within 1,000 hours TIS since remanufacture or overhaul, or 6 months from the effective date of this AD, whichever occurs later.

(c) Thereafter, 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 first, in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997. 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 Textron Lycoming MSB No. 505B, dated December 1, 1997, repeat the FPI at intervals not to exceed 100 hours TIS since last FPI or until a serviceable crankshaft is installed in the engine.

(d) Prior to further flight, remove from service and replace with a serviceable part any crankshaft found cracked during FPI or MPI performed in accordance with Textron Lycoming MSB No. 505B, dated December 1, 1997.

(e) After accomplishing the initial visual inspection and, if necessary, the FPI or MPI, required by this AD, complete Appendix 1 of this AD and submit to the Manager, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581; fax (516) 568-2716. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

(f) 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 in accordance with Textron Lycoming MSB No. 530, dated December 1, 1997, constitutes terminating action to the inspection requirements of this AD.

(g) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(i) The actions required by this AD shall be done in accordance with the following Textron Lycoming MSB:

Document No.	**Pages**	**Date**
505B Total Pages: 5	1-5	December 1, 1997
530 Total Pages: 2	1-2	December 1, 1997

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7080, fax (717) 327-7100. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

(j) This amendment becomes effective on March 30, 1998.

FOR FURTHER INFORMATION CONTACT: Rocco Viselli or Raymond Reinhardt, Aerospace Engineers, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., Valley Stream, NY 11581-1200; telephone (516) 256-7531, fax (516) 568-2716.

Appendix 1

TEXTRON LYCOMING CRANKSHAFT INSPECTION SURVEY
AD DOCKET NO. 94-ANE-44

Date of Inspection _____

Inspector's Information
Name _____
Address _____
State _____ Zip Code _____
Telephone No. _____ Facsimile No. _____

Engine Model Number _____
Engine Serial Number (S/N) _____
Date of Manufacture _____ (M/D/YR) Total Time (TT) _____ hrs
Time Since Major Overhaul (SMOH) _____ hrs

Crankshaft Part Number (located on prop flange) _____
S/N _____

Aircraft Make and Model _____

Frequency of Flights _____ per month (average)
Duration _____ hrs per Flight

How was aircraft being utilized? ____ Training, ____ Personal, ____ Banner Towing, ____ Glider Towing, ____ Agricultural, Other (please explain)
_____

Propeller Make and Model _____

Has the aircraft ever experienced a propeller strike during service? _____ Yes _____ No

Was propeller ever removed for servicing or overhaul? _____ Yes _____ No

If yes, describe reason for removal in detail?

_____

_____

What was the condition of the crankshaft internal bore?
Corroded ____ Yes ____ No If corroded, how many pits? ___ 1 to 5, ___ 6 to 10, ___ More than 10
Was a crack found? ____ Yes ____ No If crack was found, complete the following:
_____ Distance from crankshaft end (Inches) _____ Crack Length (Inches)

COMMENTS:

_____

_____

_____

LUFTFARTSVERKET
Hovedadministrasjonen
Luftfartsinspeksjonen
Postboks 8124 Dep., 0032 Oslo
Telefon : 22 94 20 00
Telefax : 22 94 23 91
Tlgr : CIVILAIR
Telex : 71032 enfb n

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 41

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

98-086 SPREKKONTROLL AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming and Teledyne Continental Motors, modeller som listet i vedlagte kopi av FAA AD 98-17-11.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 98-17-11.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 98-17-11, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 98-17-11.

Gyldighetsdato:

1998-10-05.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation Administration

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98-17-11 Textron Lycoming and Teledyne Continental Motors: Amendment 39-10713. Docket 98-ANE-27-AD. Textron Lycoming (LYC) 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; and Teledyne Continental Motors (TCM) A-65, A65-3, A65-8, A75, A75-8, C75-12, C85, C85-8, C85-12, C90-8FJ, C90-12, O-200, O-200-A, O-300, O-300-D, IO-360-C, E-185-4, E-225-8, O-470, O-470-K, O-470-L, O-470-R, O-470-11, IO-470, IO-470-N, IO-470-S, IO-520, IO-520-D, GTSIO-520, and TSIO-520-VB reciprocating engines, with installed cranksh repaired by Nelson Balancing Service, Bedford, Massachusetts, Repair Station Certificate No. NB7R820J, betwe... February 1, 1995, and December 31, 1997, inclusive, as listed (by work order (W/O)) in Table 1 of this AD.

Table 1

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
LYC:			
AEIO-320-E1B	1134	2/17/96	L-5653-55A
IO-320	1141	1/17/96	
IO-360	1314	12/17/96	
IO-360-A1A	1230	6/10/96	L-474-51
IO-360-A1A	1415b	5/23/97	RL-3920-51A
IO-360-B1E	1312	12/12/96	L-4453-51A
IO-360-C1C	1336	2/10/97	
IO-360-C1C6	1530	11/25/97	
IO-360-C1D6	1286	4/28/97	
IO-360-F1A6	1176	3/7/96	L-27423-36A
IO-540	1056	6/13/95	
IO-540-C4B5	1313	12/17/96	L-19547-48
IVO-435-G1A	1271	10/1/96	
LIO-360-C1E6	1280	10/7/96	
O-235	1013	2/21/95	
O-235	1054	6/9/95	
O-235	1058	6/29/95	
O-235	1069	8/10/95	
O-235	1145	1/23/96	
O-235	1160	2/9/96	RL-24636-15
O-235	1329	2/11/97	
O-235	1481	9/2/97	
O-235-C1	1188	4/2/96	L-7143-15
O-235-C1	1367	3/24/97	
O-235-C2C	1040	5/8/95	
O-235-L2C	1030	4/6/95	L-14545-15
O-235-L2C	1037	4/24/95	L-23012-15
O-235-L2C	1062	7/5/95	L-18306-15
O-235-L2C	1070	8/10/95	L-16005-15
O-235-L2C	1101	11/4/95	L-15300-15
O-235-L2C	1162	2/14/96	L-16114-15
O-235-L2C	1219	5/16/96	L-21215-15
O-235-L2C	1285	10/19/96	
O-235-L2C	1400	4/28/97	
O-235-L2C	1417	12/5/97	
O-235-L2C	1435	6/9/97	
O-235-L2C	1508	11/18/97	
O-235-L2C	1536	11/24/97	
O-235-N2C	1511	10/29/97	L-23857-15
O-290	1326	3/26/97	
O-320	1018	2/22/95	

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
LYC:			
HIO-360-C1A	1155	2/7/96	L-12126-51A
IO-320-B1A	1525	11/14/97	
IO-360	IN6137	8/7/97	
IO-360-A1A	1289	10/23/96	L-4085-5174
IO-360-A1B6	1463	7/31/97	
IO-360-C	1146	1/23/96	R-51448-9-C
IO-360-C1C	1518	12/9/97	
IO-360-C1C6	1537	12/9/97	L-19294-51A
IO-360-D	1540	12/2/97	
IO-540	1014	2/8/95	
IO-540	1302	12/5/96	
IO-540-S1A5	1513	10/27/97	L-19597-48A
LIO-320-C1A	1158	2/8/96	
LIO-360-C1E6	1281	10/9/96	
O-235	1051	6/2/95	
O-235	1057	6/14/95	L-9041-15
O-235	1060	6/30/95	
O-235	1110	2/20/96	
O-235	1151	1/25/96	
O-235	1305	12/5/96	L-22542-15
O-235	1332	2/11/97	
O-235-C1	1089	10/8/95	L-6475-15
O-235-C1	1335	3/12/97	L-5569-15
O-235-C2C	1019	2/24/95	L-12284-15
O-235-C2C	1105	12/1/95	L-12273-15
O-235-L2C	1036	4/24/95	
O-235-L2C	1050	6/2/95	L-15542-15
O-235-L2C	1067	8/8/95	
O-235-L2C	1095	11/14/95	RL-023227-15
O-235-L2C	1102	11/15/95	L-20183-15
O-235-L2C	1251	8/22/96	
O-235-L2C	1365	3/24/97	
O-235-L2C	1414	8/5/97	
O-235-L2C	1433	6/26/97	L-17074-15
O-235-L2C	1504	10/31/97	
O-235-L2C	1524	11/12/97	
O-235-L2C	2010	11/19/97	
O-290	1257	9/4/96	
O-290-D2	1082	9/26/95	L-6019-21
O-320	1024	3/17/95	

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
LYC:			
O-320	1038	5/3/95	L-39272-27A
O-320	1084	9/28/95	
O-320	1125	1/8/96	
O-320	1175	3/7/96	
O-320	1189	8/27/96	
O-320	1212	5/10/96	
O-320	1316	12/21/96	
O-320	1347	2/18/97	
O-320	1361	3/10/97	
O-320	1468	8/14/97	
O-320	1477	9/13/97	
O-320	1507	11/18/97	
O-320	1546	12/7/97	
O-320-A	1192	4/13/96	
O-320-A	1196	4/13/96	
O-320-A2B	1081	9/22/95	
O-320-B2B	1452	7/10/97	L-2977-39
O-320-D2J	1172	3/4/96	L-13039-39A
O-320-D2J	1253	9/4/96	
O-320-D2J	1539	12/3/97	
O-320-D3G	1114	1/8/96	L-10983-39A
O-320-D3G	1370	3/26/97	H45247
O-320-E2A	1103	11/10/95	L-26363-27A
O-320-E2A	1317	12/21/96	L-15219-27A
O-320-E2D	1068	8/10/95	L-35528-27A
O-320-E2D	1177	3/9/96	L-44732-27A
O-320-E2D	1241	8/9/96	L-42691-27A
O-320-E2D	1260	9/9/96	L-15300-15
O-320-E2D	1346	3/2/97	L-44320-27A
O-320-E2D	1458	7/18/97	
O-320-E2D	1549	12/12/97	
O-320-E3D	1034	4/18/95	L-29668-27A
O-320-E3D	1431	6/9/97	L-33770-27A
O-320-E3D	1500	10/7/97	L-33841-27A
O-360	1025	3/17/95	
O-360	1199	4/18/96	
O-360	1386	4/17/97	
O-360	1528	11/19/97	
O-360-A1A	1214	5/14/96	L-20190-36A
O-360-A1D	1411	5/5/97	
O-360-A4A	1270	9/27/96	L-14008-36A
O-360-A4A	1486	9/6/97	
O-360-A4K	1166	2/22/96	L-26455-36A
O-540-A1B5	1129	12/29/95	
O-540-A1D5	1462	7/28/97	L-5661-40
TIO-540-A2	1064	7/13/95	
TIO-540-R2AD	1106	11/27/95	L-5949-61A
TCM:			
A-65	1152	1/25/96	
A-65	1183	2/22/96	
A-65	1233	6/23/96	
A-65	1296	11/14/96	4933868
A-65	1325	3/26/97	
A-65	1376	4/29/97	
A-65-3	1243	8/13/96	324993
A-65-8	1276	10/5/96	5762568
A75	1255	9/3/96	
A75-8	1275	10/5/96	5162868
C85	1088	10/4/95	
C-85	1198	4/17/96	29652-7-8
C-85	1352	3/10/97	
C-85	1391	4/19/97	
C-85	1484	9/4/97	28487-6-12
C-85-8FJ	1420	5/12/97	29465-7-8
C-85-12	1182	3/18/96	21596-6-12
C-85-12	1265	9/12/96	14657
C-90-8F	1471	9/6/97	42838-1-8
E-185-4	1124	1/16/96	25700D-1-9
GTSIO-520	1208	5/7/96	210114-70H
IO-470	1028	3/23/95	87329-R

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
LYC:			
O-320	1045	5/24/95	
O-320	1116	1/8/96	
O-320	1169	2/28/96	
O-320	1184	3/28/96	
O-320	1202	4/30/96	
O-320	1283	10/17/96	
O-320	1340	2/25/97	L-24367
O-320	1360	3/10/97	
O-320	1436	5/29/97	
O-320	1474	8/22/97	L-13130-39A
O-320	1519	11/21/97	
O-320	1171	3/1/96	
O-320-A	1194	4/13/96	
O-320-A1A	1244	8/13/96	L-5270-27
O-320-A2B	1461	9/9/97	L-12626-27
O-320-B2C	1315	12/17/96	
O-320-D2J	1173	3/7/96	L-123412-39A
O-320-D2J	1534	11/25/97	
O-320-D3G	1077	9/17/95	
O-320-D3G	1354	2/25/97	
O-320-D3G	1544	12/3/97	
O-320-E2A	1191	4/13/96	L-19377-27A
O-320-E2A	1439	6/9/97	L-38003-55A
O-320-E2D	1078	9/17/95	
O-320-E2D	1181	3/14/96	
O-320-E2D	1245	8/13/96	L-40483-27A
O-320-E2D	1343	2/17/97	
O-320-E2D	1385	4/16/97	
O-320-E2D	1533	11/25/97	
O-320-E2G	1338	3/10/97	L-38264-27A
O-320-E3D	1074	8/24/95	L-29495-27A
O-320-E3D	1444	6/13/97	
O-320-H2AD	1322	1/22/97	L-1530-78T
O-360	1157	2/7/96	
O-360	1362	3/10/97	
O-360	1394	5/6/97	
O-360-A1A	1170	2/28/96	L-20677-36A
O-360-A1A	1239	8/5/96	
O-360-A3A	1531	11/25/97	
O-360-A4A	1464	7/30/97	L-24796-36A
O-360-A4A	1529	11/25/97	
O-360-B1B	1262	9/9/96	L-5261-51A
O-540-A1B5	1132	1/9/96	L-1165-40
IO-720	1510	10/26/97	
TIO-540-A2	1111	1/10/96	
TCM:			
A-65	1154	2/7/96	7187
A-65	1185	3/28/96	
A-65	1290	10/29/96	
A-65	1299	11/19/96	
A-65	1326	3/26/97	
A-65	1438	6/17/97	5890178
A-65-8	1541	12/2/97	
A75	1156	2/7/96	5321868
A75	1256	9/4/96	
C75-12F	1293	11/4/96	3316-6-12
C85	1092	10/18/95	
C-85	1297	11/14/96	
C-85	1381	4/28/97	
C-85	1392	4/19/97	
C-85-8FJ	1139	1/17/96	29845-7-8
C-85-12	1031	4/6/95	
C-85-12	1217	5/15/96	
C-85-12	1298	11/14/96	23610-6-12
C-90-12	1279	10/7/96	44747-6-12
E-225-8	1505	10/28/97	35477-D-9-8-P
IO-360-C	1126	12/28/95	F-51439-9-C
IO-470-N	1421	5/13/97	95271-1-N

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
TCM:			
IO-470-S	1331	3/11/97	102412-2-S-I
IO-520-D	1167	2/22/96	
O-200	1043	5/12/95	
O-200	1076	9/11/95	214668-27A
O-200	1131	1/5/96	
O-200	1147	1/23/96	
O-200	1193	4/13/96	
O-200	1197	4/17/96	
O-200	1261	9/9/96	
O-200	1321	2/7/97	28115
O-200	1344	3/2/97	
O-200	1413	5/7/97	61001-5-4
O-200	1437	6/17/97	255759A-48
O-200	1506	11/18/97	
O-200-A	1052	6/21/95	254150-A-48
O-200-A	1120	12/29/95	253971
O-200-A	1215	5/15/96	
O-200-A	1254	9/3/96	6105-71-A-R
O-200-A	1356	3/10/97	
O-300	1042	5/12/95	34012-D-6-D
O-300	1096	10/23/95	464481
O-300	1259	9/4/96	
O-300	1397	4/26/97	5928-9A
O-300	1423	6/9/97	3834D8Z
O-300-A	1446	6/27/97	
O-300-D	1079	9/17/95	24276-D-0-D
O-300-D	1543	12/3/97	
O-470	1383	4/4/97	
O-470-11	1491	10/19/97	
O-470-11	1493	10/19/97	
O-470-F	1236	7/25/96	76956-4-F
O-470-L	1128	1/10/96	68681-8-L
O-470-L	1399	4/28/97	
O-470-R	1086	10/3/95	
O-470-R	1178	3/10/96	
O-470-R	1319	1/6/97	459408

ENGINE AND MODEL	W/O	DATE	ENGINE SER#
TCM:			
IO-520	1174	3/4/96	
O-200	1033	4/18/95	
O-200	1049	6/2/95	
O-200	1104	11/21/95	213830-71A
O-200	1142	1/18/96	265349-R
O-200	1190	4/13/96	
O-200	1195	4/13/96	
O-200	1213	5/13/96	
O-200	1303	12/5/96	
O-200	1324	2/6/97	
O-200	1393	5/5/97	
O-200	1430	5/23/97	
O-200	1488	9/7/97	
O-200	1522	11/11/97	
O-200-A	1085	9/29/95	
O-200-A	1161	2/9/96	24R-469
O-200-A	1240	8/5/96	69589-8-A
O-200-A	1264	9/12/96	
O-300	1027	3/20/95	
O-300	1083	9/26/95	
O-300	1137	1/17/96	
O-300	1387	4/22/97	
O-300	1403	4/28/97	
O-300	1555	1/13/98	
O-300-D	1022	3/17/95	35110-D-6-D
O-300-D	1487	9/6/97	
O-470	1046	6/1/95	
O-470-11	1017	2/22/95	
O-470-11	1492	10/19/97	
O-470-11	1494	10/19/97	
O-470-K	1087	10/3/95	47172-6-K
O-470-L	1359	5/19/97	68245-8-L
O-470-R	1016	2/10/95	133087-6-R
O-470-R	1165	2/22/96	
O-470-R	1201	6/2/96	83164-1-R
TSIO-520-VB	1055	6/9/95	

Note 1: Blank spaces indicate unknown data. Where the engine serial number is blank in this table, it is either unknown or the crankshaft may not be installed in an engine.

Note 2: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

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

(a) Within 10 hours time in service after the effective date of this AD, 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. 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) A person with a private pilot or higher rated certificate may make the determination of applicability of this AD provided the propeller spinner does not have to be removed.

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

(5) 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) Within 10 hours time in service after the effective date of this AD, 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 3: Further guidance on all inspection and acceptance criteria is contained in applicable TCM or LYC Overhaul or Maintenance Manuals, or other FAA-approved data.

(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 TCM or LYC Overhaul/Maintenance Manuals; or

(ii) All of the FAA-approved requirements for any repair station which currently has approval for limits other than those in the appropriate TCM or LYC 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.

Note 4: Crankshafts removed from TCM engine models IO-360, IO-520, and TSIO-520 series engines are also subject to compliance with AD 97-26-17.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York (LYC) or Atlanta (TCM) Aircraft Certification Offices. Operators shall submit their requests through an appropriate FAA Airworthiness Inspector, who may add comments and then send it to the Manager, New York or Atlanta Aircraft Certification Offices.

Note 5: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Atlanta Aircraft Certification or New York Aircraft Certification Office, as applicable.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(e) This amendment becomes effective on October 19, 1998.

FOR FURTHER INFORMATION CONTACT: Rocco Viselli, Aerospace Engineer (assigned to Textron Lycoming), New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., 3rd Floor, Valley Stream, NY 11581-1200; telephone (516) 256-7531, fax (516) 568-2716; or Jerry Robinette, Aerospace Engineer (assigned to Teledyne Continental Motors), Atlanta Aircraft Certification Office, FAA, Small Airplane Directorate, 1895 Phoenix Boulevard, One Crown Center, Suite 450, Atlanta, GA 30349; telephone (770) 703-6096, fax (770) 703-6097.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 42

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

98-090 KONTROLL AV BRENNSTOFFPUMPE

Påbudet gjelder:

Textron Lycoming and Teledyne Continental Motors, modeller som listet i vedlagte kopi av FAA AD 98-18-12.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 98-18-12.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 98-18-12, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 98-18-12.

Gyldighetsdato:

1998-11-01.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

98-18-12 Textron Lycoming: Amendment 39-10728. Docket 97-ANE-50-AD.

Applicability: Textron Lycoming 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, with Crane/Lear Romec "AN" rotary fuel pump model series, RG9080, RG9570, and RG17980 installed. These engines are installed on but not limited to fuel injected, reciprocating engine powered aircraft manufactured by Cessna, The New Piper, Inc., Mooney, Raytheon (Beech), Bellanca, Champion, Partenavia, Rockwell, Schweizer, Enstrom, Aerospatiale (SOCATA), Maule, Aero Commander, Helio, Hiller, and Pacific Aerospace Corp.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

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:

(a) Perform initial and repetitive torque check inspections of pump relief valve attaching screws in accordance with the Accomplishment Instructions of Textron Lycoming Service Bulletin (SB) No. 529, dated December 1, 1997, as follows:

(1) Within 10 hours time in service (TIS), or 30 days after the effective date of this AD, whichever occurs first, perform the initial torque check inspection. If the torque does not meet the specifications in Textron Lycoming SB No. 529, dated December 1, 1997, tighten screws to the required torque in accordance with that SB.

(2) Perform a follow-up torque check inspection after accumulating 50 hours TIS, or 6 months since the initial torque check inspection, whichever occurs first. If the torque does not meet the specification in Textron Lycoming SB No. 529, dated December 1, 1997, during this follow-up inspection, tighten screws to the required torque in accordance with that SB.

(3) Continue the repetitive torque check inspections required by paragraph (a)(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.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(d) The actions required by this AD shall be done in accordance with the following Textron Lycoming SB:

Document No.	Pages	Date
529	1-6	December 1, 1997

Total Pages: 6.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7080, fax (717) 327-7100. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on September 28, 1998.

FOR FURTHER INFORMATION CONTACT: Ray O'Neill, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., 3rd Floor, Valley Stream, NY 11581-1200; telephone (516) 256-7505, fax (516) 568-2716.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 43

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

99-016 UTSKIFTING AV "CRANKSHAFT GEAR RETAINING BOLTS"

Påbudet gjelder:

Textron Lycoming modell O-540-F1B5 motorer med serienummer som listet i vedlagte kopi av FAA AD 99-03-05.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 99-03-05

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 99-03-05, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 99-03-05.

Gyldighetsdato:

1999-03-01.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

99-03-05 Textron Lycoming: Amendment 39-11019. Docket 98-ANE-73-AD.

Applicability: Textron Lycoming Model O-540-F1B5 reciprocating engines, with the following Textron Lycoming Engine Serial Numbers, installed on but not limited to Robinson Helicopters Co. Model R-44 rotorcraft.

L-24545-40A	L-25087-40A	L-25126-40A	L-25161-40A
L-24628-40A	L-25088-40A	L-25127-40A	L-25162-40A
L-24766-40A	L-25089-40A	L-25128-40A	L-25164-40A
L-24772-40A	L-25090-40A	L-25129-40A	L-25166-40A
L-25050-40A	L-25091-40A	L-25130-40A	L-25167-40A
L-25052-40A	L-25092-40A	L-25131-40A	L-25168-40A
L-25053-40A	L-25093-40A	L-25132-40A	L-25169-40A
L-25054-40A	L-25094-40A	L-25133-40A	L-25170-40A
L-25063-40A	L-25095-40A	L-25134-40A	L-25171-40A
L-25064-40A	L-25096-40A	L-25135-40A	L-25172-40A
L-25065-40A	L-25097-40A	L-25136-40A	L-25173-40A
L-25066-40A	L-25098-40A	L-25137-40A	L-25174-40A
L-25067-40A	L-25099-40A	L-25138-40A	L-25175-40A
L-25068-40A	L-25100-40A	L-25139-40A	L-25176-40A
L-25069-40A	L-25101-40A	L-25140-40A	L-25177-40A
L-25070-40A	L-25102-40A	L-25141-40A	L-25178-40A
L-25071-40A	L-25103-40A	L-25142-40A	L-25179-40A
L-25072-40A	L-25104-40A	L-25143-40A	L-25180-40A
L-25073-40A	L-25105-40A	L-25144-40A	L-25181-40A
L-25074-40A	L-25106-40A	L-25145-40A	L-25182-40A
L-25075-40A	L-25116-40A	L-25146-40A	L-25183-40A
L-25076-40A	L-25117-40A	L-25149-40A	L-25184-40A
L-25077-40A	L-25118-40A	L-25150-40A	L-25185-40A
L-25078-40A	L-25119-40A	L-25154-40A	L-25186-40A
L-25080-40A	L-25120-40A	L-25155-40A	L-25188-40A
L-25081-40A	L-25121-40A	L-25156-40A	L-25189-40A
L-25083-40A	L-25122-40A	L-25157-40A	L-25190-40A
L-25084-40A	L-25123-40A	L-25158-40A	L-25191-40A
L-25085-40A	L-25124-40A	L-25159-40A	L-25192-40A

L-25086-40A	L-25125-40A	L-25160-40A	L-25193-40A
L-25198-40A	L-25200-40A	L-25201-40A	L-25202-40A
L-25204-40A	L-25206-40A	L-25207-40A	L-25208-40A
L-25211-40A	L-25212-40A	L-25213-40A	L-25214-40A
L-25216-40A	L-25217-40A	L-25218-40A	L-25219-40A
L-25221-40A	L-25222-40A	L-25223-40A	L-25228-40A
L-25229-40A	L-25230-40A	L-25231-40A	L-25232-40A
L-25233-40A	L-25234-40A	L-25235-40A	L-25236-40A
L-25237-40A	L-25238-40A	L-25239-40A	L-25240-40A
L-25242-40A	L-25243-40A	L-25244-40A	L-25246-40A
L-25249-40A	L-25250-40A	L-25251-40A	L-25252-40A
25257-40A			

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the crankshaft gear retaining bolts, which can result in engine failure and subsequent autorotation and forced landing, accomplish the following:

(a) Within 10 hours time in service, or 3 days after the effective date of this AD, whichever occurs first, have the crankshaft gear retaining bolt, part number STD-2209, replaced by Textron Lycoming or Robinson Helicopter Company.

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this worthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

(d) This amendment becomes effective on February 18, 1999.

FOR FURTHER INFORMATION CONTACT: Rocco Viselli, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth St., 3rd Floor, Valley Stream, NY 11581-1200; telephone (516) 256-7531, fax (516) 568-2716.

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 44

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartsverket følgende forskrift om luftdyktighet.

99-017 KONTROLL/UTSKIFTING AV "MAGNETO IMPULSE COUPLING"

Påbudet gjelder:

Textron Lycoming modeller som er utstyrt med Slick Aircraft Products magnet i henhold til vedlagte kopi av FAA AD 99-04-04.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 99-04-04.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av FAA AD 99-04-04, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 99-04-04.

Gyldighetsdato:

1999-03-01.

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
Federal Aviation Administration

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, Part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference FAR Subpart 39.3).

99-04-04 Textron Lycoming: Amendment 39-11028. Docket 98-ANE-81-AD.

Applicability: Textron Lycoming O-540-B2B5, B2C5, E4B5, E4C5, G1A5, G2A5, IO-540-K1A5, K1B5, and K1G5 reciprocating model engines equipped with Slick Aircraft Products magneto model numbers 6251, 6252, 6255, 6351 and 6355. These engines are installed on, but not limited to, the following airplanes: Britten Norman BN-2A, -2A-2, -2A-3, -2A-6, -2A-9, -2A-20, -2A-21, -2A-26, -2A-27, -2A-MKIII, -2A- MKIII-2, -2A- MKIII-3, -2B-20, -2B-21, -2B-26, -2B-27 and Piper PA-25-235, PA-25-260, PA-32-260, PA-32-300.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent failure of the magneto impulse coupling, resulting in seizure of the engine, accomplish the following:

(a) For engines on which the service history of the magneto is not known, or on which the magneto has greater than 250 hours TIS since new, factory rebuilt, or overhauled, on the effective date of this AD, within 10 hours of the effective date of this AD, inspect the components of the magneto impulse coupling for the conditions listed in accordance with steps 1 through 7 of the Textron Lycoming Mandatory SB No. 537, dated November 20, 1998.

Note 2: The Textron Lycoming Mandatory SB No. 537 dated November 20, 1998 contains the Slick SB No. SB1-98 dated August 26,1998 in its entirety. The steps referenced to the Textron Lycoming SB No. 537 dated November 20, 1998 by this compliance section are the same steps that are contained in the Slick SB No. SB1-98 dated August 26,1998.

(b) . For engines on which the magneto has less than or equal to 250 hours TIS since new, factory rebuilt, overhauled on the effective date of this AD, before accumulating 250 hours TIS since new, factory rebuilt or overhauled, or within 10 hours TIS from the effective date of this AD, whichever comes later, inspect the components of the magneto impulse coupling for the conditions listed in accordance with steps 1 through 7 of the Textron Lycoming Mandatory SB No. 537, dated November 20, 1998.

(c) Thereafter, at intervals not to exceed 250 hours TIS since the last inspection performed in accordance with this AD, inspect the components of the magneto impulse coupling for the conditions listed in accordance steps 1 through 7 of the Textron Lycoming Mandatory SB No. 537, dated November 20, 1998.

(d) Remove magneto impulse coupling before 2,000 hours TIS since new and replace with a serviceable part.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

(f) The inspection shall be done in accordance with the following Textron Lycoming Mandatory SB:

Document No	Pages	Revision	Date
SB No. 537	1-9	Original	November 20, 1998

Total pages: 9.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver Street, Williamsport, PA 17701. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on February 25, 1999.

FOR FURTHER INFORMATION CONTACT: Rocco Viselli, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine & Propeller Directorate, 10 Fifth Street, 3rd Floor, Valley Stream, NY 11581-1200; telephone (516) 256-7531, fax (516) 568-2716.

AD's are posted on the internet at http://av-info.faa.gov

Luftfartstilsynet
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Postboks 8050 Dep., 0031 Oslo
Besøksadresse:
Rådhusgata 2, Oslo
Telefon : 23 31 78 00
Telefax : 23 31 79 96
e-post: postmottak@caa.dep.no

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 45

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2000-063 KONTROLL/UTSKIFTING AV "OIL FILTER CONVERTER PLATE/PLATE GASKET"

Påbudet gjelder:

Textron Lycoming modeller som listet i vedlagte kopi av FAA AD 2000-18-53.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2000-18-53.

Tid for utførelse:

Til de tider og intervaller som beskrevet i vedlagte kopi av FAA AD 2000-18-53, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2000-18-53.

Gyldighetsdato:

2000-09-18.

EMERGENCY AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at http://av-info.faa.gov

DATE: **September 5, 2000**
2000-18-53

Send to all U.S. owners and operators of Textron Lycoming **O-320**-H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD; **(L)O-360**–A1AD, -A1F6D, -A1G6D, -A1LD, -A3AD, -A4AD, -A5AD, -E1A6D; **IO-360**-A1B6D, -A1D6D, -A3B6D, -A3D6D,-C1E6D, -J1AD, -J1A6D; **(L)TO-360**-A1A6D, -C1A6D, -E1A6D, -F1A6D; **TIO-360**-C1A6D; **(L)HIO-360**-E1AD, -E1BD, -F1AD; **0-540**-H1A5D, -H1B5D, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5D, -J3C5D, -L3C5D; **IO-540**-C4D5D, -K1A5D, -K1B5D, -K1E5D, -K1F5D, -K1G5D, -K1J5D, -L1A5D, -L1B5D, -M1A5D, -M1B5D, -M2A5D, -T4A5D, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D, -W3A5D; **(L)TIO-540**-K1AD, -S1AD, -AA1AD, -AB1AD, -AB1BD, -F2BD, -J2BD, -N2BD, -R2AD, -T2AD, -V2AD; **AEIO-540**-L1B5D; **TIO-541**-E Series; **TIGO-541**-D1A, -D1B, -E1A; **IO-720**-A1BD. –B1BD, -C1BD, -D1BD, and -D1CD reciprocating engines.

The Federal Aviation Administration (FAA) has received reports of certain oil filter converter plate gaskets, part number (P/N) LW-13388, extruding from the seat of the oil filter converter plate, P/N LW-13904. The protruding or swelling of the gasket allows oil to leak from between the plate and the accessory housing. This condition, if not corrected, could result in complete loss of engine oil and subsequent seizing of the engine and possible fire.

Manufacturer's Service Information

The FAA has reviewed and approved the technical contents of Textron Lycoming Mandatory service bulletin (MSB) number 543A, dated August 30, 2000, and service instruction (SI) 1453, dated May 9, 1991. Those documents provide procedures for removing the existing gasket , P/N LW-13388, and installing a new gasket.

Differences Between this AD and the Manufacturer's Service Information

MSB 543A, dated August 30, 2000, requires the gasket to be replaced before further flight. The FAA has determined that only engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time since the last replacement of the oil filter converter plate or gasket must have the gasket replaced before further flight.

Requirements of This AD

Since an unsafe condition has been identified that is likely to exist or develop on other engines of this same type design, this AD requires the replacement of the oil filter converter plate gasket before further flight on engines with more than 50 hours TSN, TSO, or time since the last replacement of the gasket or the converter plate. This AD also requires inspections of the gasket on engines with fewer than 50 hours TSN, TSO, or time since the last replacement of the gasket or the converter plate for leaks and for damage to, or displacement, deterioration, or extrusion of the gasket. This AD also requires replacement of the gasket every 50 hours time-in-service (TIS) thereafter. The actions are required to be accomplished in accordance with the mandatory service bulletin described previously.

There are about 31,500 Textron Lycoming engines in the worldwide fleet that may be affected by this AD. There are about 22,050 engines that are used on aircraft that are registered in the U.S. that may be affected by this AD.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2000-18-53 TEXTRON LYCOMING: Docket No. 2000-NE-36-AD.

Applicability

This AD is applicable to the following reciprocating engine models that were manufactured new, rebuilt, overhauled, or had the oil filter converter plate P/N LW-13904 or gasket P/N LW-13388 replaced, after April 1, 1999:

O-320	-H1AD, -H1BD, -H2AD, -H2BD, -H3AD, -H3BD
(L)O-360	-A1AD, -A1F6D, -A1G6D, -A1LD, -A3AD, -A4AD, -A5AD, -E1A6D
IO-360	-A1B6D, -A1D6D, -A3B6D, -A3D6D, -C1E6D, -J1AD, -J1A6D
(L)TO-360	-A1A6D, -C1A6D, -E1A6D, -F1A6D
TIO-360	-C1A6D
(L)HIO-360	-E1AD, -E1BD, -F1AD
O-540	-H1A5D, -H1B5D, -H2A5D, -H2B5D, -J1A5D, -J1B5D, -J1C5D, -J1D5D, -J2A5D, -J2B5D, -J2C5D, -J2D5D, -J3A5D, -J3C5D, -L3C5D
IO-540	-C4D5D, -K1A5D, -K1B5D, -K1E5D, -K1F5D, -K1G5D, -K1J5D, -L1A5D, -L1B5D, -M1A5D, -M1B5D, -M2A5D, -T4A5D, -T4B5D, -T4C5D, -U1A5D, -U1B5D, -V4A5D, -W1A5D, -W3A5D
(L)TIO-540	-K1AD, -S1AD, -AA1AD, -AB1AD, -AB1BD, -F2BD, -J2BD, -N2BD, -R2AD, -T2AD, -V2AD
AEIO-540	-L1B5D
TIO-541	-E Series;
TIGO-541	-D1A, -D1B, -E1A
IO-720	-A1BD, -B1BD, -C1BD, -D1BD, and -D1CD.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated below, unless already done.

To prevent complete loss of engine oil and subsequent seizing of the engine, and possibility of fire, do the following:

(a) For engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time since the last replacement of the oil filter converter plate gasket, P/N LW-13388, or the converter plate, P/N LW-13904, replace the gasket in accordance with paragraphs 1 and 2 of MSB 543A, dated August 30, 2000, and Textron Lycoming SI No. 1453, dated May 9, 1991, before further flight.

(b) For engines with fewer than 50 hours, TSN, TSO, or time since the last replacement of the oil filter converter plate gasket, P/N LW-13388, or the converter plate, P/N LW-13904, inspect the gasket within 10 hours time-in-service (TIS) or within 3 days after the effective date of this AD for the following:
(1) Inspect the oil filter base for both:
(i) Signs of oil leakage between the oil filter base and the accessory housing. AND,
(ii) Any evidence of the gasket extruding beyond the perimeter of the base.
(2) If there is any oil leakage, or if the seal is damaged, extruded, displaced, or deteriorated, replace the plate gasket in accordance with paragraphs 1 and 2 of MSB 543A, dated August 30, 2000, SI No. 1453, dated May 9, 1991, before further flight.

(c) Thereafter, replace the converter plate gasket, P/N LW-13388, every 50 hours TIS since the last replacement of the gasket.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators shall submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be accomplished.

Availability of Manufacturer Service Information

(f) Copies of the applicable service information may be obtained from Textron Lycomng, 652 Oliver Street, Williamsport, PA 17701, U.S.A. telephone: 570-323-6181. This information may be examined at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

Effective date

(g) **Emergency AD 2000-18-53, issued September 5, 2000, becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Rocco Viselli, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, Third Floor, Valley Stream, NY 11581; telephone: 516-256-7531; fax: 516-568-2716; e-mail rocco.viselli@faa.gov.

Issued in Burlington, Massachusetts on September 5, 2000.
David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

Luftfartstilsynet
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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 46

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2002-019 KONTROLL AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming modeller som listet i vedlagte kopi av FAA Emergency AD 2002-04-51.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA Emergency AD 2002-04-51.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA Emergency AD 2002-04-51, med virkning fra denne LDP's gyldighetsdato.

Referanse:

Emergency AD 2002-04-51.

Gyldighetsdato:

2002-02-19.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

Airworthiness Directives

▼Header Information
DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
14 CFR Part 39
Docket No. 2002-NE-03-AD; AD 2002-04-51 E

Textron Lycoming LTIO-540 and TIO-540 engines

▼Preamble Information
AGENCY: Federal Aviation Administration, DOT

FOR FURTHER INFORMATION CONTACT: Norman Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, 3rd floor, Valley Stream, NY 11581-1200; telephone (516) 256-7537; fax (516) 568-2716.

DATE: February 11, 2002
2002-04-51

Send to all U.S. owners and operators of Textron Lycoming LTIO-540 and TIO-540 engines. These engines are installed on, but not limited to Piper Navajo (PA 31, PA 31-350, and EMB-820), Piper Saratoga (PA 32-301T, PA 32R-301T, and PA 31-325), Piper Aerostar (PA 60-700P), Piper Malibu Mirage (PA 46-350P), Piper Mojave (PA 31P-350) El Gavilian (EL-1), and Cessna T-206.

This Emergency Airworthiness Directive (AD) is prompted by reports of 14 crankshaft failures in LTIO-540 and TIO-540 engines, rated at 300 HP or higher, that were assembled with crankshafts manufactured from March 1, 1999, through December 31, 1999. This condition, if not corrected, could result in crankshaft failure, which could result in total engine power loss, in-flight engine failure and possible forced landing.

Since an unsafe condition has been identified that is likely to exist or develop on other Textron Lycoming LTIO-540 and TIO-540 engines, rated at 300 HP or higher, that are listed by serial number (SN) in this AD, this AD requires removal of the crankshaft within 10 hours time-in-service (TIS) after receipt of this AD.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

▼Regulatory Information

2002-04-51 Textron Lycoming: Docket No. 2002-NE-03-AD

Applicability This AD is applicable to all Textron Lycoming LTIO-540 and TIO-540 engines, rated at 300 HP or greater, that have a SN in the following Table:

Table of Engine Serial Numbers (SN's)

MODEL	ENGINE SN	MODEL	ENGINE SN	MODEL	ENGINE SN
LTIO-540-F2BD	1144-68A	LTIO-540-J2B	2310-68A	LTIO-540-J2BD	1255-68A
LTIO-540-F2BD	1272-68A	LTIO-540-J2B	2317-68A	LTIO-540-J2BD	1331-68A
LTIO-540-F2BD	1871-68A	LTIO-540-J2B	2455-68A	LTIO-540-J2BD	1457-68A
LTIO-540-F2BD	2645-68A	LTIO-540-J2B	2553-68A	LTIO-540-J2BD	1563-68A
LTIO-540-F2BD	2988-68A	LTIO-540-J2B	2675-68A	LTIO-540-J2BD	1941-68A
LTIO-540-J2B	345-68A	LTIO-540-J2B	2807-68A	LTIO-540-J2BD	1970-68A
LTIO-540-J2B	703-68A	LTIO-540-J2B	2968-68A	LTIO-540-J2BD	2330-68A
LTIO-540-J2B	1426-68A	LTIO-540-J2BD	172-68A	LTIO-540-J2BD	2485-68A
LTIO-540-J2B	1885-68A	LTIO-540-J2BD	186-68A	LTIO-540-J2BD	2667-68A
LTIO-540-J2B	1984-68A	LTIO-540-J2BD	355-68A	LTIO-540-J2BD	2846-68A
LTIO-540-J2B	2181-68A	LTIO-540-J2BD	1186-68A	LTIO-540-J2BD	2890-68A
LTIO-540-J2BD	2904-68A	TIO-540-AE2A	9822-61A	TIO-540-AE2A	10547-61A
LTIO-540-J2BD	2932-68A	TIO-540-AE2A	9853-61A	TIO-540-AE2A	10552-61A
LTIO-540-J2BD	2986-68A	TIO-540-AE2A	9939-61A	TIO-540-AE2A	10557-61A

TIO-540-A2B	2169-61A	TIO-540-AE2A	10072-61A	TIO-540-AE2A	10559-61A
TIO-540-A2B	4732-61A	TIO-540-AE2A	10173-61A	TIO-540-AE2A	10560-61A
TIO-540-A2B	6011-61A	TIO-540-AE2A	10338-61A	TIO-540-AE2A	10569-61A
TIO-540-A2B	6468-61A	TIO-540-AE2A	10382-61A	TIO-540-AE2A	10572-61A
TIO-540-A2C	2212-61A	TIO-540-AE2A	10387-61A	TIO-540-AE2A	10578-61A
TIO-540-A2C	3379-61A	TIO-540-AE2A	10393-61A	TIO-540-AE2A	10591-61A
TIO-540-A2C	3558-61A	TIO-540-AE2A	10405-61A	TIO-540-AE2A	10592-61A
TIO-540-A2C	4281-61A	TIO-540-AE2A	10408-61A	TIO-540-AE2A	10593-61A
TIO-540-A2C	7424-61A	TIO-540-AE2A	10427-61A	TIO-540-AE2A	10594-61A
TIO-540-A2C	7689-61A	TIO-540-AE2A	10436-61A	TIO-540-AE2A	10595-61A
TIO-540-A2C	7961-61A	TIO-540-AE2A	10441-61A	TIO-540-AE2A	10603-61A
TIO-540-A2C	7965-61A	TIO-540-AE2A	10448-61A	TIO-540-AE2A	10608-61A
TIO-540-A2C	8965-61A	TIO-540-AE2A	10449-61A	TIO-540-AE2A	10611-61A
TIO-540-A2C	9072-61A	TIO-540-AE2A	10451-61A	TIO-540-AE2A	10613-61A

TIO-540-A2C	9134-61A	TIO-540-AE2A	10453-61A	TIO-540-AE2A	10620-61A
TIO-540-A2C	9409-61A	TIO-540-AE2A	10455-61A	TIO-540-AE2A	10622-61A
TIO-540-A2C	9440-61A	TIO-540-AE2A	10459-61A	TIO-540-AE2A	10626-61A
TIO-540-A2C	9895-61A	TIO-540-AE2A	10462-61A	TIO-540-AE2A	10645-61A
TIO-540-A2C	9988-61A	TIO-540-AE2A	10463-61A	TIO-540-AE2A	10646-61A
TIO-540-A2C	10008-61A	TIO-540-AE2A	10464-61A	TIO-540-AE2A	10647-61A
TIO-540-AE2A	365-61A	TIO-540-AE2A	10466-61A	TIO-540-AE2A	10648-61A
TIO-540-AE2A	1634-61A	TIO-540-AE2A	10471-61A	TIO-540-AE2A	10649-61A
TIO-540-AE2A	1835-61A	TIO-540-AE2A	10479-61A	TIO-540-AE2A	10650-61A
TIO-540-AE2A	2543-61A	TIO-540-AE2A	10487-61A	TIO-540-AE2A	10754-61A
TIO-540-AE2A	2560-61A	TIO-540-AE2A	10488-61A	TIO-540-AE2A	10757-61A
TIO-540-AE2A	2650-61A	TIO-540-AE2A	10489-61A	TIO-540-AE2A	10761-61A
TIO-540-AE2A	2883-61A	TIO-540-AE2A	10495-61A	TIO-540-AE2A	10764-61A
TIO-540-AE2A	3184-61A	TIO-540-AE2A	10499-61A	TIO-540-AE2A	10785-61A
TIO-540-AE2A	4920-61A	TIO-540-AE2A	10502-61A	TIO-540-AH1A	9940-61A

TIO-540-AE2A	5468-61A	TIO-540-AE2A	10510-61A	TIO-540-AH1A	10343-61A
TIO-540-AE2A	6038-61A	TIO-540-AE2A	10534-61A	TIO-540-AH1A	10352-61A
TIO-540-AE2A	6711-61A	TIO-540-AE2A	10535-61A	TIO-540-AH1A	10378-61A
TIO-540-AE2A	6946-61A	TIO-540-AE2A	10536-61A	TIO-540-AH1A	10379-61A
TIO-540-AE2A	7825-61A	TIO-540-AE2A	10537-61A	TIO-540-AH1A	10398-61A
TIO-540-AE2A	8830-61A	TIO-540-AE2A	10540-61A	TIO-540-AH1A	10406-61A
TIO-540-AE2A	9777-61A	TIO-540-AE2A	10541-61A	TIO-540-AH1A	10434-61A
TIO-540-AE2A	9804-61A	TIO-540-AE2A	10545-61A	TIO-540-AH1A	10450-61A
TIO-540-AE2A	9808-61A	TIO-540-AE2A	10546-61A	TIO-540-AH1A	10456-61A
TIO-540-AH1A	10457-61A	TIO-540-AH1A	10680-61A	TIO-540-AJ1A	10446-61A
TIO-540-AH1A	10458-61A	TIO-540-AH1A	10688-61A	TIO-540-AJ1A	10452-61A
TIO-540-AH1A	10472-61A	TIO-540-AH1A	10701-61A	TIO-540-AJ1A	10454-61A
TIO-540-AH1A	10481-61A	TIO-540-AH1A	10703-61A	TIO-540-AJ1A	10469-61A
TIO-540-AH1A	10486-61A	TIO-540-AH1A	10714-61A	TIO-540-AJ1A	10470-61A
TIO-540-AH1A	10492-61A	TIO-540-AH1A	10735-61A	TIO-540-AJ1A	10473-61A

TIO-540-AH1A	10500-61A	TIO-540-AJ1A	4873-61A	TIO-540-AJ1A	10474-61A
TIO-540-AH1A	10501-61A	TIO-540-AJ1A	9442-61A	TIO-540-AJ1A	10477-61A
TIO-540-AH1A	10508-61A	TIO-540-AJ1A	9634-61A	TIO-540-AJ1A	10478-61A

TIO-540-AH1A	10519-61A	TIO-540-AJ1A	10059-61A	TIO-540-AJ1A	10483-61A
TIO-540-AH1A	10524-61A	TIO-540-AJ1A	10114-61A	TIO-540-AJ1A	10484-61A
TIO-540-AH1A	10530-61A	TIO-540-AJ1A	10188-61A	TIO-540-AJ1A	10490-61A
TIO-540-AH1A	10533-61A	TIO-540-AJ1A	10341-61A	TIO-540-AJ1A	10491-61A
TIO-540-AH1A	10567-61A	TIO-540-AJ1A	10354-61A	TIO-540-AJ1A	10496-61A
TIO-540-AH1A	10568-61A	TIO-540-AJ1A	10355-61A	TIO-540-AJ1A	10497-61A
TIO-540-AH1A	10570-61A	TIO-540-AJ1A	10356-61A	TIO-540-AJ1A	10503-61A
TIO-540-AH1A	10573-61A	TIO-540-AJ1A	10357-61A	TIO-540-AJ1A	10504-61A
TIO-540-AH1A	10581-61A	TIO-540-AJ1A	10362-61A	TIO-540-AJ1A	10506-61A
TIO-540-AH1A	10587-61A	TIO-540-AJ1A	10367-61A	TIO-540-AJ1A	10512-61A
TIO-540-AH1A	10588-61A	TIO-540-AJ1A	10369-61A	TIO-540-AJ1A	10514-61A

TIO-540-AH1A	10600-61A	TIO-540-AJ1A	10371-61A	TIO-540-AJ1A	10518-61A
TIO-540-AH1A	10607-61A	TIO-540-AJ1A	10372-61A	TIO-540-AJ1A	10520-61A
TIO-540-AH1A	10618-61A	TIO-540-AJ1A	10373-61A	TIO-540-AJ1A	10521-61A
TIO-540-AH1A	10619-61A	TIO-540-AJ1A	10376-61A	TIO-540-AJ1A	10525-61A
TIO-540-AH1A	10629-61A	TIO-540-AJ1A	10377-61A	TIO-540-AJ1A	10526-61A
TIO-540-AH1A	10632-61A	TIO-540-AJ1A	10384-61A	TIO-540-AJ1A	10527-61A
TIO-540-AH1A	10633-61A	TIO-540-AJ1A	10385-61A	TIO-540-AJ1A	10542-61A
TIO-540-AH1A	10634-61A	TIO-540-AJ1A	10388-61A	TIO-540-AJ1A	10543-61A
TIO-540-AH1A	10635-61A	TIO-540-AJ1A	10389-61A	TIO-540-AJ1A	10544-61A
TIO-540-AH1A	10640-61A	TIO-540-AJ1A	10390-61A	TIO-540-AJ1A	10551-61A
TIO-540-AH1A	10652-61A	TIO-540-AJ1A	10391-61A	TIO-540-AJ1A	10555-61A
TIO-540-AH1A	10653-61A	TIO-540-AJ1A	10400-61A	TIO-540-AJ1A	10561-61A
TIO-540-AH1A	10657-61A	TIO-540-AJ1A	10404-61A	TIO-540-AJ1A	10562-61A
TIO-540-AH1A	10658-61A	TIO-540-AJ1A	10416-61A	TIO-540-AJ1A	10563-61A
TIO-540-AH1A	10659-61A	TIO-540-AJ1A	10421-61A	TIO-540-AJ1A	10564-61A

TIO-540-AH1A	10664-61A	TIO-540-AJ1A	10428-61A	TIO-540-AJ1A	10565-61A
TIO-540-AH1A	10666-61A	TIO-540-AJ1A	10429-61A	TIO-540-AJ1A	10574-61A
TIO-540-AH1A	10671-61A	TIO-540-AJ1A	10437-61A	TIO-540-AJ1A	10579-61A
TIO-540-AH1A	10672-61A	TIO-540-AJ1A	10440-61A	TIO-540-AJ1A	10580-61A
TIO-540-AH1A	10678-61A	TIO-540-AJ1A	10444-61A	TIO-540-AJ1A	10582-61A
TIO-540-AH1A	10679-61A	TIO-540-AJ1A	10445-61A	TIO-540-AJ1A	10586-61A
TIO-540-AJ1A	10589-61A	TIO-540-J2B	2804-61A	TIO-540-J2B	10655-61A

TIO-540-AJ1A	10596-61A	TIO-540-J2B	3167-61A	TIO-540-J2BD	3818-61A
TIO-540-AJ1A	10601-61A	TIO-540-J2B	3218-61A	TIO-540-J2BD	3918-61A
TIO-540-AJ1A	10604-61A	TIO-540-J2B	3590-61A	TIO-540-J2BD	4209-61A
TIO-540-AJ1A	10605-61A	TIO-540-J2B	4492-61A	TIO-540-J2BD	4407-61A
TIO-540-AJ1A	10615-61A	TIO-540-J2B	4907-61A	TIO-540-J2BD	4710-61A
TIO-540-AJ1A	10616-61A	TIO-540-J2B	5305-61A	TIO-540-J2BD	4819-61A
TIO-540-AJ1A	10617-61A	TIO-540-J2B	5544-61A	TIO-540-J2BD	5049-61A

TIO-540-AJ1A	10624-61A	TIO-540-J2B	6743-61A	TIO-540-J2BD	5155-61A
TIO-540-AJ1A	10625-61A	TIO-540-J2B	6804-61A	TIO-540-J2BD	5218-61A
TIO-540-AJ1A	10628-61A	TIO-540-J2B	6837-61A	TIO-540-J2BD	6044-61A
TIO-540-AJ1A	10630-61A	TIO-540-J2B	6915-61A	TIO-540-J2BD	6092-61A
TIO-540-AJ1A	10631-61A	TIO-540-J2B	6942-61A	TIO-540-J2BD	6423-61A
TIO-540-AJ1A	10641-61A	TIO-540-J2B	7101-61A	TIO-540-J2BD	6896-61A
TIO-540-AJ1A	10654-61A	TIO-540-J2B	7948-61A	TIO-540-J2BD	7501-61A
TIO-540-AJ1A	10661-61A	TIO-540-J2B	8113-61A	TIO-540-J2BD	7795-61A
TIO-540-AJ1A	10662-61A	TIO-540-J2B	8192-61A	TIO-540-J2BD	8231-61A
TIO-540-AJ1A	10667-61A	TIO-540-J2B	8835-61A	TIO-540-J2BD	8617-61A
TIO-540-AJ1A	10668-61A	TIO-540-J2B	8852-61A	TIO-540-J2BD	8689-61A
TIO-540-AJ1A	10669-61A	TIO-540-J2B	9030-61A	TIO-540-J2BD	9164-61A
TIO-540-AJ1A	10673-61A	TIO-540-J2B	9071-61A	TIO-540-J2BD	9663-61A
TIO-540-AJ1A	10674-61A	TIO-540-J2B	9300-61A	TIO-540-J2BD	10067-61A
TIO-540-AJ1A	10675-61A	TIO-540-J2B	9307-61A	TIO-540-J2BD	10070-61A

TIO-540-AJ1A	10676-61A	TIO-540-J2B	9847-61A	TIO-540-J2BD	10394-61A
TIO-540-AJ1A	10686-61A	TIO-540-J2B	9917-61A	TIO-540-J2BD	10695-61A
TIO-540-AJ1A	10689-61A	TIO-540-J2B	10100-61A	TIO-540-S1AD	3421-61A
TIO-540-AJ1A	10690-61A	TIO-540-J2B	10301-61A	TIO-540-S1AD	3744-61A
TIO-540-AJ1A	10691-61A	TIO-540-J2B	10366-61A	TIO-540-S1AD	3875-61A
TIO-540-AJ1A	10693-61A	TIO-540-J2B	10423-61A	TIO-540-S1AD	7554-61A
TIO-540-AJ1A	10696-61A	TIO-540-J2B	10431-61A	TIO-540-U2A	4641-61A
TIO-540-AJ1A	10705-61A	TIO-540-J2B	10432-61A	TIO-540-U2A	4658-61A
TIO-540-AJ1A	10711-61A	TIO-540-J2B	10433-61A	TIO-540-U2A	4718-61A
TIO-540-AJ1A	10718-61A	TIO-540-J2B	10515-61A	TIO-540-U2A	7269-61A
TIO-540-AJ1A	10729-61A	TIO-540-J2B	10528-61A	TIO-540-U2A	8214-61A
TIO-540-AJ1A	10807-61A	TIO-540-J2B	10529-61A	TIO-540-U2A	8530-61A
TIO-540-AJ1A	10896-61A	TIO-540-J2B	10571-61A	TIO-540-U2A	9136-61A
TIO-540-F2BD	9560-61A	TIO-540-J2B	10576-61A	TIO-540-U2A	9892-61A

TIO-540-J2B	568-61A	TIO-540-J2B	10577-61A	TIO-540-U2A	10136-61A
TIO-540-J2B	1234-61A	TIO-540-J2B	10637-61A	TIO-540-U2A	10553-61A
TIO-540-J2B	2315-61A	TIO-540-J2B	10638-61A	TIO-540-U2A	10585-61A

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required within 10 hours TIS after receipt of this AD, unless already done.

To prevent crankshaft failure, which could result in total engine power loss, in-flight engine failure and possible forced landing, do the following:

(a) Remove from service, the crankshaft of all LTIO-540 and TIO-540 engines, rated at 300 HP or greater, that are listed by serial number in this AD.

Note 2: Textron Lycoming Service Bulletin No. 550 addresses this action.

(b) After receipt of this AD, do not install any crankshaft removed in accordance with paragraph (a).

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (NYACO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, NYACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the NYACO

(d) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be done.

(e) **Emergency AD 2002-04-51, issued February 11, 2002, becomes effective upon receipt.**

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 47

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2002-056 KONTROLL /UTSKIFTING AV "OIL FILTER CONVERTER PLATE/PLATE GASKET"

Påbudet gjelder:

Textron Lycoming modeller som listet i vedlagte kopi av FAA AD 2002-12-07.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2002-12-07.

Anm.: Denne LDP erstatter og opphever LDP 2000-063.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2002-12-07, med virkning fra denne LDP's gyldighetsdato.

Referanse:

AD 2002-12-07.

Gyldighetsdato:

2002-07-19.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.airweb.faa.gov/rgl"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-12-07 Textron Lycoming: Amendment 39-12779. Docket No. 2000-NE-36-AD. Supersedes AD 2000-18-53.

Applicability: This airworthiness directive (AD) is applicable to the reciprocating engine models in the following Table, that were shipped from the factory between April 1, 1999 and October 4, 2000, or rebuilt, or overhauled, or had the oil filter converter plate kit part number (P/N) LW-13904 or gasket P/N LW13388 replaced:

ENGINE APPLICABILITY TABLE

O–320	–H1AD, –H1BD, –H2AD, –H2BD, –H3AD, –H3BD
(L)O–360	–A1AD, –A1F6D, –A1G6D, –A1LD, –A3AD, –A4AD, –A5AD, –E1A6D
IO–360	–A1B6D, –A1D6D, –A3B6D, –A3D6D, –C1E6D, –J1AD, –J1A6D
(L)TO–360	–A1A6D, –C1A6D, –E1A6D, –F1A6D
TIO–360	–C1A6D
(L)HIO–360	–E1AD, –E1BD, –F1AD
O–540	–H1A5D, –H1B5D, –H2A5D, –H2B5D, –J1A5D, –J1B5D, –J1C5D, –J1D5D, –J2A5D, –J2B5D, –J2C5D, –J2D5D, –J3A5D, –J3C5D, –L3C5D
IO–540	–C4D5D, –K1A5D, –K1B5D, –K1E5D, –K1F5D, –K1G5D, –K1J5D, –L1A5D, –L1B5D, –M1A5D, –M1B5D, –M2A5D, –T4A5D, –T4B5D, –T4C5D, –U1A5D, –U1B5D, –V4A5D, –W1A5D, –W3A5D
(L)TIO–540	–K1AD, –S1AD, –AA1AD, –AB1AD, –AB1BD, –F2BD, –J2BD, –N2BD, –R2AD, –T2AD, –V2AD
AEIO–540	–L1B5D
TIO–541	–E Series
TIGO–541	–D1A, –D1B, –E1A
IO–720	–A1BD, –B1BD, –C1BD, –D1BD, –D1CD

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated, unless already done.

To prevent complete loss of engine oil and subsequent seizing of the engine and possibility of fire, caused by oil leakage between the converter plate and accessory housing, do the following:

(a) For engines with more than 50 hours time-since-new (TSN), time-since-overhaul (TSO), or time since the last replacement of the oil filter converter plate gasket, P/N LW-13388, or the converter plate kit, P/N LW-13904, replace the converter plate gasket or converter plate kit in accordance with paragraphs 1 and 2 of Textron Lycoming Mandatory Service Bulletin (MSB) 543A, dated August 30, 2000, and Textron Lycoming Service Instruction (SI) No. 1453, dated May 9, 1991, or Part II of Supplement No. 1 to MSB 543A, dated October 4, 2000, before further flight.

(b) For engines with fewer 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 converter plate, P/N LW-13904, inspect the gasket within 10 hours time-in-service (TIS) or within 3 days after the effective date of this AD, whichever occurs earlier, for the following:

(1) Inspect the oil filter base for both:

(i) Signs of oil leakage between the oil filter base and the accessory housing; and

(ii) Any evidence of the gasket extruding beyond the perimeter of the base.

(2) If there is any oil leakage, or if the seal is damaged, extruded, displaced, or deteriorated, replace the converter plate gasket or converter plate kit in accordance with paragraphs 1 and 2 of Textron Lycoming MSB 543A, dated August 30, 2000, and Textron Lycoming SI No. 1453, dated May 9, 1991, or Part II of Supplement No. 1 to MSB 543A, dated October 4, 2000, before further flight.

(c) 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 since the last replacement.

(d) Before October 1, 2003, replace the oil filter converter plate gasket or oil filter converter plate kit, in accordance with Part II or Part III respectively, of Supplement No. 1 to MSB 543A, dated October 4, 2000.

Terminating Action

(e) Replacement of oil filter converter plate gasket, or oil filter converter plate in accordance with Part II or Part III of Textron Lycoming Supplement 1 to MSB 543A, dated October 4, 2000, constitutes terminating action to the repetitive gasket replacement specified in paragraph (c) of this AD.

Alternative Methods of Compliance

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office. Operators must submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, New York Aircraft Certification Office.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York Aircraft Certification Office.

Special Flight Permits

(g) Special flight permits may be issued in accordance with Secs. 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated by Reference

(h) The inspections and replacements must be done in accordance with the following Textron Lycoming mandatory service bulletin (MSB), MSB supplement, and Service Instruction (SI):

Document No.	Pages	Revision	Date
MSB No. 543A, Total pages: 2	All	Revision A	August 30, 2000.
MSB No. 543A, Supplement No. 1, Total pages: 3	All	Original	October 4, 2000.
SI No. 1453, Total pages: 1	All	Original	May 9, 1991.

The incorporations by reference were approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A. telephone: 570-323-6181. This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street NW, suite 700, Washington, DC.

Effective Date

(i) This amendment becomes effective July 3, 2002.

Issued in Burlington, Massachusetts, on June 4, 2002.
Francis A. Favara,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 02-14696 Filed 6-17-02; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 48

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2002-071 UTSKIFTING AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming, alle modeller og serienummer som listet i vedlagte kopi av FAA AD 2002-17-53.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2002-17-53.

Anm.: Denne LDP erstatter og opphever LDP 2002-019.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2002-17-53, med virkning fra denne LDP's gyldighetsdato.

Referanse:

AD 2002-17-53.

Gyldighetsdato:

2002-09-01.

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EMERGENCY AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post Emergency ADs on the internet at "av-info.faa.gov"

DATE: August 16, 2002
AD #: 2002-17-53

Emergency distribution is required.

This Emergency Airworthiness Directive (AD) supersedes Emergency AD 2002-04-51. Send to all U.S. owners and operators of Textron Lycoming LTIO-540 and TIO-540 engines. These engines are installed on, but not limited to Piper Navajo (PA 31, PA 31-350, and EMB-820), Piper Saratoga (PA 32-301T, PA 32R-301T, and PA 31-325), Piper Aerostar (PA 60-700P), Piper Malibu Mirage (PA 46-350P), Piper Mojave (PA 31P-350) El Gavilian (EL-1), and Cessna T-206.
This Emergency AD is prompted by reports of 17 crankshaft failures in LTIO-540 and TIO-540 engines, rated at 300 HP or higher, that were assembled with certain crankshafts that were manufactured using a hammer-forged process. The FAA is continuing the investigation into the cause of the crankshaft failures, and further regulatory action will follow. This condition, if not corrected, could result in crankshaft failure, which could result in total engine power loss, in-flight engine failure and possible forced landing.
FAA's Determination of an Unsafe Condition and Proposed Actions

Since an unsafe condition has been identified that is likely to exist or develop on other Textron Lycoming LTIO-540 and TIO-540 engines, rated at 300 HP or higher, with a crankshaft installed that is listed by serial number (SN) in this AD, this AD requires removal of the crankshaft before further flight after receipt of this AD.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this emergency AD.

2002-17-53 **Textron Lycoming**: Docket No. 20002-NE-03-AD. Supersedes Emergency AD 2002-04-51.

Applicability

This AD is applicable to all Textron Lycoming LTIO-540 and TIO-540 engines, rated at 300 HP or greater.

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required before further flight.

To prevent crankshaft failure, which could result in total engine power loss, in-flight engine failure and possible forced landing, do the following:

(a) For any engine listed in Table 1 of this AD, replace the crankshaft before further flight with a crankshaft that is not listed by SN in Table 2 of this AD. Tables 1 and 2 follow:

Table 1 List of Engine SN's

MODEL	ENGINE S/N	MODEL	ENGINE S/N	MODEL	ENGINE S/N
LTIO-540-F2BD	1144-68A	LTIO-540-J2B	2641-68A	LTIO-540-J2BD	1885-68A
LTIO-540-F2BD	1272-68A	LTIO-540-J2B	2650-68A	LTIO-540-J2BD	1908-68A
LTIO-540-F2BD	1465-68A	LTIO-540-J2B	2694-68A	LTIO-540-J2BD	1940-68A
LTIO-540-F2BD	1871-68A	LTIO-540-J2B	2807-68A	LTIO-540-J2BD	1941-68A
LTIO-540-F2BD	1874-68A	LTIO-540-J2B	2865-68A	LTIO-540-J2BD	1994-68A
LTIO-540-F2BD	2103-68A	LTIO-540-J2B	2888-68A	LTIO-540-J2BD	2111-68A
LTIO-540-F2BD	2645-68A	LTIO-540-J2B	2968-68A	LTIO-540-J2BD	2286-68A
LTIO-540-F2BD	2988-68A	LTIO-540-J2B	2991-68A	LTIO-540-J2BD	2330-68A
LTIO-540-J2B	345-68A	LTIO-540-J2B	2994-68A	LTIO-540-J2BD	2419-68A
LTIO-540-J2B	376-68A	LTIO-540-J2BD	149-68A	LTIO-540-J2BD	2450-68A
LTIO-540-J2B	701-68A	LTIO-540-J2BD	172-68A	LTIO-540-J2BD	2485-68A
LTIO-540-J2B	703-68A	LTIO-540-J2BD	186-68A	LTIO-540-J2BD	2500-68A
LTIO-540-J2B	788-68A	LTIO-540-J2BD	217-68A	LTIO-540-J2BD	2667-68A
LTIO-540-J2B	877-68A	LTIO-540-J2BD	297-68A	LTIO-540-J2BD	2813-68A
LTIO-540-J2B	1017-68A	LTIO-540-J2BD	355-68A	LTIO-540-J2BD	2823-68A
LTIO-540-J2B	1127-68A	LTIO-540-J2BD	530-68A	LTIO-540-J2BD	2844-68A
LTIO-540-J2B	1159-68A	LTIO-540-J2BD	648-68A	LTIO-540-J2BD	2846-68A
LTIO-540-J2B	1206-68A	LTIO-540-J2BD	732-68A	LTIO-540-J2BD	2856-68A
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TIO-540-AJ1A	10631-61A	TIO-540-AJ1A	10774-61A	TIO-540-AJ1A	10960-61A
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TIO-540-AJ1A	10654-61A	TIO-540-AJ1A	10783-61A	TIO-540-AJ1A	10962-61A
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TIO-540-AJ1A	11092-61A	TIO-540-AJ1A	11252-61A	TIO-540-J2B	6743-61A

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TIO-540-J2B	10811-61A	TIO-540-J2BD	6646-61A	TIO-540-S1AD	3744-61A
TIO-540-J2B	10862-61A	TIO-540-J2BD	7085-61A	TIO-540-S1AD	7554-61A
TIO-540-J2B	10863-61A	TIO-540-J2BD	7108-61A	TIO-540-S1AD	8149-61A
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TIO-540-J2B	11033-61A	TIO-540-J2BD	7502-61A	TIO-540-S1AD	8781-61A
TIO-540-J2B	11037-61A	TIO-540-J2BD	7562-61A	TIO-540-S1AD	9815-61A

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TIO-540-J2B	11289-61A	TIO-540-J2BD	8405-61A	TIO-540-U2A	1103-61A
TIO-540-J2BD	842-61A	TIO-540-J2BD	8409-61A	TIO-540-U2A	2505-61A
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TIO-540-J2BD	2340-61A	TIO-540-J2BD	8617-61A	TIO-540-U2A	4658-61A
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TIO-540-J2BD	3918-61A	TIO-540-J2BD	9355-61A	TIO-540-U2A	10553-61A
TIO-540-J2BD	4138-61A	TIO-540-J2BD	9463-61A	TIO-540-U2A	10585-61A
TIO-540-J2BD	4213-61A	TIO-540-J2BD	9573-61A	TIO-540-U2A	11073-61A
TIO-540-J2BD	4217-61A	TIO-540-J2BD	9662-61A	TIO-540-U2A	11074-61A
TIO-540-J2BD	4240-61A	TIO-540-J2BD	9793-61A	TIO-540-V2AD	8560-61A
TIO-540-J2BD	4241-61A	TIO-540-J2BD	9846-61A		
TIO-540-J2BD	4248-61A	TIO-540-J2BD	9965-61A		
TIO-540-J2BD	4371-61A	TIO-540-J2BD	9980-61A		

Table 2 List of Crankshaft SN's

CRANKSHAFT SN's					
V537912175	V537912648	V537912901	V537912959	V537913227	V537913281
V537912176	V537912649	V537912902	V537912961	V537913228	V537913282
V537912185	V537912650	V537912903	V537912962	V537913229	V537913284
V537912190	V537912657	V537912904	V537912965	V537913230	V537913285
V537912195	V537912663	V537912906	V537912966	V537913231	V537913286
V537912199	V537912859	V537912907	V537912967	V537913232	V537913288
V537912201	V537912861	V537912908	V537912968	V537913233	V537913289
V537912202	V537912862	V537912909	V537912971	V537913234	V537913292
V537912203	V537912863	V537912910	V537912973	V537913235	V537913293
V537912204	V537912865	V537912911	V537912974	V537913236	V537913294
V537912207	V537912866	V537912912	V537912975	V537913237	V537913295

V537912209	V537912867	V537912914	V537912976	V537913238	V537913297
V537912210	V537912868	V537912915	V537912977	V537913239	V537913502
V537912212	V537912869	V537912916	V537912978	V537913240	V537913503
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V537912607	V537912873	V537912920	V537913197	V537913244	V537913508
V537912608	V537912875	V537912921	V537913198	V537913245	V537913509
V537912610	V537912876	V537912924	V537913199	V537913246	V537913512
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V537925084	V537925116	V537925151	V537925257	V537925293	V537925579
V537925085	V537925117	V537925152	V537925258	V537925294	V537925580
V537925086	V537925118	V537925153	V537925259	V537925295	V537925582
V537925087	V537925119	V537925155	V537925260	V537925296	V537925583
V537925088	V537925120	V537925156	V537925262	V537925297	V537925584
V537925089	V537925121	V537925157	V537925264	V537925298	V537925585
V537925090	V537925122	V537925158	V537925265	V537925299	V537925586
V537925091	V537925123	V537925159	V537925267	V537925300	V537925587
V537925092	V537925125	V537925160	V537925268	V537925301	V537925722
V537925093	V537925126	V537925161	V537925269	V537925302	
V537925094	V537925127	V537925162	V537925270	V537925303	
V537925095	V537925128	V537925163	V537925271	V537925304	

(b) For engines that have had a crankshaft replaced after September 30, 1999, replace any crankshaft that has a SN listed in Table 2 of this AD.

(c) After receipt of this AD, do not install any crankshaft removed in accordance with paragraph (a) or (b) of this AD into any engine.

(d) After receipt of this AD, do not install any crankshaft that has a SN listed in Table 2 of this AD on an LTIO-540 or TIO-540 model engine.

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (NYACO). Operators must submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, NYACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the NYACO.

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

(g) **Emergency AD 2002-17-53, issued August 16, 2002, supersedes Emergency AD 2002-04-51 and becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Norman Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, 3rd floor, Valley Stream, NY 11581-1200; telephone (516) 256-7537; fax (516) 568-2716.

Issued in Burlington, Massachusetts on August 16, 2002.

Jay J. Pardee,
Manager, Engine and Propeller Directorate,
Aircraft Certification Service.

Luftfartstilsynet
1. tilsynsavdeling
Postboks 8050 Dep., 0031 Oslo
Besøksadresse:
Rådhusgata 2, Oslo
Telefon : 23 31 78 00
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e-post: postmottak@caa.dep.no

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 49

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2002-072 "GROUNDING" AV LYCOMING MOTORER

Påbudet gjelder:

Textron Lycoming, alle modeller og serienummer som listet i vedlagte kopi av FAA AD 2002-19-03.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2002-19-03.

Anm.: Denne LDP erstatter og opphever LDP 2002-071.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2002-19-03, med **umiddelbar** virkning.

Referanse:

AD 2002-19-03.

Gyldighetsdato:

2002-09-23.

Airworthiness Directives

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39
[Docket No. 2002-NE-03-AD; Amendment 39-12883; AD 2002-19-03]

RIN 2120-AA64
Airworthiness Directives; Textron Lycoming IO-540, LTIO-540 and TIO-540 Series Reciprocating Engines

2002-19-03 Textron Lycoming: Amendment 39-12883. Docket No. 2002-NE- 03-AD. Supersedes Emergency AD 2002-17-53.

Applicability

This AD is applicable to all Textron Lycoming LTIO-540 and TIO- 540 engines, rated at 300 horsepower (HP) or greater and all IO-540 engines, rated at any HP, that have been modified by supplemental type certificate (STC) listed in Table 1 of this AD, by installing a turbocharger system. These engines are used on, but not limited to Piper Navajo (PA 31, PA 31-350, and PA 31-325), Piper Saratoga (PA 32-301T, PA 32R-301T), Piper Aerostar (PA 60-700P), Piper Malibu Mirage (PA 46-350P), Piper Mojave (PA 31P-350) Appalachian Aircraft Corporation Gavilan (EL-1), and Cessna T-206 airplanes.Table 1 follows:

Table 1.--List of STC Numbers

SA000214DE	SA00356DE	SA01925AT	SA09650SC
SA469NE	SA2062WE	SA2118NM	SE2122WE
SA2123NM	SA257CE	SA2657WE	SA2082WE
SA305SO	SA3513WE	SA3719SW	SA385WE
SA4942NM	SA529WE	SA530WE	SA539WE
SA5699NM	SA811WE	SA840WE	SA909WE
SA978WE	SE00357DE	SE01949AT	SE1657NM
SE978NM	SE17WE	SE21WE	SE22WE
SE4157NM	SE5869SW	SE40WE	SE60WE
SE6WE	SE7734SW	SE81WE	SA01925AT
SA1648NM	SA4156NM	SA1747CE	SE4941NM
SA2656WE	SA000214DE		

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required as indicated unless already done.

To prevent crankshaft failure, which could result in total engine power loss, in-flight engine failure and possible forced landing, do the following:

LTIO-540 Engines, TIO-540 Engines, Rated at 300 HP or Greater

(a) If your engine SN is listed in Table 1 of Lycoming Mandatory Service Bulletin (MSB) No. 552, dated August 16, 2002, remove the crankshaft before further flight.

(b) If your engine SN is listed in Table 2 of this AD, do the following; Table 2 follows:

Table 2. Engine Serial Numbers for Crankshafts Manufactured from March 2002 to Present

Engine Model	Engine SN	Engine Model	Engine SN
TIO-540-A2B	9149-61A	TIO-540-AE2A	6711-61A
TIO-540-AE2A	10441-61A	TIO-540-AE2A	9808-61A
TIO-540-AE2A	10534-61A	TIO-540-AE2A	9946-61A
TIO-540-AE2A	10536-61A	TIO-540-AH1A	11264-61A
TIO-540-AE2A	10541-61A	TIO-540-AH1A	11301-61A
TIO-540-AE2A	10546-61A	TIO-540-AH1A	11305-61A
TIO-540-AE2A	10626-61A	TIO-540-AJ1A	11298-61A
TIO-540-AE2A	10649-61A	TIO-540-AJ1A	11303-61A
TIO-540-AE2A	10754-61A	TIO-540-AJ1A	11304-61A
TIO-540-AE2A	10757-61A	TIO-540-AJ1A	11315-61A
TIO-540-AE2A	10764-61A	TIO-540-AJ1A	11316-61A
TIO-540-AE2A	11283-61A	TIO-540-AJ1A	11319-61A
TIO-540-AE2A	11307-61A	TIO-540-J2BD	10394-61A
TIO-540-AE2A	4722-61A	TIO-540-J2BD	7712-61A
TIO-540-AE2A	4920-61A	TIO-540-J2BD	7783-61A
TIO-540-U2A	9892-61A		

(1) Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181, within 10 hours time-in-service (TIS) to arrange for a crankshaft material test.

(2) Operation of the engine beyond 10 hours TIS after the effective date of this AD or while the material is being tested is not permitted.

(3) If your crankshaft fails the material testing, remove the crankshaft before further flight.

(4) If your crankshaft passes the material testing, the crankshaft may be returned to service.

(c) If your engine SN is listed in Table 3 of this AD, do the following; Table 3 follows:

Table 3. Engine Serial Numbers for Crankshafts Manufactured from March 1997 to March 1999

Engine Model	Engine SN	Engine Model	Engine SN	Engine Model	Engine SN
LTIO-540-F2BD	399-68A	TIO-540-AE2A	10278-61A	TIO-540-AJ1A	10347-61A
LTIO-540-F2BD	1179-68A	TIO-540-AE2A	10303-61A	TIO-540-AJ1A	10348-61A
LTIO-540-F2BD	1632-68A	TIO-540-AE2A	10306-61A	TIO-540-AJ1A	10349-61A
LTIO-540-F2BD	1734-68A	TIO-540-AE2A	10318-61A	TIO-540-AJ1A	10370-61A
LTIO-540-F2BD	2811-68A	TIO-540-AE2A	10319-61A	TIO-540-AJ1A	10380-61A
LTIO-540-F2BD	2812-68A	TIO-540-AE2A	10331-61A	TIO-540-AJ1A	10383-61A
LTIO-540-J2B	244-68A	TIO-540-AE2A	10342-61A	TIO-540-AJ1A	10396-61A
LTIO-540-J2B	344-68A	TIO-540-AE2A	10345-61A	TIO-540-AJ1A	10402-61A
LTIO-540-J2B	797-68A	TIO-540-AE2A	10350-61A	TIO-540-AJ1A	10403-61A
LTIO-540-J2B	834-68A	TIO-540-AE2A	10360-61A	TIO-540-AJ1A	10410-61A
LTIO-540-J2B	870-68A	TIO-540-AE2A	10368-61A	TIO-540-AJ1A	10414-61A
LTIO-540-J2B	874-68A	TIO-540-AE2A	10374-61A	TIO-540-AJ1A	10418-61A
LTIO-540-J2B	911-68A	TIO-540-AE2A	10392-61a	TIO-540-AJ1A	10422-61A
LTIO-540-	921-68A	TIO-540-	10407-	TIO-540-	10439-

J2B		AE2A	61A	AJ1A	61A
LTIO-540-J2B	930-68A	TIO-540-AE2A	10415-61A	TIO-540-AJ1A	10447-61A
LTIO-540-J2B	1053-68A	TIO-540-AE2A	10420-61A	TIO-540-AJ1A	10498-61A
LTIO-540-J2B	1070-68A	TIO-540-AE2A	10465-61A	TIO-540-AJ1A	10584-61A
LTIO-540-J2B	1100-68a	TIO-540-AE2A	10475-61A	TIO-540-AJ1A	10639-61A
LTIO-540-J2B	1103-68A	TIO-540-AE2A	10511-61A	TIO-540-AJ1A	10694-61A
LTIO-540-J2B	1169-68A	TIO-540-AE2A	10517-61A	TIO-540-AJ1A	11186-61A
LTIO-540-J2B	1184-68A	TIO-540-AE2A	10532-61A	TIO-540-AJ1A	11269-61A
LTIO-540-J2B	1287-68A	TIO-540-AE2A	10538-61A	TIO-540-F2BD	3171-61A
LTIO-540-J2B	1298-68A	TIO-540-AE2A	10539-61A	TIO-540-F2BD	5123-61A
LTIO-540-J2B	1466-68A	TIO-540-AE2A	10597-61A	TIO-540-F2BD	5719-61A
LTIO-540-J2B	1489-68A	TIO-540-AE2A	10782-61A	TIO-540-F2BD	6100-61A
LTIO-540-J2B	1520-68A	TIO-540-AE2A	10791-61A	TIO-540-F2BD	8286-61A
LTIO-540-J2B	1749-68A	TIO-540-AE2A	11056-61A	TIO-540-F2BD	10480-61A
LTIO-540-J2B	1780-68A	TIO-540-AE2A	11105-61A	TIO-540-J2B	476-61A
LTIO-540-J2B	1844-68A	TIO-540-AH1A	1005-61A	TIO-540-J2B	2567-61A
LTIO-540-J2B	1971-68A	TIO-540-AH1A	1369-61A	TIO-540-J2B	2812-61A
LTIO-540-J2B	2123-68A	TIO-540-AH1A	9879-61A	TIO-540-J2B	3284-61A
LTIO-540-J2B	2362-68A	TIO-540-AH1A	9896-61A	TIO-540-J2B	3500-61A
LTIO-540-J2B	2504-68A	TIO-540-AH1A	9925-61A	TIO-540-J2B	3562-61A
LTIO-540-J2B	2637-68A	TIO-540-AH1A	9933-61A	TIO-540-J2B	3575-61A
LTIO-540-J2B	2817-68A	TIO-540-AH1A	9935-61A	TIO-540-J2B	3628-61A

LTIO-540-J2B	2876-68A	TIO-540-AH1A	9936-61A	TIO-540-J2B	3730-61A
LTIO-540-J2B	2975-68A	TIO-540-AH1A	9949-61A	TIO-540-J2B	3921-61A
LTIO-540-J2B	2976-68A	TIO-540-AH1A	9950-61A	TIO-540-J2B	4009-61A
LTIO-540-J2B	2977-68A	TIO-540-AH1A	9955-61A	TIO-540-J2B	4218-61A
LTIO-540-J2B	2979-68A	TIO-540-AH1A	9957-61A	TIO-540-J2B	4567-61A
LTIO-540-J2B	2980-68A	TIO-540-AH1A	9959-61A	TIO-540-J2B	4727-61A
LTIO-540-J2BD	162-68A	TIO-540-AH1A	9961-61A	TIO-540-J2B	4782-61A
LTIO-540-J2BD	293-68A	TIO-540-AH1A	9974-61A	TIO-540-J2B	5053-61A
LTIO-540-J2BD	334-68A	TIO-540-AH1A	9975-61A	TIO-540-J2B	5242-61A
LTIO-540-J2BD	418-68A	TIO-540-AH1A	9977-61A	TIO-540-J2B	5547-61A
LTIO-540-J2BD	445-68A	TIO-540-AH1A	9978-61A	TIO-540-J2B	5899-61A
LTIO-540-J2BD	545-68A	TIO-540-AH1A	9981-61A	TIO-540-J2B	5934-61A
LTIO-540-J2BD	549-68A	TIO-540-AH1A	9983-61A	TIO-540-J2B	6186-61A
LTIO-540-J2BD	569-68A	TIO-540-AH1A	9986-61A	TIO-540-J2B	6290-61A
LTIO-540-J2BD	607-68A	TIO-540-AH1A	9991-61A	TIO-540-J2B	6300-61A
LTIO-540-J2BD	614-68A	TIO-540-AH1A	9992-61A	TIO-540-J2B	6303-61A
LTIO-540-J2BD	623-68A	TIO-540-AH1A	9995-61A	TIO-540-J2B	6402-61A
LTIO-540-J2BD	632-68A	TIO-540-AH1A	9996-61A	TIO-540-J2B	6506-61A
LTIO-540-J2BD	737-68A	TIO-540-AH1A	10003-61A	TIO-540-J2B	6788-61A
LTIO-540-J2BD	840-68A	TIO-540-AH1A	10007-61A	TIO-540-J2B	6845-61A
LTIO-540-J2BD	857-68A	TIO-540-AH1A	10013-61A	TIO-540-J2B	6892-61A
LTIO-540-	858-68A	TIO-540-	10017-	TIO-540-	7223-61A

J2BD		AH1A	61A	J2B	
LTIO-540-J2BD	934-68A	TIO-540-AH1A	10025-61A	TIO-540-J2B	7313-61A
LTIO-540-J2BD	1052-68A	TIO-540-AH1A	10026-61A	TIO-540-J2B	8060-61A
LTIO-540-J2BD	1084-68A	TIO-540-AH1A	10030-61A	TIO-540-J2B	8114-61A
LTIO-540-J2BD	1088-68A	TIO-540-AH1A	10031-61A	TIO-540-J2B	8349-61A
LTIO-540-J2BD	1152-68A	TIO-540-AH1A	10032-61A	TIO-540-J2B	8629-61A
LTIO-540-J2BD	1210-68A	TIO-540-AH1A	10045-61A	TIO-540-J2B	8953-61A
LTIO-540-J2BD	1270-68A	TIO-540-AH1A	10046-61A	TIO-540-J2B	8992-61A
LTIO-540-J2BD	1311-68A	TIO-540-AH1A	10047-61A	TIO-540-J2B	9050-61A
LTIO-540-J2BD	1418-68A	TIO-540-AH1A	10054-61A	TIO-540-J2B	9200-61A
LTIO-540-J2BD	1484-68A	TIO-540-AH1A	10055-61A	TIO-540-J2B	9277-61A
LTIO-540-J2BD	1552-68A	TIO-540-AH1A	10066-61A	TIO-540-J2B	9942-61A
LTIO-540-J2BD	1600-68A	TIO-540-AH1A	10073-61A	TIO-540-J2B	9943-61A
LTIO-540-J2BD	1709-68A	TIO-540-AH1A	10074-61A	TIO-540-J2B	9944-61A
LTIO-540-J2BD	1752-68A	TIO-540-AH1A	10077-61A	TIO-540-J2B	9945-61A
LTIO-540-J2BD	1816-68A	TIO-540-AH1A	10087-61A	TIO-540-J2B	9958-61A
LTIO-540-J2BD	1841-68A	TIO-540-AH1A	10088-61A	TIO-540-J2B	9960-61A
LTIO-540-J2BD	1853-68A	TIO-540-AH1A	10096-61A	TIO-540-J2B	9967-61A
LTIO-540-J2BD	1924-68A	TIO-540-AH1A	10097-61A	TIO-540-J2B	9970-61A
LTIO-540-J2BD	1933-68A	TIO-540-AH1A	10122-61A	TIO-540-J2B	9972-61A
LTIO-540-J2BD	1951-68A	TIO-540-AH1A	10124-61A	TIO-540-J2B	10038-61A
LTIO-540-J2BD	1955-68A	TIO-540-AH1A	10130-61A	TIO-540-J2B	10039-61A

LTIO-540-J2BD	2011-68A	TIO-540-AH1A	10137-61A	TIO-540-J2B	10148-61A
LTIO-540-J2BD	2030-68A	TIO-540-AH1A	10139-61A	TIO-540-J2B	10149-61A
LTIO-540-J2BD	2046-68A	TIO-540-AH1A	10150-61A	TIO-540-J2B	10161-61A
LTIO-540-J2BD	2047-68A	TIO-540-AH1A	10156-61A	TIO-540-J2B	10162-61A
LTIO-540-J2BD	2101-68A	TIO-540-AH1A	10157-61A	TIO-540-J2B	10185-61A
LTIO-540-J2BD	2240-68A	TIO-540-AH1A	10165-61A	TIO-540-J2B	10186-61A
LTIO-540-J2BD	2246-68A	TIO-540-AH1A	10167-61A	TIO-540-J2B	10210-61A
LTIO-540-J2BD	2262-68A	TIO-540-AH1A	10176-61A	TIO-540-J2B	10211-61A
LTIO-540-J2BD	2290-68A	TIO-540-AH1A	10177-61A	TIO-540-J2B	10283-61A
LTIO-540-J2BD	2305-68A	TIO-540-AH1A	10183-61A	TIO-540-J2B	10285-61A
LTIO-540-J2BD	2319-68A	TIO-540-AH1A	10187-61A	TIO-540-J2B	10363-61A
LTIO-540-J2BD	2386-68A	TIO-540-AH1A	10195-61A	TIO-540-J2B	10430-61A
LTIO-540-J2BD	2437-68A	TIO-540-AH1A	10200-61A	TIO-540-J2BD	676-61A
LTIO-540-J2BD	2465-68A	TIO-540-AH1A	10218-61A	TIO-540-J2BD	2080-61A
LTIO-540-J2BD	2471-68A	TIO-540-AH1A	10221-61A	TIO-540-J2BD	2489-61A
LTIO-540-J2BD	2559-68A	TIO-540-AH1A	10223-61A	TIO-540-J2BD	2660-61A
LTIO-540-J2BD	2577-68A	TIO-540-AH1A	10229-61A	TIO-540-J2BD	2941-61A
LTIO-540-J2BD	2594-68A	TIO-540-AH1A	10239-61A	TIO-540-J2BD	3898-61A
LTIO-540-J2BD	2630-68A	TIO-540-AH1A	10247-61A	TIO-540-J2BD	4066-61A
LTIO-540-J2BD	2647-68A	TIO-540-AH1A	10250-61A	TIO-540-J2BD	4133-61A
LTIO-540-J2BD	2684-68A	TIO-540-AH1A	10258-61A	TIO-540-J2BD	4146-61A
LTIO-540-	2690-	TIO-540-	10259-	TIO-540-	4221-61A

J2BD	68A	AH1A	61A	J2BD	
LTIO-540-J2BD	2860-68A	TIO-540-AH1A	10271-61A	TIO-540-J2BD	4664-61A
LTIO-540-J2BD	2879-68A	TIO-540-AH1A	10272-61A	TIO-540-J2BD	4695-61A
LTIO-540-J2BD	2884-68A	TIO-540-AH1A	10279-61A	TIO-540-J2BD	4973-61A
LTIO-540-J2BD	2887-68A	TIO-540-AH1A	10284-61A	TIO-540-J2BD	5111-61A
LTIO-540-J2BD	2966-68A	TIO-540-AH1A	10298-61A	TIO-540-J2BD	5153-61A
LTIO-540-J2BD	2971-68A	TIO-540-AH1A	10299-61A	TIO-540-J2BD	5340-61A
LTIO-540-J2BD	2978-68A	TIO-540-AH1A	10304-61A	TIO-540-J2BD	5561-61A
LTIO-540-J2BD	2981-68A	TIO-540-AH1A	10312-61A	TIO-540-J2BD	5867-61A
LTIO-540-J2BD	2982-68A	TIO-540-AH1A	10317-61A	TIO-540-J2BD	6122-61A
LTIO-540-J2BD	2983-68A	TIO-540-AH1A	10330-61A	TIO-540-J2BD	6334-61A
LTIO-540-J2BD	2984-68A	TIO-540-AH1A	10344-61A	TIO-540-J2BD	6388-61A
LTIO-540-J2BD	2985-68A	TIO-540-AH1A	10353-61A	TIO-540-J2BD	6531-61A
TIO-540-A2B	791-61A	TIO-540-AH1A	10359-61A	TIO-540-J2BD	6540-61A
TIO-540-A2B	1119-61	TIO-540-AH1A	10375-61A	TIO-540-J2BD	6866-61A
TIO-540-A2B	2159-61	TIO-540-AH1A	10424-61A	TIO-540-J2BD	6942-61A
TIO-540-A2B	8594-61A	TIO-540-AH1A	10461-61A	TIO-540-J2BD	6973-61A
TIO-540-A2B	8610-61A	TIO-540-AH1A	10468-61A	TIO-540-J2BD	7024-61A
TIO-540-A2C	1215-61	TIO-540-AH1A	10482-61A	TIO-540-J2BD	7043-61A
TIO-540-A2C	1760-61A	TIO-540-AH1A	10507-61A	TIO-540-J2BD	7058-61A
TIO-540-A2C	2729-61A	TIO-540-AH1A	10531-61A	TIO-540-J2BD	7064-61A
TIO-540-A2C	3048-61A	TIO-540-AH1A	10554-61A	TIO-540-J2BD	7212-61A

TIO-540-A2C	3123-61A	TIO-540-AH1A	10602-61A	TIO-540-J2BD	7417-61A
TIO-540-A2C	3181-61A	TIO-540-AH1A	10609-61A	TIO-540-J2BD	7425-61A
TIO-540-A2C	3271-61A	TIO-540-AJ1A	104-61A	TIO-540-J2BD	7559-61A
TIO-540-A2C	3353-61A	TIO-540-AJ1A	9161-61A	TIO-540-J2BD	7677-61A
TIO-540-A2C	3392-61A	TIO-540-AJ1A	10020-61A	TIO-540-J2BD	7707-61A
TIO-540-A2C	3763-61A	TIO-540-AJ1A	10021-61A	TIO-540-J2BD	7857-61A
TIO-540-A2C	4327-61A	TIO-540-AJ1A	10022-61A	TIO-540-J2BD	7869-61A
TIO-540-A2C	4430-61A	TIO-540-AJ1A	10023-61A	TIO-540-J2BD	7980-61A
TIO-540-A2C	4557-61A	TIO-540-AJ1A	10036-61A	TIO-540-J2BD	8057-61A
TIO-540-A2C	4575-61A	TIO-540-AJ1A	10037-61A	TIO-540-J2BD	8165-61A
TIO-540-A2C	4685-61A	TIO-540-AJ1A	10040-61A	TIO-540-J2BD	8205-61A
TIO-540-A2C	4875-61A	TIO-540-AJ1A	10041-61A	TIO-540-J2BD	8223-61A
TIO-540-A2C	5315-61A	TIO-540-AJ1A	10049-61A	TIO-540-J2BD	8338-61A
TIO-540-A2C	5904-61A	TIO-540-AJ1A	10060-61A	TIO-540-J2BD	8400-61A
TIO-540-A2C	6897-61A	TIO-540-AJ1A	10061-61A	TIO-540-J2BD	8517-61A
TIO-540-A2C	6914-61A	TIO-540-AJ1A	10063-61A	TIO-540-J2BD	8518-61A
TIO-540-A2C	7307-61A	TIO-540-AJ1A	10085-61A	TIO-540-J2BD	8557-61A
TIO-540-A2C	8363-61A	TIO-540-AJ1A	10086-61A	TIO-540-J2BD	8680-61A
TIO-540-A2C	8571-61A	TIO-540-AJ1A	10090-61A	TIO-540-J2BD	9057-61A
TIO-540-A2C	8826-61A	TIO-540-AJ1A	10093-61A	TIO-540-J2BD	9078-61A
TIO-540-A2C	8982-61A	TIO-540-AJ1A	10099-61A	TIO-540-J2BD	9158-61A
TIO-540-	9199-	TIO-540-	10104-	TIO-540-	9175-61A

A2C	61A	AJ1A	61A	J2BD	
TIO-540-A2C	9927-61A	TIO-540-AJ1A	10105-61A	TIO-540-J2BD	9272-61A
TIO-540-A2C	10103-61A	TIO-540-AJ1A	10106-61A	TIO-540-J2BD	9430-61A
TIO-540-A2C	11086-61A	TIO-540-AJ1A	10107-61A	TIO-540-J2BD	9488-61A
TIO-540-AE2A	508-61A	TIO-540-AJ1A	10108-61A	TIO-540-J2BD	9772-61A
TIO-540-AE2A	882-61A	TIO-540-AJ1A	10109-61A	TIO-540-J2BD	9836-61A
TIO-540-AE2A	954-61A	TIO-540-AJ1A	10110-61A	TIO-540-J2BD	9870-61A
TIO-540-AE2A	1129-61A	TIO-540-AJ1A	10111-61A	TIO-540-J2BD	9877-61A
TIO-540-AE2A	1741-61A	TIO-540-AJ1A	10113-61A	TIO-540-J2BD	9973-61A
TIO-540-AE2A	3550-61A	TIO-540-AJ1A	10117-61A	TIO-540-J2BD	10009-61A
TIO-540-AE2A	4117-61A	TIO-540-AJ1A	10118-61A	TIO-540-J2BD	10015-61A
TIO-540-AE2A	4379-61A	TIO-540-AJ1A	10120-61A	TIO-540-J2BD	10024-61A
TIO-540-AE2A	4822-61A	TIO-540-AJ1A	10121-61A	TIO-540-J2BD	10044-61A
TIO-540-AE2A	6168-61A	TIO-540-AJ1A	10126-61A	TIO-540-J2BD	10068-61A
TIO-540-AE2A	6225-61A	TIO-540-AJ1A	10127-61A	TIO-540-J2BD	10082-61A
TIO-540-AE2A	6553-61A	TIO-540-AJ1A	10128-61A	TIO-540-J2BD	10083-61A
TIO-540-AE2A	6584-61A	TIO-540-AJ1A	10134-61A	TIO-540-J2BD	10094-61A
TIO-540-AE2A	6614-61A	TIO-540-AJ1A	10135-61A	TIO-540-J2BD	10095-61A
TIO-540-AE2A	7316-61A	TIO-540-AJ1A	10140-61A	TIO-540-J2BD	10152-61A
TIO-540-AE2A	7891-61A	TIO-540-AJ1A	10141-61A	TIO-540-J2BD	10194-61A
TIO-540-AE2A	8038-61A	TIO-540-AJ1A	10153-61A	TIO-540-J2BD	10216-61A
TIO-540-AE2A	8105-61A	TIO-540-AJ1A	10155-61A	TIO-540-J2BD	10276-61A

TIO-540-AE2A	8360-61A	TIO-540-AJ1A	10160-61A	TIO-540-J2BD	10612-61A
TIO-540-AE2A	9165-61A	TIO-540-AJ1A	10169-61A	TIO-540-J2BD	10763-61A
TIO-540-AE2A	9315-61A	TIO-540-AJ1A	10170-61A	TIO-540-J2BD	11106-61A
TIO-540-AE2A	9674-61A	TIO-540-AJ1A	10171-61A	TIO-540-S1AD	4754-61A
TIO-540-AE2A	9700-61A	TIO-540-AJ1A	10172-61A	TIO-540-S1AD	6218-61A
TIO-540-AE2A	9748-61A	TIO-540-AJ1A	10178-61A	TIO-540-S1AD	6907-61A
TIO-540-AE2A	9767-61A	TIO-540-AJ1A	10179-61A	TIO-540-S1AD	7147-61A
TIO-540-AE2A	9842-61A	TIO-540-AJ1A	10180-61A	TIO-540-S1AD	7474-61A
TIO-540-AE2A	9844-61A	TIO-540-AJ1A	10181-61A	TIO-540-S1AD	7555-61A
TIO-540-AE2A	9846-61A	TIO-540-AJ1A	10184-61A	TIO-540-S1AD	8396-61A
TIO-540-AE2A	9848-61A	TIO-540-AJ1A	10190-61A	TIO-540-S1AD	8851-61A
TIO-540-AE2A	9850-61A	TIO-540-AJ1A	10197-61A	TIO-540-S1AD	9411-61A
TIO-540-AE2A	9852-61A	TIO-540-AJ1A	10199-61A	TIO-540-S1AD	9874-61A
TIO-540-AE2A	9854-61A	TIO-540-AJ1A	10201-61A	TIO-540-U2A	921-61A
TIO-540-AE2A	9861-61A	TIO-540-AJ1A	10202-61A	TIO-540-U2A	2052-61A
TIO-540-AE2A	9862-61A	TIO-540-AJ1A	10203-61A	TIO-540-U2A	2837-61A
TIO-540-AE2A	9866-61A	TIO-540-AJ1A	10209-61A	TIO-540-U2A	3740-61A
TIO-540-AE2A	9906-61A	TIO-540-AJ1A	10213-61A	TIO-540-U2A	4160-61A
TIO-540-AE2A	9918-61A	TIO-540-AJ1A	10220-61A	TIO-540-U2A	4998-61A
TIO-540-AE2A	9919-61A	TIO-540-AJ1A	10222-61A	TIO-540-U2A	5219-61A
TIO-540-AE2A	9930-61A	TIO-540-AJ1A	10224-61A	TIO-540-U2A	5339-61A
TIO-540-	9931-	TIO-540-	10226-	TIO-540-	5493-61A

AE2A	61A	AJ1A	61A	U2A	
TIO-540-AE2A	9953-61A	TIO-540-AJ1A	10227-61A	TIO-540-U2A	6200-61A
TIO-540-AE2A	9962-61A	TIO-540-AJ1A	10231-61A	TIO-540-U2A	6667-61A
TIO-540-AE2A	9963-61A	TIO-540-AJ1A	10232-61A	TIO-540-U2A	6748-61A
TIO-540-AE2A	9964-61A	TIO-540-AJ1A	10233-61A	TIO-540-U2A	6990-61A
TIO-540-AE2A	9968-61A	TIO-540-AJ1A	10234-61A	TIO-540-U2A	7383-61A
TIO-540-AE2A	9985-61A	TIO-540-AJ1A	10235-61A	TIO-540-U2A	7410-61A
TIO-540-AE2A	9987-61A	TIO-540-AJ1A	10236-61A	TIO-540-U2A	7473-61A
TIO-540-AE2A	9994-61A	TIO-540-AJ1A	10237-61A	TIO-540-U2A	7495-61A
TIO-540-AE2A	9997-61A	TIO-540-AJ1A	10245-61A	TIO-540-U2A	7717-61A
TIO-540-AE2A	9998-61A	TIO-540-AJ1A	10246-61A	TIO-540-U2A	7806-61A
TIO-540-AE2A	10016-61A	TIO-540-AJ1A	10249-61A	TIO-540-U2A	9093-61A
TIO-540-AE2A	10028-61A	TIO-540-AJ1A	10253-61A	TIO-540-U2A	9456-61A
TIO-540-AE2A	10033-61A	TIO-540-AJ1A	10257-61A	TIO-540-U2A	9857-61A
TIO-540-AE2A	10034-61A	TIO-540-AJ1A	10261-61A	TIO-540-U2A	9873-61A
TIO-540-AE2A	10052-61A	TIO-540-AJ1A	10263-61A	TIO-540-U2A	9920-61A
TIO-540-AE2A	10053-61A	TIO-540-AJ1A	10264-61A	TIO-540-U2A	9934-61A
TIO-540-AE2A	10056-61A	TIO-540-AJ1A	10267-61A	TIO-540-U2A	10019-61A
TIO-540-AE2A	10057-61A	TIO-540-AJ1A	10268-61A	TIO-540-U2A	10035-61A
TIO-540-AE2A	10058-61A	TIO-540-AJ1A	10273-61A	TIO-540-U2A	10050-61A
TIO-540-AE2A	10075-61A	TIO-540-AJ1A	10277-61A	TIO-540-U2A	10051-61A
TIO-540-AE2A	10079-61A	TIO-540-AJ1A	10280-61A	TIO-540-U2A	10146-61A

TIO-540-AE2A	10080-61A	TIO-540-AJ1A	10281-61A	TIO-540-U2A	10147-61A
TIO-540-AE2A	10084-61A	TIO-540-AJ1A	10282-61A	TIO-540-U2A	10251-61A
TIO-540-AE2A	10123-61A	TIO-540-AJ1A	10286-61A	TIO-540-U2A	10252-61A
TIO-540-AE2A	10125-61A	TIO-540-AJ1A	10289-61A	TIO-540-U2A	10295-61A
TIO-540-AE2A	10143-61A	TIO-540-AJ1A	10293-61A	TIO-540-U2A	10307-61A
TIO-540-AE2A	10144-61A	TIO-540-AJ1A	10294-61A	TIO-540-U2A	10308-61A
TIO-540-AE2A	10145-61A	TIO-540-AJ1A	10296-61A	TIO-540-W2A	9928-61A
TIO-540-AE2A	10151-61A	TIO-540-AJ1A	10297-61A	TIO-540-W2A	9929-61A
TIO-540-AE2A	10154-61A	TIO-540-AJ1A	10302-61A	TIO-540-W2A	9937-61A
TIO-540-AE2A	10158-61A	TIO-540-AJ1A	10310-61A	TIO-540-W2A	9938-61A
TIO-540-AE2A	10163-61A	TIO-540-AJ1A	10311-61A	TIO-540-W2A	10006-61A
TIO-540-AE2A	10166-61A	TIO-540-AJ1A	10313-61A	TIO-540-W2A	10042-61A
TIO-540-AE2A	10191-61A	TIO-540-AJ1A	10314-61A	TIO-540-W2A	10043-61A
TIO-540-AE2A	10192-61A	TIO-540-AJ1A	10315-61A	TIO-540-W2A	10204-61A
TIO-540-AE2A	10193-61A	TIO-540-AJ1A	10316-61A	TIO-540-W2A	10207-61A
TIO-540-AE2A	10198-61A	TIO-540-AJ1A	10320-61A	TIO-540-X120	9882-61A
TIO-540-AE2A	10205-61A	TIO-540-AJ1A	10321-61A	TIO-540-X120	9887-61A
TIO-540-AE2A	10206-61A	TIO-540-AJ1A	10322-61A	TIO-540-X120	9891-61A
TIO-540-AE2A	10208-61A	TIO-540-AJ1A	10325-61A	TIO-540-X120	9893-61A
TIO-540-AE2A	10228-61A	TIO-540-AJ1A	10326-61A	TIO-540-X120	9894-61A
TIO-540-AE2A	10238-61A	TIO-540-AJ1A	10327-61A	TIO-540-X120	9904-61A
TIO-540-	10248-	TIO-540-	10328-	TIO-540-	9905-61A

AE2A	61A	AJ1A	61A	X120	
TIO-540-AE2A	10254-61A	TIO-540-AJ1A	10329-61A	TIO-540-X120	9908-61A
TIO-540-AE2A	10255-61A	TIO-540-AJ1A	10332-61A	TIO-540-X120	9909-61A
TIO-540-AE2A	10256-61A	TIO-540-AJ1A	10333-61A	TIO-540-X120	9922-61A
TIO-540-AE2A	10260-61A	TIO-540-AJ1A	10334-61A	TIO-540-X120	9923-61A
TIO-540-AE2A	10262-61A	TIO-540-AJ1A	10335-61A	TIO-540-X120	9924-61A
TIO-540-AE2A	10265-61A	TIO-540-AJ1A	10339-61A	TIO-540-X143	101115-61
TIO-540-AE2A	10269-61A	TIO-540-AJ1A	10340-61A		
TIO-540-AE2A	10270-61A	TIO-540-AJ1A	10346-61A		

(1) Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181, contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181 within 50 hours time-in-service (TIS) or 6 months after the effective date of this AD, whichever occurs earlier, to arrange for a crankshaft material test.

(2) Operation of the engine beyond 50 hours TIS or 6 months after the effective date of this AD, whichever occurs earlier, or while the material is being tested is not permitted.

(3) If your crankshaft fails the material testing, remove the crankshaft before further flight.

(4) If your crankshaft passes the material testing, the crankshaft may be returned to service.

IO-540 Engines Modified by STC by Installing a Turbocharger System and All Engines That Have Been Overhauled

(d) If your engine was manufactured, overhauled or had the crankshaft replaced after March 1, 1997, and your engine SN is not covered in paragraphs (a), (b), or (c) of this AD, do the following:

(1) Determine the SN of your crankshaft.

(2) If your crankshaft SN is listed in Table 2 of Lycoming MSB 552, dated August 16, 2002, remove the crankshaft before further flight.

(3) If your crankshaft SN is listed in Table 4 of this AD, do the following; Table 4 follows:

Table 4 SN's of Crankshafts Manufactured From March 2002 to Present

V537925679	V537924595	V537925619	V537925665

V537925690	V537925649	V537925609	V537925668
V537925681	V537925695	V537925617	V537925674
V537925689	V537925702	V537925595	V537925651
V537925656	V537925841	V537925627	V537925697
V537924599	V537925644	V537925626	V537925672
V537925864	V537924597	V537925635	V537925712
V537925877	V537925653	V537925613	V537925868
V537925678	V537925639	V537925629	V537924598
V537925711	V537925634	V537925601	V537925675
V537925870	V537925638	V537925625	V537925851
V537925842	V537925606	V537925598	V537925623
V537925838	V537925593	V537924596	

(i) Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181, within 10 hours time-in-service (TIS) to arrange for a crankshaft material test.

(ii) Operation of the engine beyond 10 hours TIS after the effective date of this AD or while the material is being tested is not permitted.

(iii) If your crankshaft fails the material testing, remove the crankshaft before further flight.

(iv) If your crankshaft passes the material testing, the crankshaft may be returned to service.

(4) If your crankshaft SN is listed in Table 5 of this AD, do the following; Table 5 follows:

Table 5. Crankshafts Manufactured From March 1997 through March 1999 By SN

0037	V53790300	V537910159	V53795379	V537910654	V53799491
0039A	V53790309	V537910160	V537910555	V537910655	V53799492
0048A	V53790311	V537910161	V537910557	V537910658	V537911246
I17424	V53790312	V537910162	V537910558	V537910659	V537911247
I17425	V53790314	V537910163	V537910559	V53791066	V537911248
I17426	V53790322	V537910165	V537910562	V537910660	V537911249
I17429	V53790324	V537910167	V537910565	V537910661	V537911251
I17438	V53790327	V537910168	V537910567	V537910661	V537911252
I17440	V53790339	V537910169	V537910570	V537910662	V537911253
I17441	V53790407	V537910222	V537910571	V537910663	V537911255
I17442	V53790542	V537910246	V537910572	V537910667	V537911257
I17444	V537910002	V537910248	V537910573	V537910668	V537911260
I17488	V537910003	V537910250	V537910574	V53791067	V537911261

I17491	V537910004	V537910251	V537910576	V537910672	V537911263
I17493	V537910005	V537910252	V537910577	V537910673	V537911267
I17494	V537910006	V537910253	V537910580	V537910675	V537911269
I17497	V537910007	V537910254	V537910581	V537910677	V537911270
I17498	V537910008	V537910260	V537910582	V537910679	V537911271
I17668	V537910009	V537910266	V537910583	V53791068	V537911272
I17669	V537910010	V537910267	V537910584	V537910680	V537911273
I17672	V537910011	V537910280	V537910585	V537910836	V537911274
I17675	V537910013	V537910291	V537910586	V537911201	V537911275
I17679	V537910014	V53791043	V537910588	V537911203	V537911277
I17681	V537910017	V537910472	V537910590	V537911204	V537911278
I17682	V537910018	V537910486	V537910591	V537911205	V537911280
I17683	V537910021	V537910487	V537910597	V537911206	V537911281
I17685	V537910022	V537910488	V537910598	V537911209	V537911284
I17686	V537910023	V537910490	V537910599	V537911210	V537911285
I17690	V537910024	V537910492	V537910600	V537911211	V537911286
I17692	V537910025	V537910493	V537910602	V537911213	V537911287
I17693	V537910026	V537910494	V537910603	V537911214	V537911289
I17695	V537910027	V537910495	V537910604	V537911216	V537911292
I17696	V537910028	V537910496	V537910605	V537911217	V537911293
I17698	V537910029	V537910501	V537910612	V537911221	V537911295
I17700	V537910030	V537910502	V537910614	V537911223	V537911299
I17701	V537910032	V537910504	V537910615	V537911225	V537911301
I17702	V537910033	V537910505	V537910616	V537911227	V537911303
I17703	V537910034	V537910507	V537910617	V537911228	V537911306
I17704	V537910036	V537910508	V537910618	V537911231	V537911307
I17708	V537910038	V537910509	V537910620	V537911232	V537911309
I17709	V537910039	V537910510	V537910621	V537911237	V537911310
I17711	V537910040	V537910511	V537910622	V537911238	V537911313
I17712	V537910041	V537910532	V537910625	V537911241	V537911314
I17716	V537910042	V537910536	V537910627	V537912218	V537911315
V53790015	V537910043	V537910538	V537910630	V537912219	V537911316
V53790017	V537910045	V537910539	V537910632	V537912220	V537911318
V53790035	V53791013	V537910546	V537910633	V537912221	V537911319
V53790114	V53791014	V537910549	V537910635	V537912222	V537911325
V53790138	V537910151	V537910551	V537910636	V537912224	V537911394
V53790261	V537910154	V537910552	V537910637	V537912609	V537911469
V537911476	V537910156	V537910553	V537910638	V537912614	V537911472

V537911477	V537911856	V537912072	V53791064	V537912618	V537911473
V537911479	V537911857	V537912073	V537912135	V537912620	V537911474
V537911480	V537911858	V537912074	V537912136	V537912621	V537913280
V537911482	V537911859	V537912075	V537912137	V537912629	V537913287
V537911482	V537911862	V537912077	V537912138	V537912630	V537913422
V537911486	V537911863	V537912078	V537912139	V537912631	V53791344
V537911487	V537911865	V537912079	V537912140	V537912633	V537913511
V537911488	V537911873	V537912081	V537912141	V537912634	V537913518
V537911490	V53791202	V537912082	V537912142	V537912636	V537913524
V537911491	V537912020	V537912084	V537912143	V537912637	V537913545
V537911493	V537912022	V537912085	V537912144	V537912638	V537913692
V537911495	V537912024	V537912086	V537912146	V537912639	V537913705
V537911501	V537912025	V537912088	V537912147	V537912640	V537914210
V537911503	V537912026	V537912089	V537912148	V537912651	V537914279
V537911504	V537912027	V537912090	V537912149	V537912653	V537914281
V537911505	V537912028	V537912091	V537912150	V537912654	V53791429
V537911506	V537912029	V537912092	V537912151	V537912655	V537914298
V537911509	V537912030	V537912094	V537912152	V537912656	V537914310
V537911511	V537912033	V537912095	V537912153	V537912658	V537914315
V537911515	V537912034	V537912096	V537912154	V537912660	V53791432
V537911517	V537912035	V537912097	V537912155	V537912661	V53791433
V53791152	V537912036	V537912100	V537912156	V537912662	V53791438
V537911522	V537912037	V537912101	V537912160	V537912664	V53791443
V537911523	V537912039	V537912103	V537912161	V537912665	V53791443
V537911532	V537912040	V537912105	V537912162	V53791291	V53791444
V53791161	V537912041	V537912106	V537912163	V537912913	V53791446
V53791170	V537912042	V537912107	V537912164	V537912923	V53791447
V537911803	V537912043	V537912108	V537912166	V537912926	V53791448
V537911818	V537912045	V537912109	V537912167	V537912927	V53791450
V537911819	V537912046	V537912109	V537912168	V537912927	V537914696
V537911820	V537912047	V537912110	V537912170	V537912931	V537914921
V537911822	V537912048	V537912111	V537912173	V537912933	V537915021
V537911824	V537912050	V537912112	V537912177	V537912934	V537915037
V537911826	V537912051	V537912113	V537912181	V537912935	V537915178
V537911827	V537912052	V537912114	V537912182	V537912936	V537915220
V537911832	V537912054	V537912115	V537912183	V537912937	V537915291
V537911833	V537912055	V537912117	V537912184	V537912941	V53791535
V537911834	V537912056	V537912118	V537912186	V537912964	V537915350

V537911838	V537912057	V537912119	V537912189	V537912988	V537915840
V537911839	V537912058	V537912120	V537912191	V537913261	V537915922
V537911840	V537912059	V537912124	V537912193	V537913261	V537915943
V537911842	V537912060	V537912125	V537912194	V537913272	V537915989
V537911846	V537912062	V537912126	V537912196	V537913277	V537915990
V537911847	V537912063	V537912128	V537912197	V53792770	V537915996
V537911848	V537912064	V537912129	V537912198	V53792771	V537916014
V537911850	V537912065	V537912129	V537912200	V53792773	V537916140
V537911851	V537912067	V537912130	V537912205	V53792774	V53791623
V537911853	V537912068	V537912131	V537912206	V53792777	V53791624
V537911854	V537912069	V537912132	V537912208	V53792778	V53791625
V537911855	V537912070	V537912133	V537912211	V53792779	V53791626
V53791633	V537912071	V537912134	V537912214	V53792780	V53791628
V53791635	V53791881	V53792105	V537912215	V53792782	V53791629
V53791637	V53791882	V53792106	V53792398	V53792786	V53791630
V53791654	V53791883	V53792107	V53792399	V53792788	V53793121
V53791740	V53791887	V53792108	V53792400	V53792789	V53793122
V53791741	V53791888	V53792110	V53792401	V53792791	V53793123
V53791743	V53791890	V53792111	V53792402	V53792792	V53793126
V53791749	V53791894	V53792112	V53792403	V53792795	V53793130
V53791751	V53791895	V53792114	V53792405	V53792798	V53793131
V53791753	V53791902	V53792115	V53792486	V53792799	V53793132
V53791754	V53791903	V53792118	V53792568	V53792846	V53793133
V53791755	V53791908	V53792120	V53792570	V53792847	V53793134
V53791756	V53791909	V53792172	V53792572	V53792848	V53793135
V53791787	V53791910	V53792215	V53792573	V53792850	V53793136
V53791790	V53791916	V53792216	V53792576	V53792852	V53793137
V53791796	V53791917	V53792222	V53792577	V53792854	V53793139
V53791797	V53791920	V53792223	V53792579	V53792857	V53793140
V53791799	V53791924	V53792224	V53792581	V53792858	V53793141
V53791800	V53791924	V53792226	V53792583	V53792970	V53793142
V53791804	V53791925	V53792229	V53792586	V53792981	V53793147
V53791805	V53791927	V53792236	V53792726	V53792983	V53793152
V53791806	V53791928	V53792238	V53792753	V53792985	V53793155
V53791809	V53791929	V53792239	V53792754	V53792988	V53793156
V53791810	V53791931	V53792240	V53792756	V53792991	V53793157
V53791812	V53791948	V53792242	V53792757	V53792995	V53793158
V53791813	V53791955	V53792243	V53792758	V53792996	V53793159

V53791820	V53791956	V53792244	V53792759	V53792998	V53793160
V53791823	V53791957	V53792245	V53792762	V53792999	V53793161
V53791824	V53791959	V53792247	V53792763	V53793000	V53793342
V53791828	V53791964	V53792292	V53792766	V53793003	V53793343
V53791833	V53791979	V53792296	V53792767	V53793004	V53793344
V53791835	V53791995	V53792307	V53792768	V53793005	V53793345
V53791836	V53792081	V53792308	V53792769	V53793006	V53793347
V53791838	V53792084	V53792309	V53795380	V53793007	V53793348
V53791839	V53792085	V53792310	V53795381	V53793008	V53793349
V53791841	V53792086	V53792312	V53795382	V53793011	V53793352
V53791842	V53792087	V53792313	V53795384	V53793013	V53793353
V53791847	V53792089	V53792314	V53795386	V53793014	V53793355
V53791868	V53792090	V53792316	V53795387	V53793015	V53793357
V53791876	V53792091	V53792317	V53795389	V53793017	V53793359
V53791878	V53792092	V53792394	V53795390	V53793018	V53793360
V53793382	V53792094	V53792396	V53795391	V53793021	V53793361
V53793383	V53792096	V53792397	V53795392	V53793022	V53793363
V53793384	V53792098	V53794873	V53795393	V53793026	V53793365
V53793385	V53792099	V53794874	V53795394	V53795453	V53793368
V53793776	V53792100	V53794877	V53795396	V53795501	V53793369
V53793777	V53792101	V53794879	V53795400	V53795630	V53793370
V53793779	V53792102	V53794881	V53795401	V53795670	V53793371
V53793781	V53792103	V53794883	V53795402	V53795673	V53793373
V53793782	V53794111	V53794884	V53795403	V53796525	V53793374
V53793783	V53794153	V53794886	V53795405	V53796611	V53793375
V53793784	V53794154	V53794888	V53795406	V53796640	V53793376
V53793786	V53794156	V53794889	V53795412	V53796641	V53793379
V53793788	V53794157	V53794890	V53795413	V53796642	V53793381
V53793789	V53794158	V53794892	V53795414	V53796662	V53799493
V53793790	V53794159	V53794893	V53795415	V53796663	V53799496
V53793791	V53794161	V53794894	V53795416	V53796671	V53799497
V53793792	V53794163	V53794895	V53795417	V53796673	V53799498
V53793798	V53794335	V53795061	V53795418	V53796674	V53799499
V53793885	V53794336	V53795062	V53795419	V53796678	
V53793886	V53794338	V53795141	V53795420	V53796679	
V53793887	V53794339	V53795253	V53795421	V53796680	
V53793889	V53794809	V53795254	V53795422	V53796824	
V53793890	V53794810	V53795255	V53795423	V53796828	

V53793906	V53794811	V53795256	V53795424	V53796834	
V53793908	V53794812	V53795264	V53795426	V53797355	
V53793910	V53794812	V53795269	V53795428	V53797417	
V53793911	V53794813	V53795272	V53795429	V53797418	
V53793913	V53794815	V53795277	V53795433	V53797419	
V53793914	V53794822	V53795278	V53795436	V53797421	
V53793915	V53794824	V53795279	V53795437	V53797427	
V53793916	V53794827	V53795280	V53795438	V53797428	
V53793917	V53794828	V53795281	V53795439	V53797433	
V53793918	V53794830	V53795283	V53795440	V53797434	
V53793919	V53794831	V53795284	V53795441	V53797435	
V53793921	V53794833	V53795285	V53795443	V53797436	
V53793924	V53794835	V53795287	V53795444	V53797439	
V53794013	V53794836	V53795288	V53795445	V53797440	
V53794017	V53794837	V53795289	V53795447	V53797441	
V53794027	V53794838	V53795290	V53795448	V53798425	
V53794029	V53794840	V53795291	V53795449	V53799427	
V53794033	V53794841	V53795292	V53795450	V53799473	
V53794037	V53794842	V53795296	V53795451	V53799474	
V53794038	V53794843	V53795313	V53795452	V53799475	
V53794040	V53794844	V53795368	V537910640	V53799478	
V53794043	V53794845	V53795369	V537910643	V53799479	
V53794044	V53794846	V53795372	V537910643	V53799481	
V53794045	V53794847	V53795373	V537910644	V53799485	
V53794046	V53794848	V53795374	V537910645	V53799486	
V53794047	V53794849	V53795375	V537910646	V53799488	
V53794048	V53794851	V53795376	V53791065	V53799489	
V53794051	V53794852	V53795377	V537910652	V53799490	

BILLING CODE 4910-13-C

(i) Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181, contact Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A.; telephone (570) 323-6181 within 50 hours time-in-service (TIS) or 6 months after the effective date of this AD, whichever occurs earlier, to arrange for a crankshaft material test.

(ii) Operation of the engine beyond 50 hours TIS or 6 months after the effective date of this AD, whichever occurs earlier, or while the material is being tested is not permitted.

(iii) If your crankshaft fails the material testing, remove the crankshaft before further flight.

(iv) If your crankshaft passes the material testing, the crankshaft may be returned to service.

Disposition of Crankshafts That Have Passed the Material Test

(e) A crankshaft that has passed the Lycoming material testing may be returned to service.

Disposition of Crankshafts That Have Failed the Material Test

(f) After the effective date of this AD, do not install in any engine, any crankshaft that has failed the material test.

Denial of Alternative Methods of Compliance

(g) An alternative method of compliance to perform material testing on crankshafts listed by SN in Table 2 of Lycoming MSB 552, dated August 16, 2002, will not be approved.

Special Flight Permits

(h) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated By Reference

(i) The actions must be done in accordance with the following Lycoming Mandatory Service Bulletin No. 552, dated August 16, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Lycoming, 652 Oliver Street, Williamsport, PA 17701, U.S.A. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street NW., suite 700, Washington, DC.

Effective Date

(j) This amendment becomes effective September 20, 2002.

Luftfartstilsynet
1. tilsynsavdeling
Postboks 8050 Dep., 0031 Oslo
Besøksadresse:
Rådhusgata 2, Oslo
Telefon : 23 31 78 00
Telefax : 23 31 79 95
e-post: postmottak@caa.dep.no

LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 50

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2002-073 VEIVAKSELENS "GEAR RETAINING BOLTS"

Påbudet gjelder:

Textron Lycoming, alle modeller som er listet i vedlagte kopi av FAA AD 2002-20-51.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2002-20-51.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2002-20-51, med **umiddelbar** virkning.

Referanse:

AD 2002-20-51.

Gyldighetsdato:

2002-10-02.

Airworthiness Directives

Header Information
DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration
14 CFR Part 39
Docket No. 2002-NE-31-AD; AD 2002-20-51

Textron Lycoming AEIO-540, IO-540, LTIO-540, O-540, and TIO-540 Series Reciprocating Engines

2002-20-51 Textron Lycoming: Docket No. 2002-NE-31-AD

Applicability

This airworthiness directive (AD) is applicable to all Textron Lycoming AEIO-540, IO-540, LTIO-540, O-540, and TIO-540 series reciprocating engines with crankshaft gear retaining bolts, part number (P/N) STD-2209 installed, except engines with single-drive dual magnetos and O-540-F series engines to which AD 99-03-05 applies. These engines are installed on, but not limited to the following aircraft:

Aero Commander. (500), (500-B), (500-E), (500-U)
Aero Mercantil. Gavilan.
Aerofab. Renegade 250.
Bellanca Aircraft. Aries T-250
Britten-Norman. (BN-2).
Cessna Aircraft. Skylane C-182, Stationair C-206, Turbo Skylane T182T, Turbo Stationair T-206
Christen. Pitts (S-2S), (S-2B).
Commander Aircraft. 114TC, 114B
DeHavilland. (DH-114-2X)
Dornier. (DO-28-B1)
Evangel-Air.
Extra-Flugzeugbau. Extra 300.
Found Bros. (FBA-2C), Centennial (100)
Gippsland. GA-200.
Helio. Military (H-250).
King Engineering. Angel.

Maule. MT-7-260, M-7-260, MX-7-235, MT-7-235, M7-235, Star
Rocket (MX-7-235), Super Rocket (M-6-235), Super Std. Rocket (M-7-235).
Mooney Aircraft. "TLS" M20M.
Moravan. Zlin-50L
Pilatus Britten-Norman. Islander (BN-2A-26), Islander (BN-2A-27), Islander II (BN-2B-26), Islander (BN-2A-21), Trislander (BN-2A-Mark III-2), Islander (BN-2B).
Piper Aircraft. 700P Aerostar, Aerostar 600A, Aerostar 601B, Aerostar 601P,Apache (PA-23 "235"), Aztec (PA-23 "250"), Aztec (PA-23 "250"), Comanche (PA-24 "250"), Comanche (PA-24 "260"), Aztec F, Aztec C (PA-23 "250", Cherokee (PA-24 "250"), Cherokee (PA-28 "235"), Cherokee Six (PA-32 "260", Cherokee Six (PA-32-300). "LANCE", Comanche (PA-24 "150"), Comanche (PA-24 "250"), Comanche (PA-24), Comanche (PA-24 "260"), Comanche 260, Mirage (PA-46-350P, Navajo (PA-31), Navajo (PA-31-300), Navy Aztec (PA-23 "250"), Pawnee (PA-24 "235"), Pawnee (PA-25 "260"), Saratoga (PA-32-300), Brave 300, Sequoia 602P, T-1020, T35, Turbo Aztec (PA-23-250), Turbo Saratoga TC (PA-32-301T)
S.O.C.A.T.A. Rallye 235CA., Rallye 235GT, Rallye 235C, TB-20

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance

Compliance with this AD is required within 10 hours TIS after receipt this Emergency AD or 7 days after receipt this Emergency AD, whichever is earlier, unless already done.

To prevent loss of all engine power and possible forced landing, do the following:

Engines Listed by SN

(a) if your engine SN is listed in Table 1 of Lycoming SB No. 554, dated September 30, 2002, replace the crankshaft gear retaining bolt in accordance with Lycoming SB No. 554, dated September 30, 2002.

Bolts That Have Been Replaced During Maintenance or Overhaul

(b) If the bolt was replaced or the engine was overhauled between November 27, 1996 and November 10, 1998, replace the bolt in accordance with Lycoming SB No. 554, dated September 30, 2002.

Prohibition Against Installing Zinc-plated Bolts

(c) After the receipt of this AD, do not install any zinc-plated crankshaft gear retaining bolt, P/N

STD-2209, onto any engine listed in this AD. Zinc-plated bolts are gold in color.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (NYACO). Operators must submit their requests through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, NYACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the NYACO.

(e) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be done.

(f) Copies of the applicable service information may be obtained from Lycoming, a Textron Company, 652 Oliver Street, Williamsport, PA 10071; telephone (570) 323-6181. This information may also be obtained electronically on "*www.lycoming.textron.com*". This information may be examined, by appointment, at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

(g) **Emergency AD 2002-20-51, issued October 1, 2002, becomes effective upon receipt.**

FOR FURTHER INFORMATION CONTACT: Norman Perenson, Aerospace Engineer, New York Aircraft Certification Office, FAA, Engine and Propeller Directorate, 10 Fifth Street, 3rd floor, Valley Stream, NY 11581-1200; telephone (516) 256-7537; fax (516) 568-2716.

Luftfartstilsynet
1. tilsynsavdeling
Postboks 8050 Dep., 0031 Oslo
Besøksadresse:
Rådhusgata 2, Oslo
Telefon : 23 31 78 00
Telefax : 23 31 79 95
e-post: postmottak@caa.dep.no

LUFTDYKTIGHETSPÅBUD

MOTORER

LYCOMING - 51

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2003-016 "FUEL INJECTOR FUEL LINES"

Påbudet gjelder:

Textron Lycoming, alle modeller som er listet i vedlagte kopi av FAA AD 2002-26-01.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2002-26-01.

Anm.: Denne LDP erstatter og opphever LDP 93-056 og FAA AD 93-05-22.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2002-26-01

Referanse:

AD 2002-26-01.

Gyldighetsdato:

2003-02-26.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2002-26-01 Textron Lycoming Division, AVCO Corporation: Amendment 39-12986. Docket No. 92-ANE-56-AD. Supersedes AD 93-02-05, Amendment 39-8487 and AD 93-05-22, Amendment 39-8525.

Applicability: This airworthiness directive (AD) is applicable to Textron Lycoming fuel injected reciprocating engines incorporating externally mounted fuel injection lines as listed in the following Table 1:

TABLE 1.—ENGINE MODELS AFFECTED.

Engine	Model
AEIO–320	-D1B, -D2B, -E1B, -E2B
AIO–320	-A1B, -B1B, -C1B
IO–320	-B1A, -B1C, -C1A, -D1A, -D1B, -E1A, -E1B, -E2A, -E2B
LIO–320	-B1A, -C1A
AEIO–360	-A1A, -A1B, -A1B6, -A1D, -A1E, -A1E6, -B1F, -B2F, -B1G6, -B4A, -H1A, -H1B
AIO–360	-A1A, -A1B, -B1B
HIO–360	-A1A, -A1B, -B1A, -C1A, -C1B, -D1A, -E1AD, E1BD, -F1AD
IO–360	-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1D, -A1D6, -A2A, -A2B, -A3B6, -A3B6D, -B1B, -B1D, -B1E, -B1F, -B1G6, -B2F, -B2F6, -B4A, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1F, -C1G6, -C2G6, -J1A6D, -L2A, -M1A,
IVO–360	-A1A
LIO–360	-C1E6
TIO–360	-A1B, -C1A6D
IGO–480	-A1B6
AEIO–540	-D4A5, -D4B5, -D4D5, -L1B5, -L1B5D, -L1D5
IGO–540	-B1A, -B1C
IO–540	-A1A5, -AA1A5, -AA1B5, -AB1A5, -AC1A5, -B1A5, -B1C5, -C1B5, -C4B5, -C4D5D, -D4A5, -E1A5, -E1B5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -J4A5, -V4A5D, -K1A5, -KIA5D, -KIB5, -KIC5, -KID5, -K1E5, -K1E5D, -KIF5, -K1J5, -KIF5D, -K1G5, -K1G5D, -K1H5, -K1J5D, -K1K5, -K1E5, -K1E5D, -K1F5, -K1J5, -L1C5, -M1A5, -M1B5D, -N1A5, -P1A5, -R1A5, -S1A5, -T4A5D, -T4B5, -T4B5D, -T4C5D, -V4A5, -V4A5D, -W1A5D, -W3A5D
IVO–540	-A1A
LTIO–540	-F2BD, -J2B, -J2BD, -N2BD, -R2AD, -U2A, -V2AD, -W2A

TABLE 1.—ENGINE MODELS AFFECTED.—Continued

Engine	Model
TIO–540	-A1A, -A1B, -A2A, -A2B, -A2C, -AE2A, -AH1A, -AA1AD, -AF1A, -AF1B, -AG1A, -AB1AD, -AB1BD, -AH1A, -AJ1A, -AK1A, -C1A, -E1A, -G1A, -F2BD, -J2B, -J2BD, -N2BD, -R2AD, -S1AD, -U2A, -V2AD, -W2A
TIVO–540	-A2A
IO–720	-A1A, -A1B, -D1B, -D1BD, -D1C, -D1CD, -B1B, -B1BD, -C1B

Engine models in Table 1 are installed on, but not limited to Piper PA-24 Comanche, PA-30 and PA-39 Twin Comanche, PA-28 Arrow, and PA-23 Aztec; Beech 23 Musketeer; Mooney 20, and Cessna 177 Cardinal airplanes.

Note 1: This AD is applicable to engines with an "I" in the prefix of the model designation that have externally mounted fuel injection lines. This AD is not applicable to engines having internally mounted fuel injection lines, which are not accessible.

Note 2: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Compliance with this AD is required as indicated, unless already done.

To prevent failure of the fuel injector fuel lines allowing fuel to spray into the engine compartment, resulting in an engine fire, do the following:

Engines That Have Been Previously Inspected

(a) For engines that have been inspected in accordance with Textron Lycoming Mandatory Service Bulletin (MSB) No. 342, dated March 24, 1972; Textron Lycoming MSB No. 342A, dated May 26, 1992 Textron Lycoming MSB No. 342B, dated October 22, 1993; Supplement No. 1 to MSB No. 342B, dated April 27, 1999; Textron Lycoming MSB No. 342C, dated April 28, 2000; and Textron Lycoming MSB No. 342D, dated July 10, 2001, inspect in accordance with paragraph (c) of this AD.

Engines That Have Not Been Inspected

(b) For engines that have not had initial inspections previously done in accordance with Textron Lycoming MSB No. 342, dated March 24, 1972; Textron Lycoming MSB No. 342A, dated May 26, 1992; Textron Lycoming MSB No. 342B, dated October 22, 1993; Supplement No. 1 to MSB No. 342B, dated April 27, 1999; Textron Lycoming MSB No. 342C, dated April 28, 2000; or Textron Lycoming MSB No. 342D, dated July 10, 2001, inspect in accordance with Textron Lycoming MSB No. 342D, dated July 10, 2001 as follows:

(1) For engines that have not yet had any fuel line maintenance done, or have not had any fuel line maintenance done since new or since the last overhaul, inspect within 50 hours time-in-service after the effective date of this AD, and replace as necessary, the fuel injector fuel lines and clamps

between the fuel manifold and the fuel injector nozzles that do not meet all conditions specified in Textron Lycoming MSB No. 342D, dated July 10, 2001.

(2) For all other engines, inspect within 10 hours time-in-service after the effective date of this AD, and replace as necessary, the fuel injector fuel lines and clamps between the fuel manifold and the fuel injector nozzles that do not meet all conditions specified in Textron Lycoming MSB No. 342D, dated July 10, 2001.

Repetitive Inspections

(c) Thereafter, at each annual inspection, at each 100-hour inspection, at each engine overhaul, and after any maintenance has been done on the engine where any clamp (or clamps) on a fuel injector line (or lines) has been disconnected, moved, or loosened, inspect the fuel injector fuel lines and clamps and replace as necessary any fuel injector fuel line and clamp that does not meet all conditions specified in Textron Lycoming MSB No. 342D, dated July 10, 2001.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated By Reference

(f) The clamp inspection and installations must be done in accordance with Textron Lycoming MSB No. 342D, dated July 10, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Textron Lycoming, 652 Oliver Street, Williamsport, PA 17701, telephone (570) 323-6181. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on January 31, 2003.

Issued in Burlington, Massachusetts, on December 16, 2002.
Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 02-32339 Filed 12-26-02; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 52

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, kap. XV § 15-4 jf. kap. IV § 4-1 og Samferdselsdepartementets bemyndigelse av 25. mars 1994, fastsetter Luftfartstilsynet følgende forskrift om luftdyktighet.

2003-046 KONTROLL/UTSKIFTING AV BRENNSTOFFPUMPE

Påbudet gjelder:

Textron Lycoming, alle modeller som er listet i vedlagte kopi av FAA AD 2003-14-03.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2003-14-03.

Anm.: Denne LDP erstatter og opphever LDP 98-090

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2003-14-03.

Referanse:

AD 2003-14-03.

Gyldighetsdato:

2003-08-18.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2003-14-03 Textron Lycoming: Amendment 39-13222. Docket No. 97-ANE-50-AD. Supersedes AD 98-18-12, Amendment 39-10728.

Applicability: This airworthiness directive (AD) is applicable to Textron Lycoming 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 reciprocating engines, with Crane/Lear Romec RG9080, RG9570, and RG17980 series "AN" rotary fuel pumps listed in Table 1 installed. Table 1 follows:

TABLE 1.—APPLICABLE PUMP CROSS REFERENCE LIST

Lear/Romec Series	Textron Lycoming Part Number (P/N)
RG9080F2	68262, 68262–85
RG9080J4A	LW–13909, LW–13909–85
RG9080J6A	LW–14444, LW–14444–85
RG9080J7A	LW–13920, LW–13920–85
RG9080J8A	LW–15740, LW–15740–85
RG9570K1	62E22288
RG9570P/P1	LW–19012
RG17980	74547, 74547–85
RG17980A	76188, 76188–85
RG17980D	76486, 76486–85
RG17980E	77443, 77443–85
RG17980J	78993, 78993–85
RG17980K	LW–11166, LW–11166–85
RG17980P	LW–12534, LW–12534–85
RG17980U	62D21153, 62D21

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

Note 1: This AD applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an

assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless already done.

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:

(a) If the Lear/Romec part number (P/N) on rotary fuel pumps, series RG9080, RG9570, or RG17980 has an "/M" suffix, the pump has been modified, and no further action is required.

(b) If the P/N does not have an "/M" suffix, perform initial and follow-up torque check inspections of pump relief valve attaching screws in accordance with the Accomplishment Instructions of Lycoming Service Bulletin (SB) No. 529B, dated June 10, 2002, as follows:

(1) Within 10 hours time-in-service (TIS), or 30 days after the effective date of this AD, whichever occurs first, perform the initial torque check inspection. If the torque does not meet the specifications in Lycoming SB No. 529B, dated June 10, 2002, tighten screws to the required torque in accordance with that SB.

(2) Perform follow-up torque check inspections at 50 hour intervals TIS, or 6 months since the previous torque check inspection, whichever occurs first. If the torque does not meet the specification in Lycoming SB No. 529B, dated June 10, 2002, during this follow-up inspection, tighten screws to the required torque in accordance with that SB.

(3) Continue the follow-up torque check inspections required by paragraph (a)(2) of this AD until:

(i) The accumulation of 100 hours TIS since the inspection with the torque remaining within the SB specification; or

(ii) The torque meets the SB specification during the initial inspection and a subsequent inspection taking place after accumulating an additional 50 hours TIS also meets the SB specification.

(4) After the accumulation of 100 hours TIS since the inspection with the torque remaining within the SB specification; visually inspect the pump at 50-hour intervals until the pump is replaced with a modified pump (with the "/M" after the part number).

(c) Replacement of a rotary fuel pump series RG9080, RG9570, or RG17980, with an unmodified pump (without the "/M" after the part number) requires repeating the initial and follow-up inspections in accordance with paragraph (b) of this AD.

Optional Terminating Action

(d) Replacement of a rotary fuel pump series RG9080, RG9570, or RG17980, with a modified pump (with the "/M" after the part number) constitutes terminating action for the inspection requirements specified in paragraphs (b)(1) through (b)(4) of this AD.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO). Operators must submit their request through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the New York ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be done.

Documents That Have Been Incorporated by Reference

(g) The actions must be done in accordance with Lycoming Service Bulletin No. 529B, dated June 10, 2002. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Lycoming, 652 Oliver St., Williamsport, PA 17701; telephone (717) 327-7080; fax (717) 327-7100. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on August 14, 2003.

Issued in Burlington, Massachusetts, on June 30, 2003.
Francis A. Favara,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 03-17019 Filed 7-9-03; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 53

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2004-029 VEIVAKSELENS "GEAR RETAINING BOLTS"

Påbudet gjelder:

Textron Lycoming, alle modeller som er listet i vedlagte kopi av FAA AD 2004-05-24.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2004-05-24.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2004-05-24.

Referanse:

FAA AD 2004-05-24.

Gyldighetsdato:

2004-04-13.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

CORRECTION: [*Federal Register (FR): March 15, 2004, page 12059*], delete the line that separates "Maule" and "Rocket" under (5) ...installed on, but not limited to. The Maule models should read: Maule. MT–7–260, M–7–260, MX–7–235, MT–7–235, M7–235, Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235). We have corrected this copy. We will not issue a correction to the FR.

2004-05-24 Lycoming Engines (Formerly Textron Lycoming): Amendment 39-13519. Docket No. 2002-NE-31-AD. Supersedes AD 2002-23-06, Amendment 39-12950.

Effective Date

(a) This airworthiness directive (AD) becomes effective March 30, 2004.

Affected ADs

(b) This AD supersedes AD 2002-23-06, Amendment 39-12950.

Applicability

(c) This AD applies to all Lycoming Engines (Formerly Textron Lycoming) AEIO-540, IO-540, LTIO-540, O-540, and TIO-540 series reciprocating engines with crankshaft gear retaining bolts, part number (P/N) STD-2209 installed, except:

(1) O-540-F series engines to which AD 99-03-05 applies and on which the bolt has not been subsequently replaced, and

(2) Engines on which the bolt was installed during original assembly or was replaced by Lycoming as specified in Service Bulletin (SB) 554 after November 10, 1998, and

(3) Engines with a bolt P/N STD-2209 supplied as part of a bolt replacement kit 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, or 05K23336, and

(4) Engines with single-drive dual magnetos.

(5) These engines are installed on, but not limited to the following aircraft:

Aero Commander. (500), (500–B), (500–E), (500–U)
Aero Mercantil. Gavilan.
Aerofab. Renegade 250.
Bellanca Aircraft. Aries T–250
Britten-Norman. (BN–2).
Cessna Aircraft. Skylane C–182, Stationair C–206, Turbo Skylane T182T, Turbo Stationair T–206

Christen. Pitts (S–2S), (S–2B).
Commander Aircraft. 114TC, 114B
DeHavilland. (DH–114–2X)
Dornier. (DO–28–B1)
Evangel-Air.
Extra-Flugzeugbau. Extra 300.
Found Bros. (FBA–2C), Centennial (100)
Gippsland. GA–200.
Helio. Military (H–250).
King Engineering. Angel.
Maule. MT–7–260, M–7–260, MX–7–235, MT–7–235, M7–235, Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235).
Mooney Aircraft. ''TLS'' M20M.
Moravan. Zlin–50L
Pilatus Britten-Norman. Islander (BN–2A–26), Islander (BN–2A–27), Islander II (BN–2B–26), Islander (BN–2A–21), Trislander (BN–2A–Mark III–2), Islander (BN–2B).
Piper Aircraft. 700P Aerostar, Aerostar 600A, Aerostar 601B, Aerostar 601P, Apache (PA–23 ''235''), Aztec (PA–23 ''250''), Aztec (PA–23 ''250''), Comanche (PA–24 ''250''), Comanche (PA–24 ''260''), Aztec F, Aztec C (PA–23 ''250'', Cherokee (PA–24 ''250''), Cherokee (PA–28 ''235''), Cherokee Six (PA–32 ''260'', Cherokee Six (PA–32–300). ''LANCE'', Comanche (PA–24 ''150''), Comanche (PA–24 ''250''), Comanche (PA–24), Comanche (PA–24 ''260''), Comanche 260, Mirage (PA–46–350P, Navajo (PA–31), Navajo (PA–31–300), Navy Aztec (PA–23 ''250''), Pawnee (PA–24 ''235''), Pawnee (PA–25 ''260''), Saratoga (PA–32–300), Brave 300, Sequoia 602P, T–1020, T35, Turbo Aztec (PA–23–250), Turbo Saratoga TC (PA–32–301T)
S.O.C.A.T.A. Rallye 235CA., Rallye 235GT, Rallye 235C, TB–20

Unsafe Condition

(d) This AD results from an expanded population of affected engines, and approval of five kits for replacing the crankshaft gear retaining bolts. We are issuing this AD to prevent the loss of all engine power and possible forced landing.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

LOP 2002-073

Engines That Have Complied With Emergency AD 2002-20-51 or AD 2002-23-06

(f) No further action is required for AEIO-540, LTIO-540, IO-540, O-540, and TIO-540 series engines that have:

(1) A bolt, P/N STD-2209 that was included in bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) A bolt P/N STD-2209 that was installed by Lycoming as specified in SB 554 after November 10, 1998; or

(3) A bolt with a P/N other than P/N STD-2209.

(g) For AEIO-540, LTIO-540, IO-540, O-540, and TIO-540 series engines that have complied with emergency AD 2002-20-51, replace the crankshaft gear retaining bolt with a new bolt that does not have P/N STD-2209, unless the bolt that was installed was:

(1) Included in bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) A bolt installed by Lycoming as specified in SB 554 after November 10, 1998; or

(3) A bolt with a P/N other than STD-2209.

(4) You can find information on replacing the retaining bolt in Lycoming SB No. 554, dated September 30, 2002.

Engines Listed by Serial Number (SN) in Lycoming SB 554, Dated September 30, 2002

(h) No further action is required for AEIO-540, LTIO-540, IO-540, O-540, and TIO-540 engines with:

(1) A single-drive dual magneto, and all O-540-F engines to which AD 99-03-05 applies and on which the bolt has not been subsequently replaced with a bolt other than one included in gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) A bolt replaced by Lycoming as specified in SB 554 after November 10, 1998; or

(3) A bolt, other than P/N STD-2209, including any O-540-F engines listed by SN in Table 1 of Lycoming SB No. 554, dated September 30, 2002.

(i) Before further flight, for all other engines that have an engine SN listed in Table 1 of Lycoming SB No. 554, dated September 30, 2002, replace the crankshaft gear retaining bolt with:

(1) A new bolt included in gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) A bolt with a P/N other than STD-2209.

(3) You can find information on replacing the retaining bolt in Lycoming SB No. 554, dated September 30, 2002.

Bolts That Have Been Replaced During Field Maintenance or Field Overhaul

(j) Before further flight, replace the crankshaft gear retaining bolt with a new bolt supplied as part of gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336, or a bolt with a P/N other than P/N STD-2209, if:

(1) The bolt on an O-540-F series engine was replaced after compliance with AD 99-03-05 with a bolt that was not included in bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) The bolt on an AEIO, LTIO, IO, O, or TIO-540 series engine was replaced during field maintenance or field overhaul between November 27, 1996, and the effective date of this AD with a bolt that was not included in bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, or 05K23336.

(3) You can find information on replacing the bolt in Lycoming SB No. 554, dated September 30, 2002.

Engines Listed by Serial Number (SN) in Lycoming Mandatory Service Bulletin (MSB) 554, Supplement 5, Dated August 15, 2003

(k) If an engine model and SN is listed in Lycoming MSB 554, Supplement 5, dated August 15, 2003, replace the crankshaft gear retaining bolt within 10 hours TIS, or 7 days after the effective date of this AD, whichever is earlier, with:

(1) A new bolt included in gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, 05K23336; or

(2) Bolt STD-2247, or

(3) A bolt with a P/N other than P/N STD-2209.

(4) You can find information on replacing the retaining bolt in Lycoming SB No. 554, dated September 30, 2002.

Recording Gear Bolt Replacement Kit Number

(l) After the effective date of this AD, record the part number of the gear bolt or the number of the gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, or 05K23336, in the engine records when recording compliance with this AD.

Prohibition Against Installing Gear Retaining Bolts P/N STD-2209

(m) After the effective date of this AD, do not install any crankshaft gear retaining bolt, P/N STD-2209, except one that is included in a Lycoming gear bolt replacement kit: 05K19987, 05K23325, 05K23326, 05K23327, 05K23335, or 05K23336, onto any engine listed in this AD.

Alternative Methods of Compliance

(n) The Manager, New York Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(o) Engine serial numbers are listed in Lycoming Mandatory Service Bulletin No. 554, Supplement 5, dated August 15, 2003; and in Table 1 of Lycoming Service Bulletin No. 554, dated September 30, 2002. The incorporation by reference of Lycoming Service Bulletin No. 554, dated September 30, 2002, was previously approved by the Director of the Federal Register on November 19, 2002 (67 FR 68932, November 14, 2002). The incorporation by reference of Lycoming Mandatory Service Bulletin No. 554, Supplement 5, dated August 15, 2003, was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Lycoming, a Textron Company, 652 Oliver Street, Williamsport, PA 17701; telephone (570) 323-6181. You can also get this information "http://www.lycoming.textron.com". You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Issued in Burlington, Massachusetts, on March 3, 2004.

Francis A. Favara,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 04-5262 Filed 3-12-04; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 54

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

Rettelse i AD 2004-10-14

2004-034 KONTROLL OG MODIFIKASJON AV VEIVAKSEL

Påbudet gjelder:

Textron Lycoming motorer, alle modeller som er listet i vedlagte kopi av FAA AD 2004-10-14.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2004-10-14.

Anm.: Denne LDP erstatter og opphever LDP 92-001.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2004-10-14.

Referanse:

FAA AD 2004-10-14.

Gyldighetsdato:

2004-06-28.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

CORRECTION: [*Federal Register: June 28, 2004 (Volume 69, Number 123); Page 36007; www.access.gpo.gov/su_docs/aces/aces140.html*]

2004-10-14 Lycoming Engines (formerly Textron Lycoming): Amendment 39-13644. Docket No. 89-ANE-10-AD. Supersedes AD 91-14-22, Amendment 39-6916.

Effective Date

(a) This AD becomes effective June 25, 2004.

Affected ADs

(b) This AD supersedes AD 91-14-22.

Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming), direct-drive reciprocating engines (except O-145, O-320H, O-360E, LO-360E, LTO-360E, TO-360-E, O-435, and TIO-541 series engines).

Unsafe Condition

(d) This AD results from a change to the definition of a propeller strike or sudden stoppage. The actions specified in this AD are intended to prevent loosening or failure of the crankshaft gear retaining bolt, which may cause sudden engine failure.

Compliance

(e) Compliance with this AD is required as indicated before further flight if the engine experiences a propeller strike after the effective date of this AD, as defined in paragraphs (i) and (j) of this AD.

(f) Inspect, and if necessary repair, the crankshaft counter bored recess, the alignment dowel, the bolt hole threads, and the crankshaft gear for wear, galling, corrosion, and fretting in accordance with steps 1 through 5 of Lycoming Mandatory Service Bulletin (MSB) No. 475C, dated January 30, 2003.

(g) Remove the existing gear retaining bolt and lockplate from service, and install a new bolt and lockplate, in accordance with steps 6 and 7 of Lycoming MSB No. 475C, dated January 30, 2003.

Prohibition of Retaining Bolt and Lockplate

(h) Do not install the gear retaining bolt and lockplate that were removed in paragraph (g) of this AD, into any engine.

Definition of Propeller Strike

(i) 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 revolutions per minute (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.

(j) 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.

Alternative Methods of Compliance

(k) The Manager, New York Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(l) You must use Lycoming MSB No. 475C, dated January 30, 2003, to perform the inspections and repairs required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You can get a copy from Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701, U.S.A; telephone (570) 323-6181; fax (570) 327-7101. You can review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

Related Information

(m) None.

Issued in Burlington, Massachusetts, on May 12, 2004.

Peter A. White,

Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.

[FR Doc. 04-11406 Filed 5-20-04; 8:45 am]

BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 55

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2005-056 UTSKIFTING AV VEIVAKSLER

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2005-19-11.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2005-19-11.

Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA AD 2005-19-11, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2005-19-11.

Gyldighetsdato:

2005-11-01.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39 3)

2005-19-11 Lycoming Engines: Amendment 39-14276. Docket No. FAA-2005-21864; Directorate Identifier 2005-NE-29-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective October 21, 2005.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Lycoming Engines (Formerly Textron Lycoming) AEIO-360, IO-360, O-360, LIO-360, LO-360, AEIO-540, IO-540, O-540, and TIO-540 series reciprocating engines, rated at 300 horsepower (HP) or lower, manufactured new, rebuilt, overhauled after March 1, 1999, or that had a crankshaft installed after March 1, 1999. These engines are installed on, but not limited to, the following aircraft:

Engine model	Manufacturer	Aircraft model
IO–540–V4A5	A.M.F	17–D Mushshak
	Aero Commander	500 B, S, U/Merlyn Products Conv.
IO–540–E1A5	Aero Commander	500–E
	Aerofab	LA 250 Renegade
	Aeronautica	Agricola Mexicana Quail
IO–540–K1F5	Aerostar	600
	Aircraft Manufacturing Factory	Mushshak
O–540–E4A5	Aviamilano	F–250 Flamingo
IO–540–C4B5	Avions	Pierre Robin HR–100/250
LO–360–A1G6D	Beech	76 Duchess
O–360–A1G6D	Beech	76 Duchess
		C–24R Sierra or 200 Sierra
	Bellanca	Aircraft Aries T–250
O–540–E4B5	Britten Norman	BN–2 Islander
O–540–E4C5	Britten Norman	BN–2A & BN–2B Islander

Engine model	Manufacturer	Aircraft model
IO–540–K1B5	Britten Norman	BN–2A Islander
	Celair	Eagle
O–360–A1F6	Cessna	177 Cardinal
O–360–A1F6D	Cessna	177 Cardinal
O–540–J3C5D	Cessna	182–RG Skylane
IO–540–AB1A5	Cessna	182–S
O–360–F1A6	Cessna	C–172RG Cutlass RG
IO–540–AC1A5	Cessna	C–206 Stationair
		R–G Cardinal
IO–360–A1B6D	Cessna	R–G Cardinal
TIO–540–AK1A	Cessna	T182T Skylane
O–540–L3C5D	Cessna	TR–182 Turbo Skylane
AEIO–540–D4A5	Christen Pitts	S–2S, S–2B
IO–540–T4B5D	Commander	114
IO–540–T4B5	Commander	114B
TIO–540–AG1A	Commander	114TC
	Dornier	DO–28
IO–540–K1J5D	Embraer	EMB–201 Ipanema
O–540–B4B5	Embraer	EMB–710 Corioca
		EMB–720 Minuano
		EMB–720 Minuano & EMB–721 Sertanejo
		EMB–721 Sertanejo
AEIO–540–L1B5	Extra-Flugzeugbau	Extra 300
	F.F.A	FFA–2000 Eurotrainer
	H.A.L	HPT–32
O–540–A1A5	Helio Military	H–250
AEIO–360–A1E6	Integrated Systems	Omega
IO–540–M1C5	King Engineering	Angel
	Korean Air	Chang Gong–91
	Lake	LA–4–200 Buccaneer
O–540–J3A5	Maule.	MT–7–260 & M–7–260
		MX–7–235 Star Rocket
IO–540–W1A5	Maule.	MX–7–235, MT–7–235 & M7–235
	Mod Works	Trophy 212 Conversion
IO–360–A3B6	Mooney	201
		M–201
IO–360–A1B6	Mooney	M–20–J
IO–360–A3B6D	Mooney	M20J–201
TIO–540–AF1B	Mooney	M20M TLS Bravo
	Moravan	Z143L Zlin
		Z242L Zlin
	Partenavia	P–68 Series Observer
IO–540–K1J5	Piper	600–A Aerostar
IO–540–S1A5	Piper	601–A, 601B & 601P Aerostar
IO–540–AA1A5	Piper	602P Sequoia
O–540–A1B5	Piper	PA–23–235 Aztec & PA–24–250 Comanche
		PA–23–250 Aztec

Unsafe Condition

(d) This AD results from 12 crankshaft failures in Lycoming model 360 and 540 series engines rated at 300 HP or lower. We are issuing this AD to prevent failure of the crankshaft, which could result in total engine power loss, in-flight engine failure, and possible loss of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within 50 hours time-in-service or 6 months after the effective date of this AD, whichever is earlier, unless the actions have already been done.

Engines Manufactured Before March 1, 1999

(f) If Lycoming Engines manufactured new, rebuilt, or overhauled your engine before March 1, 1999, and you haven't had the crankshaft replaced, no further action is required.

AEIO-540, IO-540, O-540, and TIO-540 Series Engines Manufactured New or Rebuilt, Overhauled, or That Had a Crankshaft Installed After March 1, 1999

(g) For AEIO-540, IO-540, O-540, and TIO-540 series engines manufactured new or rebuilt, overhauled, or that had a crankshaft installed after March 1, 1999, do the following:

(1) If Table 1 or Table 2 of Lycoming Mandatory Service Bulletin (MSB) No. 566, dated July 11, 2005, lists your engine serial number (SN), use Table 4 to verify the crankshaft SN.

(2) If Table 4 of Lycoming MSB No. 566, dated July 11, 2005, lists your crankshaft SN, replace the crankshaft with a crankshaft that is not listed in Table 4 of Lycoming MSB No. 566, dated July 11, 2005.

AEIO-360, IO-360, O-360, LIO-360, and LO-360 Series Engines Manufactured New or Rebuilt, Overhauled, or That Had a Crankshaft Installed After March 1, 1999

(h) For AEIO-360, IO-360, O-360, LIO-360, and LO-360 series engines manufactured new or rebuilt, overhauled, or that had a crankshaft installed after March 1, 1999, do the following:

(1) If Table 3 of Lycoming MSB No. 566, dated July 11, 2005, lists your engine SN, use Table 4 to verify the crankshaft SN.

(2) If Table 4 of Lycoming MSB No. 566, dated July 11, 2005, lists your crankshaft SN, replace the crankshaft with a crankshaft that is not listed in Table 4 of Lycoming MSB No. 566, dated July 11, 2005.

Prohibition Against Installing Certain Crankshafts

(i) After the effective date of this AD, do not install any crankshaft that has a SN listed in Table 4 of Lycoming MSB No. 566, dated July 11, 2005, into any engine.

Alternative Methods of Compliance (AMOCs)

(j) The Manager, New York Aircraft Certification Office, has the authority to approve AMOCs for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(k) None.

Material Incorporated by Reference

(l) You must use Lycoming Mandatory Service Bulletin No. 566, dated July 11, 2005, to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701; telephone (570) 323-6181; fax (570) 327-7101, or on the Internet at *http://www.Lycoming.Textron.com* for a copy of this service information. You may review copies at the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001, on the Internet at *http://dms.dot.gov*, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued in Burlington, Massachusetts, on September 9, 2005.
Jay J. Pardee,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 05-18323 Filed 9-15-05; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 56

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-009A "INSPECTION OF EXHAUST VALVE AND GUIDE"

Påbudet gjelder:

Lycoming Engines, alle Lycoming stempelmotorer.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av EASA AD No.: 2005-0023R3.

Tid for utførelse:

Til de tider og intervaller som er beskrevet i vedlagte kopi av EASA AD No.: 2005-0023R3, med virkning fra de tidspunkter som er angitt nedenfor.

Pkt. 1. Rotorcraft Engines: med virkning fra 31. mars 2006 (Gyldighetsdato for 1. utgave av LDP).

Pkt. 2. Aeroplane Engines

2A: før 15. juli 2006.

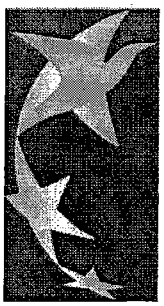
2.B: med virkning fra 31. mars 2006 (Gyldighetsdato for 1. utgave av LDP).

Referanse:

EASA AD No.: 2005-0023R3.

Gyldighetsdato:

2006-07-01.

EASA	AIRWORTHINESS DIRECTIVE
	**AD No. : 2005 - 0023R3** **Date: 29 May 2006**

No person may operate a product to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registry.

Type Approval Holder's Name:	**Type/Model designation(s):**
Lycoming Engines	All Lycoming Piston Engines

TCDS Number: FAA 1E1, 1E4, 1E7, 1E10, 1E11, E10EA, E11EA, 1E12, 1E13, 1E14, E14EA,, 1E15, E16EA, E19EA, E26EA, E00004NY, E-223, E-228, E-229, E-256, E-274, E-275, E-276, E-277, E-279, E-284, E-285, E-286, E-295, E-304, TC 199, TC 210, TC 227

Foreign AD: None

Supersedure: This AD supersedes AD's in several EU Member States including France 1999-088(A) R3, and Netherlands NL 1994-046/3

ATA 72	**Engine - Exhaust Valve and Guide – Inspection**
Manufacturer:	Lycoming Engines (Formerly Textron Lycoming)
Applicability:	All Lycoming piston engine models identified by the above FAA TCDS's, installed in aeroplanes and rotorcraft.
Reason:	To prevent exhaust valve sticking and power loss. This problem was formerly addressed by national Airworthiness Directive or other mandatory maintenance requirement in several European Union Member States. **AD 2005-0023R1** is issued to increase the 50 hour period before the initial inspection, due to allow more time to obtain the required tooling, and to increase the inspection interval to be consistent with scheduled maintenance activities. **AD 2005-0023R2** is issued to remove the requirement for inspection of engines installed on fixed wing aeroplanes and fitted with "Hi-Chrome" Exhaust Valves and Guides. This is in response to evidence submitted since the original issue of this AD, which details the service experience of these engines, and indicates that an unsafe condition does not exist. **AD 2005-0023R3** is issued to extend the period for establishing whether engines installed on fixed wing aeroplanes are fitted with "Hi-Chrome" Exhaust Valves and Guides for cases where previous inspections in accordance with Lycoming SB 388 have been carried out.

Effective Date:	1 November 2005
Compliance:	a) Carry out inspection of exhaust valves and guides in accordance with Lycoming Service Bulletin No. 388C dated November 22, 2004 at the intervals indicated in Paragraphs 1 and 2 below. The inspections must be carried out in accordance with the procedures defined in Part 1 or Part 2-A. b) If the results of the inspection are outside the recommended limits, carry out the rectification actions defined in the Service Bulletin. c) Record inspection valve guide clearance measurements, and incorporation status of SI 1485A if applicable, in the engine logbook. **1. Rotorcraft Engines** i) Exhaust Valves and Guides not previously inspected in accordance with Lycoming SB 388 : a. Inspect before completing 100 operating hours from the effective date of this AD, or 330 hours operating time since new/overhaul, whichever occurs later. b. Thereafter, repeat at an interval not to exceed 330 operating hours. ii) Exhaust Valves and Guides previously inspected in accordance with Lycoming SB 388 : a. Inspect within 330 operating hours of the previous inspection. b. Thereafter, repeat at an interval not to exceed 330 operating hours. **2. Aeroplane Engines** A. Before June 20, 2006 establish whether the engine is fitted with the "Hi-Chrome" Exhaust Valve Guide, by referring to Lycoming Service Instruction 1485A. In cases where the Exhaust Valves and Guides have been previously inspected in accordance with Lycoming SB 388, this should be established within 440 operating hours of the previous inspection or before June 20, 2006, which ever is later. No further actions relating to this AD are required for aeroplane engines fitted with "Hi-Chrome" exhaust valve guides. B. Aeroplane Engines not fitted with "Hi-Chrome" exhaust valve guide. i) Exhaust Valves and Guides not previously inspected in accordance with Lycoming SB 388: a. Inspect before completing 100 operating hours from the effective date of this AD, or 440 hours operating time since new/overhaul, whichever occurs later. b. Thereafter, repeat at an interval not to exceed 440 operating hours. ii) Exhaust Valves and Guides previously inspected in accordance with Lycoming SB 388 : a. Inspect within 440 operating hours of the previous inspection. b. Thereafter, repeat at an interval not to exceed 440 operating hours.

Ref. Publications:	Lycoming Service Bulletin No. 388C dated 22 November 2004; Lycoming Service Instruction 1485A dated July 2, 2003; or later approved revisions.
Remarks:	1. If requested and appropriately substantiated the responsible EASA manager for the related product has the authority to accept Alternative Method of Compliance (AMOCs) for this AD. 2. This AD was posted as PAD 05-002 for consultation on 21 February 2005 with a comment period until 31 March 2005. The Comment Response Document can be found at http://www.easa.eu.int/home/aw_dir_en.html 3. Enquiries regarding this Airworthiness Directive should be referred to: Mr M. Capaccio, AD Focal Point, Certification Directorate EASA. E-mail: ADs@easa.europa.eu 4. For any questions concerning the technical content of the requirements in this AD, please contact Lycoming Engines, 652 Oliver Street, Williamsport, PA 17701, USA (Ph.: 001-570-323-6181; Fax: 001-570-327-7101) E-mail: *www.lycoming.textron.com*

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 57

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-021 "CRACKS IN CYLINDER ASSEMBLIES"

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2005-26-10.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2005-26-10.

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2005-26-10, med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2005-26-10.

Gyldighetsdato:

2006-03-31.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-26-10 Engine Components Incorporated (ECi): Amendment 39-14431. Docket No. FAA-2005-22358; Directorate Identifier. 2005-NE-20-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective January 31, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming) models 320, 360, and 540 series, parallel valve, reciprocating engines specified in Table 1 of this AD, with Engine Components Inc. (ECi) cylinder assemblies, part number (P/N) AEL65102 series "Classic Cast", with casting P/N AEL65099 and serial numbers (SNs) 1 through 9879, installed.

TABLE 1.—ENGINE MODELS

Cylinder head part number:	Installed on engine models
AEL65102–NST04	O–320–A1B, A2B, A2C, A2D, A3A, A3B, B2B, B2C, B3B, B3C, C2B, C2C, C3B, C3C, D1A, D1AD, D1B, D1C, D1D, D1F, D2A, D2B, D2C, D2F, D2G, D2H, D2J, D3G, E1A, E1B, E1C, F1F, E1J, E2A, E2B, E2C, E2D, E2E, E2F, E2G, E2H, E3D, E3H
	IO–320–A1A, A2A, B1A, B1B, B1C, B1D, B1E, B2A, C1B, D1A, D1AD, D1B, D1C, E1A, E1B, E2A, E2B
	AEIO–320–D1B, D2A, D2B, E1A, E1B, E2B
	AIO–320–A1A, A1B, A2A, A2B, B1B, C1B
	LIO–320–B1A
AEL65102–NST05	O–320–C1A, C1F, F1A LIO–320–C1A
AEL65102–NST06	O–320–A1A, A2A, A2B, A2C, A3A, A3B, A3C, E1A, E1B, E2A, E2C
AEL65102–NST07	O–320–A2A, B1A, B1B
AEL65102–NST08	O–320–C1A, C1B, C2A, C2B, C3A, C2B, C3C

Cylinder head part number:	Installed on engine models
AEL65102–NST10	O–360–A1A, A1C, A1D, A2A, A2E, A3A, A3D, A4A, C1A, C1C, C1G, C2A, C2B, C2C, C2D, B1A, B1B, B2A, B2B, D1A, D2A, D2B IO–360–B1A, B1B, B1C
	HO–360–A1A, B1A, B1B
	HIO–360–B1A, B1B
	AEIO–360–B1B
	AEIO–540–A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1C5, B2C5D, B4A5, B4A5D, D1A5, E1A, E4A5, E4B5, E4C5, F1A5, F1B5, G1A5, G2A5
	IO–540–C1B5, C1C5, C2C, C4B5, C4B5D, C4C5, D4A5, D4B5, N1A5, N1A5D
AEL65102–NST12	O–360–A1A, A1AD, A1C, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1J, A1LD, A2A, A2D, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4JD, A4K, A4M, A4N, A5AD, B1A, C1A, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, D2A, F1A6, G1A6
	TIO–360–A1A6D
	LTO–360–A1A6D
	IO–360–A1G6D, A1H6, B1B, B1BD, B1D, B1E, B1F, B1F6, B2E, B2F, B2F6, B4A, E1A, E4A, F1A
	IHO–360–B1A, B1B
	AEIO–360–B1B, B1D, B1F, B1F6, B1G6, B2F, B2F6, B4A, H1A
	O–540–A4D5, B2B5, B2C5, B2C5D, B4B5, B4B5D, E4A5, E4B5, E4B5D, E4C5, G1A5, G1A5D, G2A5, H1A5, H1A5D, H1B5, H1B5D, H2A5, H2A5D, H2B5D
	IO–540–C4A5, C4B5, C4B5D, C4D5D, D4A5, D4B5, D4C5, N1A5, T4A5, T4A5D, T4B5D, T4C5D, V4A5D
	AEIO–540–D4A5, D4B5, D4C5
AEL65102–NST26	IO–540–J4A5, R1A5
	TIO–540–C1A, E1A, G1A, H1A
AEL65102–NST38	(T)IO–360–F1A TIO–360–AA1AD, AB1AD, C1A, C1AD, AF1A, K1AD
	LTIO–540–K1AD
AEL65102–NST43	O–540–J1A5D, J1B5D, J1C5D, J1D5D, J2A5D, J2B5D, J2C5D, J3A5, J3A5D, J3C5D
	IO–540–L3C5D, W1A5D, W3A5D
AEL65102–NST44	O–540–L3C5D

For information, the subject engines are installed on, but not limited to, the aircraft listed in the following Table 2:

TABLE 2.—ENGINES INSTALLED ON, BUT NOT LIMITED TO

O–320–A1A	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Apache (PA–23), Pawnee (PA–25)
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Mooney Aircraft: Mark (20A)
	Dinfia: Ranquel (1A–46)
	Simmering-Graz Pauker: Flamingo (SGP–M–222)
	Aviamilano: Scricciolo (P–19)
	Vos Helicopter Co.: Spring Bok

O–320–A1B	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Apache (PA–23)
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	S.O.C.A.T.A.: Horizon (Gardan)
O–320–A2A	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Agriculture (PA–18A "150") Super Cub (PA–18 "150"), Caribbean (PA–22 "150"), Pawnee (PA–25)
	Intermountain Mfg. Co.: Call Air Texas (A–5, A–5T)
	Lake Aircraft: Colonial (C–1)
	Rawdon Bros.: Rawdon (T–1, T–15, T–15D)
	Shinn Engineering: Shinn (2150–A)
	Dinfia: Ranquel (1A)–46)
	Neiva: (1PD–5802)
	Sud: Gardan-Horizon (GY–80)
	LaVerda: Falco (F8L Series II, America)
	Malmo: Vipan (MF1–10)
	Kingsford Smith: Autocrat (SCRM–153)
	Aero Commander: 100
O–320–A2B	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Cherokee (PA–28 "150"), Super Cub (PA–18 "150")
	Champion Aircraft: Challenger (7GCA, 7GCB, 7KC), Citabria (7GCAA, 7GCRC), Agriculture (7GCBA)
	Beagle: Pup (150)
	Artic: Interstate S1B2
	Robinson: R–22Varga: Kachina 2150A
O–320–A2C	Robinson: R–22
	Cicare: Cicare AG
	Bellanca Aircraft: Citabria 150 (7GCAA), Citabria 150S (7GCBC)
O–320–A2D	Piper Aircraft: Apache (PA–23)
O–320–A3A	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Corben-Fettes: Globe Special (Globe GC–1B)
O–320–A3B	Piper Aircraft: Apache (PA–23)
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Teal II: TSC (1A2)
O–320–B1A	Piper Aircraft: Apache (PA–23 "160")
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Malmo: Vipan (MF1–10)
O–320–B1B	Piper Aircraft: Apache (PA–23 "160")
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
O–320–B2A	Piper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160")
O–320–B2B	Piper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160")
	Beagle: Airedale (D5–160)
	Fuji-Heavy Industries: Fuji (F–200)
	Uirapuru: Aerotec 122
O–320–B2C	Robinson: R–22
O–320–B2D	Maule: MX–7–160
O–320–B2E	Lycon
O–320–B3A	Piper Aircraft: Apache (PA–23 "160")
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)

O–320–B3B	Piper Aircraft: Apache (PA–23 "160")
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)
	Sud: Gardan (GY80–160)
O–320–C1A	Piper Aircraft: Apache (PA–23 "160")
	Riley Aircraft: Rayjay (Apache)
O–320–C1B	Piper Aircraft: Apache (PA–23 "160")
O–320–C3A	Piper Aircraft: Apache (PA–23 "160")
O–320–C3B	Piper Aircraft: Apache (PA–23 "160")
O–320–D1A	Sud: Gardan (GY–80)
	Gyroflug: Speed Cancard
	Grob: G115
O–320–D1F	Slingsby: T67 Firefly
O–320–D2A	Piper Aircraft: Cherokee (PA–28S "160")
	Robin: Major (DR400–140B), Chevalier (DR–360), (R–3140)
	S.O.C.A.T.A.: Tampico TB9
	Slingsby: T67C Firefly
	Daetwyler: MD–3–160
	Nash Aircraft Ltd.: Petrel
	Aviolight: P66D Delta
	General Avia: Pinguino
O–320–D2B	Beech Aircraft: Musketeer (M–23)
	Piper Aircraft: Cherokee (PA–28 "160")
O–320–D2J	Cessna Aircraft: Skyhawk 172
O–320–D3G	Piper Aircraft: Warrior II, Cadet (PA–28–161)
O–320–E1A	Grob: G115
O–320–E1C	M.B.B. (Messerschmitt-Boelkow-Blohm): Monsun (BO–209–B)
O–320–E1F	M.B.B.: Monsun (BO–209–B)
O–320–E2A	Piper Aircraft: Cherokee (PA–28 "140", PA–28 "150")
	Robin: Major (DR–340), Sitar, Bagheera (GY–100–135)
	S.O.C.A.T.A.: Super Rallye (MS–886), Rallye Commodore (MS–892)
	Siai-Marchetti: (S–202)
	F.F.A.: Bravo (AS–202/15)
	Partenavia: Oscar (P66B), Bucker (131 APM)
	Aeromot: Paulistina P–56
	Pezetel: Koliber 150
O–320–E2C	Beech Aircraft: Musketeer III (M–23III)
	M.B.B.: Monsun (BO–209–B)
O–320–E2D	Cessna Aircraft: Cardinal (172–I, 177)
O–320–E2F	M.B.B.: Monsun (BO–209–B),
	Wassmer Pacific (WA–51)
O–320–E2G	American Aviation Corp.: Traveler
O–320–E3D	Piper Aircraft: Cherokee (140)
	Beech Aircraft: Sport
O–320–H2AD	Cessna Aircraft: Skyhawk 172
	Partenavia: P–66C
IO–320–B2A	Piper Aircraft: Twin Comanche (PA–30)
IO–320–B1C	Hi. Shear: Wing
IO–320–B1D	Ted Smith Aircraft: Aerostar
IO–320–C1A	Piper Aircraft: Twin Comanche (PA–30 Turbo)

IO–320–D1A	M.B.B.: Monsun (BO–209–C)
IO–320–D1B	M.B.B.: Monsun (BO–209–C)
IO–320–E1A	M.B.B.: Monsun (BO–209–C)
IO–320–E1B	Bellanca Aircraft
IO–320–E2A	Champion Aircraft: Citabria
IO–320–E2B	Bellanca Aircraft
IO–320–F1A	CAAR Engineering: Carr Midget
LIO–320–B1A	Piper Aircraft: Twin Comanche (PA–39)
LIO–320–C1A	Piper Aircraft: Twin Comanche (PA–39)
AIO–320–B1B	M.B.B.: Monsun (BO–209–C)
AEIO–320–D1B	Slingsby: T67M Firefly
AEIO–320–D2B	Hundustan Aeronautics Ltd.: HT–2
AEIO–320–E1A	Bellanca Aircraft
	Champion Aircraft
AEIO–320–E1B	Bellanca Aircraft
	Champion Aircraft: Decathalon (8KCAB–CS)
AEIO–320–E2B	Bellanca Aircraft
	Champion Aircraft: Decathalon (8KCAB)
O–320–A1A	Riley Aircraft: Riley Twin
O–360–A1A	Beech Aircraft: Travel Air (95, B–95)
	Piper Aircraft: Comanche (PA–24)
	Intermountain Mfg. Co.: Call Air (A–6)
	Lake Aircraft: Colonial (C–2, LA –4, 4A or 4P)
	Doyn Aircraft: Doyn-Cessna (170B, 172, 172A, 172B)
	Mooney Aircraft: Mark "20B"(M–20B)
	Earl Horton: Pawnee (Piper PA–25)
	Dinfia: Ranquel (1A–51)
	Neiva: (1PD–5901)
	Regente: (N–591)
	Wassmer: Super 4 (WA–50A), Sancy (WA–40), Baladou (WA–40), Pariou (WA–40)
	Sud: Gardan (GY–180)
	Bolkow: (207)
	Partenavia: Oscar (P–66)
	Siai-Marchetti: (S–205)
	Procaer: Picchio (F–15–A)
	S.A.A.B.: Safir (91–D)
	Malmo: Vipan (MF–10B)
	Aero Boero: AB–180
	Beagle: Airedale (A–109)
	DeHavilland: Drover (DHA–3MK3)
	Kingsford-Smith: Bushmaster (J5–6)
	Aero Engine Service Ltd.: Victa (R–2)
O–360–A1AD	S.O.C.A.T.A.: Tabago TB–10

O–360–A1D	Piper Aircraft: Comanche (PA–24)
	Lake Aircraft: Colonial (LA –4, 4A or 4P)
	Doyn Aircraft: Doyn-Beech (Beech 95)
	Mooney Aircraft: Master "21"(M–20E), Mark "20B", "20D", (M20B, M20C), Mooney Statesman (M–20G)
	Dinfia: Querandi (1A–45)
	Wassmer: (WA–50)
	Malmo: Vipan (MF1–10)
	Cessna Aircraft: Skyhawk
	Doyn Aircraft: Doyn-Piper (PA–23 "160")
O–360–A1F6	Cessna Aircraft: Cardinal
O–360–A1F6D	Cessna Aircraft: Cardinal 177
	Teal III: TSC (1A3)
O–360–A1G6	Aero Commander
O–360–A1G6D	Beech Aircraft: Duchess 76
O–360–A1H6	Piper Aircraft: Seminole (PA–44)
O–360–A1LD	Wassmer: Europa WA–52
O–360–A1P	Aviat: Husky
O–360–A2A	Center Est Aeronautique: Regente (DR–253)
	S.O.C.A.T.A.: Rallye Commodore (MS–893)
	Societe Aeronautique Normande: Mousquetaire (D–140)
	Bolkow: Klemm (K1–107C)
	Partenavia: Oscar (P–66)
	Beagle: Husky (D5–180) (J1–U)
O–360–A2D	Piper Aircraft: Comanche (PA–24), Cherokee "C"(PA–28 "180")
	Mooney Aircraft: Master "21"(M–20D), Mark "21"(M–20E)
O–360–A2E	Std. Helicopter
O–360–A2F	Aero Commander: Lark (100)
	Cessna Aircraft: Cardinal
O–360–A2G	Beech Aircraft: Sport
O–360–A3A	C.A.A.R.P.S.A.N.: (M–23III)
	Societe Aeronautique Normande: Jodel (D–140C)
	Robin: Regent (DR400/180), Remorqueur (DR400/180R). R–3170
	S.O.C.A.T.A.: Rallye 180GT, Sportavia Sportsman (RS–180)
	Norman Aeroplace Co.: NAC–1 Freelance
	Nash Aircraft Ltd.: Petrel
O–360–A3AD	S.O.C.A.T.A.: TB–10
	Robin: Aiglon (R–1180T)
O–360–A4A	Piper Aircraft: Cherokee "D"(PA–28 "180")
O–360–A4D	Varga: Kachina
O–360–A4G	Beech Aircraft: Musketeer Custom III
O–360–A4K	Grumman American: Tiger
	Beech Aircraft: Sundowner 180
O–360–A4M	Piper Aircraft: Archer II (PA–28 "18") Valmet: PIK–23
O–360–A4N	Cessna Aircraft: 172 (Optional)
O–360–A4P	Penn Yan: Super Cub Conversion
O–360–A5AD	C. Itoh and Co.: Fuji FA–200
O–360–B2C	Seabird Aviation: SB7L
O–360–C1A	Intermountain Mfg. Co.: Call Air (A–6)

O–360–C1E	Bellanca Aircraft: Scout (8GCBC–CS)
O–360–C1F	Maule: Star Rocket MX–7–180
O–360–C1G	Christen: Husky (A–1)
O–360–C2B	Hughes Tool Co.: (269A)
O–360–C2D	Hughes Tool Co.: (269A)
O–360–C2E	Hughes Tool Co.: (YHO–2HU) Military
	Bellanca Aircraft: Scout (8GCBC FP)
O–360–C4F	Maule: MX–7–180A
O–360–C4P	Penn Yan: Super Cub Conversion
O–360–E1A6D	Piper Aircraft: Seminole (PA–44 "180")
O–360–F1A6	Cessna Aircraft: Cutlass RG
O–360–J2A	Robinson: R22
IO–360–B1A	Beech Aircraft: Travel-Air (B–95A)
	Doyn Aircraft: Doyn-Piper (PA–23 "200")
IO–360–B1B	Beech Aircraft: Travel-Air (B–95B)
	Doyn Aircraft: Doyn-Piper (PA–23 "200")
	Fuji: (FA–200)
IO–360–B1D	United Consultants: See-Bee
IO–360–B1E	Piper Aircraft: Arrow (PA–28 "180R")
IO–360–B1F	Utva: 75
IO–360–B2E	C.A.A.R.P. C.A.P. (10)
IO–360–B1F6	Great Lakes: Trainer
IO–360–B1G6	American Blimp: Spector 42
IO–360–B2F6	Great Lakes: Trainer
LO–360–A1G6D	Beech Aircraft: Duchess
LO–360–A1H6	Piper Aircraft: Seminole (PA–44)
IO–360–E1A	T.R. Smith Aircraft: Aerostar
IO–360–L2A	Cessna Aircraft: Skyhawk C–172
IO–360–M1A	Diamond Aircraft: DA–40
IO–360–M1B	Vans Aircraft: RV6, RV7, RV8
	Lancair: 360
AIO–360–B1B	Moravan: Zlin (Z–526–L)
AEIO–360–B1F	F.F.A.: Bravo (200)
	Grob: G115/Sport-Acro
AEIO–360–B1G6	Great Lakes
AEIO–360–B2F	Mundry: CAP–10
AEIO–360–B4A	Pitts: S–1S
AEIO–360–H1A	Bellanca Aircraft: Super Decathalon (8KCAB–180)
AEIO–360–H1B	American Champion: Super Decathalon
TO–360–C1A6D	Avions Pierre Robin
	Partenavia
	Rockwell: 112TC
TO–360–F1A6D	Maule: Star Rocket (M–5–210TC)
TIO–360–C1A6D	Partenavia: P68C–TC
VO–360–A1A	Brantly Hynes Helicopter: (B–2)
VO–360–A1B	Brantly Hynes Helicopter: (B–2, B2–A). Military (YHO–3BR)
VO–360–B1A	Brantly Hynes Helicopter: (B–2, B2–A)
IVO–360–A1A	Brantly Hynes Helicopter: (B2–B)
HO–360–B1A	Hughes Tool Co.: (269A)

HO–360–B1B	Hughes Tool Co.: (269A)
HO–360–C1A	Schweizer: (300C)
HIO–360–B1A	Hughes Tool Co.: Military (269–A–1). (TH–55A)
HIO–360–B1B	Hughes Tool Co.: (269A)
HIO–360–G1A	Schweizer: (CB)
O–540–A1A	Rhein-Flugzeugbau: (RF–1)
O–540–A1A5	Piper Aircraft: Comanche (PA–24 "150")
	Helio: Military (H–250)
	Yoeman Aviation: (YA–1)
O–540–A1B5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250")
O–540–A1C5	Piper Aircraft: Comanche (PA–24 "250")
O–540–A1D	Found Bros.: (FBA–2C)
	Dornier: (DO–28–B1)
O–540–A1D5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250"), Military Aztec (U–11A)
	Dornier: (DO–28)
O–540–A2B	Aero Commander: (500)
	Mid-States Mfg. Co.: Twin Courier (H–500), (U–5)
O–540–A3D5	Piper Aircraft: Navy Aztec (PA–23 "250")
O–540–B1A5	Piper Aircraft: Apache (PA–23 "235")
O–540–B1B5	Piper Aircraft: Cherokee (PA–24 "250")
	Doyn Aircraft: Doyn-Piper (PA–24 "250")
O–540–B1D5	Wassmer: (WA–421)
O–540–B2B5	Piper Aircraft: Pawnee (PA–24 "235"), Cherokee (PA–28 "235"), Aztec (PA–23 "235")
	Intermountain Mfg. Co.: Call Air (A–9)
	Rawdon Bros.: Rawdon (T–1)
	S.O.C.A.T.A.: Rallye 235CA
O–540–B2C5	Piper Aircraft: Pawnee (PA–24 "235")
O–540–B4B5	Piper Aircraft: Cherokee (PA–28 "235")
	Embraer: Corioca (EMB–710)
	S.O.C.A.T.A.: Rallye 235GT, Rallye 235C
	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235),
	Super Std. Rocket (M–7–235)
O–540–E4A5	Piper Aircraft: Comanche (PA–24 "260")
	Aviamilano: Flamingo (F–250)
	Siai-Marchetti: (SF–260), (SF–208)
O–540–E4B5	Britten-Norman: (BN–2)
	Piper Aircraft: Cherokee Six (PA–32 "260")
O–540–E4C5	Pilatus Britten-Norman: Islander (BN–2A–26), Islander (BN–2A–27), Islander II (BN–2B–26), Islander (BN–2A–21), Trislander (BN–2A–Mark III–2)
O–540–F1B5	Omega Aircraft: (BS–12D1)
	Robinson: (R–44)
O–540–G1A5	Piper Aircraft: Pawnee (PA–25 "260")
O–540–H1B5D	Aero Boero: 260
O–540–H2A5	Embraer: Impanema "AG"
	Gippsland: GA–200
O–540–H2B5D	Aero Boero: 260

O–540–J1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235)
O–540–J3A5	Robin: R–3000/235
O–540–J3A5D	Piper Aircraft: Dakota (PA–28–236)
O–540–J3C5D	Cessna Aircraft: Skylane RG
O–540–L3C5D	Cessna Aircraft: TR–182, Turbo Skylane RG
IO–540–C1B5	Piper Aircraft: Aztec B (PA–23 "250"), Comanche (PA–24 "250")
IO–540–C1C5	Riley Aircraft: Turbo-Rocket
IO–540–C4B5	Piper Aircraft: Aztec C (PA–23 "250"), Aztec F
	Wassmer: (WA4–21)
	Avions Pierre Robin: (HR100/250)
	Bellanca Aircraft: Aries T–250
	Aerofab: Renegade 250
IO–540–C4D5	S.O.C.A.T.A.: TB–20
IO–540–C4D5D	S.O.C.A.T.A.: Trinidad TB–20
IO–540–D4A5	Piper Aircraft: Comanche (PA–24 "260")
	Siai-Marchetti: (SF–260)
IO–540–D4B5	Cerva: (CE–43 Guepard)
IO–540–J4A5	Piper Aircraft: Aztec (PA–23 "250")
IO–540–R1A5	Piper Aircraft: Comanche (PA–24)
IO–540–T4A5D	General Aviation: Model 114
IO–540–T4B5	Commander: 114B
IO–540–T4B5D	Rockwell: 114
IO–540–T4C5D	Lake Aircraft: Seawolf
IO–540–V4A5	Maule: MT–7–260, M–7–260
	Aircraft Manufacturing Factory
IO–540–V4A5D	Brooklands: Scoutmaster
IO–540–W1A5	Maule: MX–7–235, MT–7–235, M7–235
IO–540–W1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235)
IO–540–W3A5D	Schweizer: Power Glider
AEIO–540–D4A5	Christen: Pitts (S–2S), S–2B)
	Siai-Marchetti: SF–260
	H.A.L.: HPT–32
	Slingsby: Firefly T3A
AEIO–540–D4B5	Moravan: Zlin-50L
	H.A.L.: HPT–32
AEIO–540–D4D5	Burkhart Grob: Grob G, 115T Aero
TIO–540–C1A	Piper Aircraft: Turbo Aztec (PA–23–250)
TIO–540–K1AD	Piper Aircraft
TIO–540–AA1AD	Aerofab Inc.: Turbo Renegade (270)
TIO–540–AB1AD	S.O.C.A.T.A.: Trinidad TC TB–21
TIO–540–AB1BD	Schweizer
TIO–540–AF1A	Mooney Aircraft: "TLS"M20M
TIO–540–AF1B	Mooney Aircraft: "TLS"M20M
TIO–540–AG1A	Commander Aircraft: 114TC
TIO–540–AK1A	Cessna Aircraft: Turbo Skylane T182T
LTIO–540–K1AD	Piper Aircraft

Unsafe Condition

(d) This AD results from reports of about 30 failures of the subject cylinder assemblies marketed by ECi. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder assemblies and possible engine failure caused by separation of a cylinder head.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines Not Repaired or Overhauled Since New

(f) If your engine has not been overhauled or had any major repair since new, no further action is required.

Engines Overhauled or Repaired Since New

(g) 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 AEL65099 and SNs 1 through 9879 are installed on your engine, as follows:

(i) Inspect the engine log books and maintenance records for reference to the subject ECi cylinder assemblies.

(ii) If the engine log books and maintenance records did not record the P/N and SN of the cylinder assemblies, visually inspect the cylinder assemblies and verify the P/N and SN of the cylinder assemblies.

(2) If the cylinder assemblies are not ECi, P/N AEL65102 series "Classic Cast", with casting P/N AEL65099, no further action is required.

(3) If any cylinder assembly is an ECi P/N AEL65102 series "Classic Cast", with casting P/N AEL65099 and a SN 1 through 9879, do the following:

(i) If the cylinder assembly has fewer than 800 operating hours-in-service (HIS) on the effective date of this AD, replace the cylinder assembly at no later than 800 operating HIS. No action is required until the operating HIS reaches 800 hours.

(ii) If the cylinder assembly has 800 operating HIS or more on the effective date of this AD, replace the cylinder assembly within 60 operating HIS after the effective date of this AD.

Definition of a Replacement Cylinder Assembly

(h) For the purpose of this AD, a replacement cylinder assembly is defined as follows:

(1) A serviceable cylinder assembly made by Lycoming Engines.

(2) A serviceable FAA-approved, Parts Manufacturer Approval cylinder assembly from another manufacturer.

(3) A serviceable ECi cylinder assembly, P/N AEL65102 series, "Titan", with casting P/N AEL85009.

(4) A serviceable ECi cylinder assembly, P/N AEL65102 series, with casting P/N AEL65099, that has a SN 9880 or higher.

Prohibition of Cylinder Assemblies, P/N AEL65102 Series "Classic Cast", With Casting P/N AEL65099 and SNs 1 Through 9879

(i) After the effective date of this AD, do not install any Eci cylinder assembly, P/N AEL65102, with casting P/N AEL65099 that has a SN 1 through 9879, onto any engine.

Alternative Methods of Compliance

(j) The Manager, Special Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(k) ECi Service Bulletin No. 05-08, dated September 1, 2005, pertains to the subject of this AD.

Issued in Burlington, Massachusetts, on December 19, 2005.
Peter A. White,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 05-24449 Filed 12-23-05; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 58

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-047 "FAILURE OF CRANKSHAFT"

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2006-06-16.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2006-06-16.

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2006-06-16, med virkning fra 1. juni 2006.

Referanse:

FAA AD 2006-06-16.

Gyldighetsdato:

2006-07-01.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2006-06-16 Lycoming Engines (Formerly Textron Lycoming): Amendment 39-14525. Docket No. FAA-2005-23269; Directorate Identifier 2005-NE-50-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective April 27, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Lycoming Engines AEIO-360, IO-360, O-360, LIO-360, and LO-360 series reciprocating engines, manufactured new or rebuilt, overhauled, or that had a crankshaft installed after March 1, 1999. These engines are installed on, but not limited to, the following aircraft:

Engine model	Manufacturer	Aircraft model
AEIO–360–A1B6	Moravan	Z242L Zlin
	Scottish Avia	Bulldog
	Valmet	L–70 Vinka
AEIO–360–A1E6	Integrated Systems	Omega
IO–360–A1B6	Aircraft Manufacturing Factory	Mushshak
	Beech	C–24R Sierra or 200 Sierra
	Cessna	R–G Cardinal
	Korean Air	Chang Gong–91
	Lake	LA–4–200 Buccaneer
	Mooney	M–20–J
	Partenavia	P–68 Series Observer
	Saab	MFI–15 Safari or MFI–17 Supporter
	Scottish Avia	Bulldog
	Socata	TB–200
IO–360–A1B6D	Cessna	R–G Cardinal
	Mooney	M–201
	Siai Marchetti	S–205
IO–360–A3B6	Mooney	M–201
	Mod Works	Trophy 212 Conversion

Engine model	Manufacturer	Aircraft model
IO–360–A3B6D	Mooney	M20J–201
O–360–C1C6	Piper	PA–28R–201 Arrow
	Ruschmeyer	MF–85
IO–360–B1G6	American	Blimp
IO–360–C1G6	Zeppelin	Blimp
IO–360–C1E6	Piper	PA–34–200 Seneca I
LO–360–A1G6D	Beech	76 Duchess
LO–360–A1H6	Piper	PA–44–180 Seminole
O–360–A1F6	Cessna	177 Cardinal
O–360–A1F6D	Cessna	177 Cardinal
O–360–A1G6D	Beech	76 Duchess
O–360–A1H6	Piper	PA–44–180
O–360–E1A6D	Piper	PA–44–180
O–360–F1A6	Cessna	C–172RG Cutlass RG
IO–360–C1D6	Sold as a spare engine.	
LIO–360–C1E6	Sold as a spare engine.	
LO–360–E1A6d	Sold as a spare engine.	
IO–360–C1D6	Sold as a spare engine.	

Unsafe Condition

(d) This AD results from a crankshaft failure in a Lycoming LO-360-A1H6 reciprocating engine. We are issuing this AD to prevent failure of the crankshaft, which could result in total engine power loss, in-flight engine failure, and possible loss of the aircraft.

Compliance

(e) You are responsible for having the actions required by this AD performed within 50 hours time-in-service or 6 months after the effective date of this AD, whichever is earlier, unless the actions have already been done.

(f) If Lycoming Engines manufactured new, rebuilt, overhauled, or replaced the crankshaft in your engine before March 1, 1999, and you haven't had the crankshaft replaced, no further action is required.

(g) If Table 1 of Supplement No. 1 to Lycoming Mandatory Service Bulletin (MSB) No. 566, dated November 30, 2005, lists your engine serial number (SN), use Table 2 of Supplement No. 1 to verify if your crankshaft SN is listed.

(h) If Table 1 of Supplement No. 1 to Lycoming MSB No. 566, dated November 30, 2005, does not list your engine SN, use Table 2 of Supplement No. 1 to verify if your crankshaft SN is listed, if an affected crankshaft was installed as a replacement.

(i) If Table 2 of Supplement No. 1 to Lycoming Engines MSB No. 566, dated November 30, 2005, lists your crankshaft SN, replace the crankshaft with a crankshaft that is not listed in Table 2 of Supplement No. 1 to Lycoming MSB No. 566, dated July 11, 2005.

(j) The engine and crankshaft SNs listed in Table 1 and Table 2 of Supplement No.1 to Lycoming Engines MSB No. 566 are different from the engine and crankshaft SNs affected by Lycoming MSBs No. 552, No. 553 and No. 566; and ADs 2002-19-03 and 2005-19-11.

Prohibition Against Installing Certain Crankshafts

(k) After the effective date of this AD, do not install any crankshaft that has a SN listed in Table 2 of Supplement No. 1 to Lycoming MSB No. 566, dated November 30, 2005, into any engine.

Alternative Methods of Compliance

(l) The Manager, New York Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(m) None.

Material Incorporated by Reference

(n) You must use Lycoming Engines Supplement No. 1 to Mandatory Service Bulletin No. 566, dated November 30, 2005, to perform the crankshaft replacements required by this AD. The Director of the Federal Register approved the incorporation by reference of this service bulletin in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701; telephone (570) 323-6181; fax (570) 327-7101, or go on the Internet at *http://www.Lycoming.Textron.com* for a copy of this service information. You may review copies at the Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001, on the Internet at *http://dms.dot.gov*, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html.*

Issued in Burlington, Massachusetts, on March 15, 2006.
Peter A. White,
Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 06-2759 Filed 3-22-06; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 59

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-048 **"FATIGUE FAILURE OF CONNECTING ROD"**

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2006-10-21.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2006-10-21.

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2006-10-21 med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2006-10-21.

Gyldighetsdato:

2006-07-01.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

CORRECTION: There is a typo in the Amendment number of AD 2006-10-21, published in the Federal Register (FR), May 18, 2006, page 28769, column one, and page 28771, column three. The amendment number should be "39-14604". We will issue a correction to the FR. We have corrected this copy.

2006-10-21 Engine Components Incorporated (ECi): Amendment 39-14604. Docket No. FAA-2005-21331; Directorate Identifier 2005-NE-07-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective June 22, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming) 360 and 540 series reciprocating engines specified in Table 1 of this AD with Engine Components Incorporated (ECi) connecting rods, part number (P/N) AEL11750 installed, limited to Serial Numbers 54/6 and below and produced between January 2002 and January 2004. They are also identified with forging P/N AEL11488 in raised letters on the web of the beam between the big and small ends of the connecting rod.

TABLE 1.—ENGINE MODELS

Engine models
O–360–A1A, A1AD, A1C, A1D, A1F, A1F6, A1F6D, A1G, A1G6, A1G6D, A1H, A1H6, A1LD, A1P, A2A, A2D, A2E, A2F, A2G, A2H, A3A, A3AD, A3D, A4A, A4AD, A4D, A4G, A4J, A4K, A4M, A4N, A4P, A5AD, B1A, B1B, B2A, B2B, C1A, C1C, C1E, C1F, C1G, C2A, C2B, C2C, C2D, C2E, C4F, C4P, D1A, D2A, D2B, F1A6, G1A6, J2A;
HO–360–A1A, B1A, B1B, C1A;
IO–360–B1A, B1B, B1C, B1D, B1E, B1F, B1F6, B1G6, B2E, B2F, B2F6, B4A, E1A, F1A, L2A;
LO–360–A1G6D, A1H6;
HIO–360–A1A, A1B, B1A, B1B;
AEIO–360–B1B, B1D, B1F, B1F6, B1G6, B2F, B2F6, B4A, H1A, H1B;

Engine models
O–540–A1A, A1A5, A1B5, A1C5, A1D, A1D5, A2B, A3D5, A4A5, A4B5, A4C5, A4D5, B1A5, B1B5, B1D5, B2A5, B2B5, B2C5, B4A5, B4B5, D1A5, E4A5, E4B5, E4C5, F1A5, F1B5, G1A5, G2A5, H1A5, H1A5D, H1B5D, H2A5, H2A5D, H2B5D;
AEIO–540–D4A5, D4B5, D4C5, D4D5;
IO–540–A1A5, B1A5, B1B5, B1C5, C1B5, C1C5, C2C, C4B5, C4C5, C4D5, C4D5D, D4A5, D4B5, D4C5, E1A5, E1B5, E1C5, G1A5, G1B5, G1C5, G1D5, G1E5, G1F5, J4A5, N1A5, P1A5, R1A5, T4A5D, T4B5, T4B5D, T4C5D, V4A5, V4A5D;
LTIO–540–K1AD;
TIO–540–C1A, E1A, G1A, H1A, K1AD, AA1AD, AB1AD, AB1BD, AF1A, AF1B, AG1A.

These engines are installed on, but not limited to, the aircraft listed in Table 2 of this AD.

TABLE 2.–AIRCRAFT MODELS

Aircraft manufacturer	Aircraft model
Aero Boero	AB-180, AB-260.
Aero Commander	Lark (100), Aero Commander (500, 500-B, 500-E, 500-U).
Aero Engine Service Ltd.	Victa (R-2).
.erofab Inc.	Renegade 250, Turbo Renegade (270).
Aviamilano	Flamingo (F-250).
Aviat	Husky.
Avions Pierre Robin	(HR100/250).
Beagle	Airedale (A-109), Husky (D5-180 01-U).
Bellanca Aircraft	Scout (8GCBC-CS, 8GCBC FP), Super Decathlon (8KCAB-180), Aries T-250.
Bolkow	207, Klemm (K1-107C).
Britten-Norman	BN-2.
Brooklanda	Scoutmaster.
C.A.A.R.P.	S A.N. (M-23III), C.A.P. (10).
C. Itoh and Co	Fuji FA-200.
Center Est Aeronautique	Regente (DR-253).
Cerva	(CE-43 Guepard).
Cessna Aircraft	Cardinal C-177A and C-177B, Teal III, TSC (1A3), Skyhawk RG, and C-172RG, Cutlass C-172Q.
hristen	Husky (A-1), Christen. Pitts (S-2S), (S-2B).
DeHavilland	Drover (DHA-3MK3), Heron Conversion.
Dinfia	Ranquel (lA-51), Querandi (1A-45).
Dornier	(DO-28, DO-28-B1, DO-8-B1).
Doyn Aircraft	Doyn-Cessna (170B, 172, 172A, 172B).
Doyn Aircraft	Doyn-Beech (Beech 95).
Doyn Aircraft	Doyn-Piper (PA-23 "160", PA-23 "200", PA-24 "250", PA-23 "250").
Earl Horton	Pawnee (Piper PA-25).
Embraer	Corioca (EMB-710), Impanema "AG."
F.F.A	Bravo (200).
Found Bros	(FBA-2C), Centennial (100).
Fuji	(FA-200).
General Aviation	Model 114.
Gippsland	GA-200.
Great Lakes	Trainer.

Aircraft manufacturer	Aircraft model
Grob	G115/Sport-Acro.
H.A.L.	HPT-32.
Hughes Tool Co.	(269A, 269-A-1, YHO-2HU, 300).
Intermountain Mfg Co.	Call Air (A-6, A-9, IAR821, IAR-822, IAR-826, IAR-823).
Kingsford-Smith	Bushmaster (O-6).
Lake Aircraft	Colonial (C-2, LA-4, 4A or 4P), Seawolf.
Malmo	Vipan (MF-10B, MF1-10).
Maule	Star Rocket MX-7-180, MX-7-180A, Star Rocket (MX-7-235), Super Rocket (M-6-235), Super Std. Rocket (M-7-235).
Mid-States Mfg. Co.	Twin Courier (H-500), (U-5).
Mooney Aircraft	Master "21" (M-20D, M-20E), Mark "20B", "20D", (M20B, M20C), Statesman (M-20G), Mark "21" (M-20E), "TLS" M20M.
Moravan	Zlin-50L.
Mundry	CAP-10.
Nash Aircraft Ltd	Petrel.
Neiva	1PD-590V.
Norman Aeroplace Co	NAC-1 Freelance.
Omega Aircraft	BS-12D1.
Partenavia	Oscar (P-66).
Penn Yan	Super Cub Conversion.
Pilatus Britten-Norman	Islander (BN-2A-26), Islander (BN-2A-27, Islander II (BN-2B-26), Islander (BN-2A-21), Trislander (BN-2A-Mark III-2).
Piper Aircraft	Comanche (PA-24), Seminole (PA-44), Cherokee "C" (PA-28 "180"), Cherokee "D" (PA-28 "180"), Archer II (PA-28 "180"), Arrow (PA-28 "180R"), Seminole (PA-44), Comanche (PA-24 "150"), Aztec (PA-23 "250"), Cherokee (PA-24 "250"), Pawnee (PA-24 "235"), Cherokee (PA-28 "235"), Aztec (PA-23 "235"), Cherokee (PA-28 "235"), Comanche (PA-24 "260"), Cherokee Six (PA-32 "260"), Pawnee (PA-25 "260"), Aztec B (PA-23 "250"), Comanche (PA-24 "250"), Aztec C (PA-23 "250"), Aztec F, Comanche (PA-24), Turbo Aztec (PA-23-250).
Pitts	S-1S.
Poeschel	P-300.
Procaer	Picchio (F-15-A).
Rawdon Brow	Radon (T-1).
Raytheon Aircraft Co (Beech)	Travel-Air (95, B-95, B-95A, B-95B), Duchess 76, Sport, Musketeer Custom III, Sundowner 180.
Regente	N-591.
Rhein-Flugzeughau	RF-V.
Riley Aircraft	Rocket-Cessna (310), Turbo Rocket, Turbo-Aztec.
Robin	Regent (DR400/180), Remorqueur (DR400/180R), R-3170, Aiglon (R-1180T).
Robinson	R-44.
Rockwell	Commander (114, 114B, 114TC).
S.A.A.B.	Safir (91-D).
Schweizer Aircraft Corporation	269A.

Aircraft manufacturer	Aircraft model
S.O.C.A.T.A.	Tobago (TB-10), Rallye Commodore (MS-893), Rallye 180GI, Sportana Sportsman (RS-180), Rallye 235CA, Rallye 235GT, Rallye 235C, TB-20, Trinidad TB-20, Trinidad TC TB-21.
Shrike	(500-S).
Societe Aeronautique Normande. Mousquetaire	D-140, Jodel (D-140C).
Siai-Marchetti	(S-205, SF-260, SF-208).
Silvercraft	
Std. Helicopter	
Sud	Gardan (GY-180).
Tiger Aircraft LLC (American General)	Tiger.
T. R. Smith Aircraft	Aerostar, (600).
United Consultants	See-Bee.
Utva	75.
Valmet	PIK-23.
Varga	Kachina.
Wassmer	Super 4 (WA-50A), Sancy (WA-40), Baladou (WA-40), Pariou (WA-40), (WA-50), Europa WA-52, WA-421, WA4-2V.
Yoeman Aviation	YA-1.

Unsafe Condition

(d) This AD results from reports of connecting rods with excessive variation in circularity of the journal bores. We are issuing this AD to prevent fatigue failure of the connecting rod and possible uncommanded shutdown of the engine.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines Not Repaired or Overhauled Since New

(f) If your engine has not been overhauled or had any repair since new, no further action is required.

Engines Overhauled or Repaired Since New

(g) If your engine was overhauled or repaired since new, do the following:

(1) Before further flight inspect the maintenance records and engine logbook to determine if the overhaul or repair facility used ECi connecting rods, P/N AEL11750.

(2) If the connecting rods are not ECi, P/N AEL11750, no further action is required.

(3) If the connecting rods are ECi, P/N AEL11750, and if the serial number is 54/7 or higher, no further action is required. (Note: 54 is the lot number and 7 is the serial number of the ECi connecting rod.)

(4) If the connecting rods are ECi, P/N AEL11750, having forging P/N AEL11488 in raised letters on the web of the beam, and if the serial number is 54/6 or lower, do the following:

(i) If the connecting rod has 2,000 or more hours time-in-service (TIS), replace the connecting rod with a connecting rod that has a lot number 55 or higher, or that has a P/N not specified in this AD, within 50 hours TIS after the effective date of this AD.

(ii) If the connecting rod has fewer than 2,000 hours TIS, replace the connecting rod with a connecting rod that has a lot number 55 or higher, or that has a P/N not specified in this AD, at the next engine overhaul, or next accessibility of the connecting rod, but no later than 2,000 hours TIS on the connecting rod.

(iii) For the purpose of this AD, connecting rod accessibility is defined as any maintenance action in which a cylinder assembly is removed for maintenance.

(h) After the effective date of this AD, do not install any ECi connecting rod, P/N AEL11750, that has SN 54/6 or lower into any engine.

Alternative Methods of Compliance

(i) The Manager, Special Certification Office, has the authority to approve alternative methods of compliance for this AD, if requested, using the procedures found in 14 CFR 39.19.

Related Information

(j) None.

Material Incorporated by Reference

(k) None.

Issued in Burlington, Massachusetts, on May 12, 2006.
Thomas A. Boudreau,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 06-4646 Filed 5-17-06; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 60

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-052 "CRACKS IN CYLINDER ASSEMBLIES"

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2006-12-07.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2006-12-07.

Anm.: Denne LDP erstatter LDP 2006-021

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2006-12-07 med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2006-12-07.

Gyldighetsdato:

2006-11-27.

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

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The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2006-12-07 Engine Components Incorporated (ECi): Amendment 39-14632. Docket No. FAA-2005-22358; Directorate Identifier 2005-NE-20-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective July 11, 2006.

Affected ADs

(b) This AD supersedes 2005-26-10, Amendment 39-14431.

Applicability

(c) This AD applies to Lycoming Engines (formerly Textron Lycoming) models 320, 360, and 540 series, parallel valve, reciprocating engines:

(1) Specified in Table 1 of this AD; and

(2) With ECi cylinder assemblies, part number (P/N) AEL65102 series "Classic Cast", having casting head markings EC 65099-REV-1; and

(3) With serial numbers (SNs) 1 through 9879 (SN may have an "L" prefix for a long reach spark plug), (sold from January 1997 to September 2001) installed.

(4) The set of numbers appearing on the cylinder, below and to the left of the SN, in the form of "12345-67" is not used for determining applicability.

TABLE 1.—ENGINE MODELS

Cylinder head part No.	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.

Cylinder head part No.	Installed on engine models
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.
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.

For information, the subject engines are installed on, but not limited to, the aircraft listed in the following Table 2:

TABLE 2.—ENGINES INSTALLED ON, BUT NOT LIMITED TO	
O–320–A1A	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Apache (PA–23), Pawnee (PA–25).
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	Mooney Aircraft: Mark (20A).
	Dinfia: Ranquel (1A–46).
	Simmering-Graz Pauker: Flamingo (SGP–M–222).
	Aviamilano: Scricciolo (P–19).
	Vos Helicopter Co.: Spring Bok.
O–320–A1B	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Apache (PA–23).
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	S.O.C.A.T.A.: Horizon (Gardan).
O–320–A2A	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Agriculture (PA–18A "150") Super Cub (PA–18 "150"), Caribbean (PA–22 "150"), Pawnee (PA–25).
	Intermountain Mfg. Co.: Call Air Texas (A–5, A–5T).
	Lake Aircraft: Colonial (C–1).
	Rawdon Bros.: Rawdon (T–1, T–15, T–15D).
	Shinn Engineering: Shinn (2150–A).
	Dinfia: Ranquel (1A–46).
	Neiva: (1PD–5802).
	Sud: Gardan-Horizon (GY–80).
	LaVerda: Falco (F8L Series II, America).
	Malmo: Vipan (MF1–10).
	Kingsford Smith: Autocrat (SCRM–153).
	Aero Commander: 100.
O–320–A2B	Piper Aircraft: Tri-Pacer (PA–22 "150", PA–22S "150"), Cherokee (PA–28 "150"), Super Cub (PA–18 "150").
	Champion Aircraft: Challenger (7GCA, 7GCB, 7KC), Citabria (7GCAA, 7GCRC), Agriculture (7GCBA).
	Beagle: Pup (150).
	Artic: Interstate S1B2.
	Robinson: R–22.
	Varga: Kachina 2150A.
O–320–A2C	Robinson: R–22.
	Cicare: Cicare AG.
	Bellanca Aircraft: Citabria 150 (7GCAA), Citabria 150S (7GCBC).
O–320–A2D	Piper Aircraft: Apache (PA–23).
O–320–A3A	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	Corben-Fettes: Globe Special (Globe GC–1B).
O–320–A3B	Piper Aircraft: Apache (PA–23).
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	Teal II: TSC (1A2).
O–320–B1A	Piper Aircraft: Apache (PA–23 "160").
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	Malmo: Vipan (MF1–10).
O–320–B1B	Piper Aircraft: Apache (PA–23 "160").
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B)

O–320–B2A	Piper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160").
O–320–B2B	Piper Aircraft: Tri-Pacer (PA–22 "160", PA–22S "160").
	Beagle: Airedale (D5–160).
	Fuji-Heavy Industries: Fuji (F–200).
	Uirapuru: Aerotec 122.
O–320–B2C	Robinson: R–22.
O–320–B2D	Maule: MX–7–160.
O–320–B2E	Lycon.
O–320–B3A	Piper Aircraft: Apache (PA–23 "160").
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
O–320–B3B	Piper Aircraft: Apache (PA–23 "160").
	Doyn Aircraft: Doyn-Cessna (170, 170A, 170B).
	Sud: Gardan (GY80–160).
O–320–C1A	Piper Aircraft: Apache (PA–23 "160").
	Riley Aircraft: Rayjay (Apache).
O–320–C1B	Piper Aircraft: Apache (PA–23 "160").
O–320–C3A	Piper Aircraft: Apache (PA–23 "160").
O–320–C3B	Piper Aircraft: Apache (PA–23 "160").
O–320–D1A	Sud: Gardan (GY–80).
	Gyroflug: Speed Cancard.
	Grob: G115.
O–320–D1F	Slingsby: T67 Firefly.
O–320–D2A	Piper Aircraft: Cherokee (PA–28S "160").
	Robin: Major (DR400–140B), Chevalier (DR–360), (R–3140).
	S.O.C.A.T.A.: Tampico TB9.
	Slingsby: T67C Firefly.
	Daetwyler: MD–3–160.
	Nash Aircraft Ltd.: Petrel.
	Aviolight: P66D Delta.
	General Avia: Pinguino.
O–320–D2B	Beech Aircraft: Musketeer (M–23).
	Piper Aircraft: Cherokee (PA–28 "160").
O–320–D2J	Cessna Aircraft: Skyhawk 172.
O–320–D3G	Piper Aircraft: Warrior II, Cadet (PA–28–161).
O–320–E1A	Grob: G115.
O–320–E1C	M.B.B. (Messerschmitt-Boelkow-Blohm): Monsun (BO–209–B).
O–320–E1F	M.B.B.: Monsun (BO–209–B).
O–320–E2A	Piper Aircraft: Cherokee (PA–28 "140", PA–28 "150").
	Robin: Major (DR–340), Sitar, Bagheera (GY–100–135).
	S.O.C.A.T.A.: Super Rallye (MS–886), Rallye Commodore (MS–892).
	Siai-Marchetti: (S–202).
	F.F.A.: Bravo (AS–202/15).
	Partenavia: Oscar (P66B), Bucker (131 APM).
	Aeromot: Paulistina P–56.
	Pezetel: Koliber 150.
O–320–E2C	Beech Aircraft: Musketeer III (M–23III).
	M.B.B.: Monsun (BO–209–B).
O–320–E2D	Cessna Aircraft: Cardinal (172–I, 177).
O–320–E2F	M.B.B.: Monsun (BO–209–B), Wassmer Pacific (WA–51).
O–320–E2G	American Aviation Corp.: Traveler.

O–320–E3D	Piper Aircraft: Cherokee (140).
	Beech Aircraft: Sport.
IO–320–B2A	Piper Aircraft: Twin Comanche (PA–30).
IO–320–B1C	Hi. Shear: Wing.
IO–320–B1D	Ted Smith Aircraft: Aerostar.
IO–320–C1A	Piper Aircraft: Twin Comanche (PA–30 Turbo).
IO–320–D1A	M.B.B.: Monsun (BO–209–C).
IO–320–D1B	M.B.B.: Monsun (BO–209–C).
IO–320–E1A	M.B.B.: Monsun (BO–209–C).
IO–320–E1B	Bellanca Aircraft.
IO–320–E2A	Champion Aircraft: Citabria.
IO–320–E2B	Bellanca Aircraft.
IO–320–F1A	CAAR Engineering: Carr Midget.
LIO–320–B1A	Piper Aircraft: Twin Comanche (PA–39).
LIO–320–C1A	Piper Aircraft: Twin Comanche (PA–39).
AIO–320–B1B	M.B.B.: Monsun (BO–209–C).
AEIO–320–D1B	Slingsby: T67M Firefly.
AEIO–320–D2B	Hundustan Aeronautics Ltd.: HT–2.
AEIO–320–E1A	Bellanca Aircraft.
	Champion Aircraft.
AEIO–320–E1B	Bellanca Aircraft.
	Champion Aircraft: Decathalon (8KCAB–CS).
AEIO–320–E2B	Bellanca Aircraft.
	Champion Aircraft: Decathalon (8KCAB).
O–320–A1A	Riley Aircraft: Riley Twin.
O–360–A1A	Beech Aircraft: Travel Air (95, B–95).
	Piper Aircraft: Comanche (PA–24).
	Intermountain Mfg. Co.: Call Air (A–6).
	Lake Aircraft: Colonial (C–2, LA–4, 4A or 4P).
	Doyn Aircraft: Doyn-Cessna (170B, 172, 172A, 172B).
	Mooney Aircraft: Mark "20B"(M–20B).
	Earl Horton: Pawnee (Piper PA–25).
	Dinfia: Ranquel (1A–51).
	Neiva: (1PD–5901).
	Regente: (N–591).
	Wassmer: Super 4 (WA–50A), Sancy (WA–40), Baladou (WA–40), Pariou (WA–40).
	Sud: Gardan (GY–180).
	Bolkow: (207).
	Partenavia: Oscar (P–66).
	Siai-Marchetti: (S–205).
	Procaer: Picchio (F–15–A).
	S.A.A.B.: Safir (91–D).
	Malmo: Vipan (MF–10B).
	Aero Boero: AB–180.
	Beagle: Airedale (A–109).
	DeHavilland: Drover (DHA–3MK3).
	Kingsford-Smith: Bushmaster (J5–6).
	Aero Engine Service Ltd.: Victa (R–2).
O–360–A1AD	S.O.C.A.T.A.: Tabago TB–10.

O–360–A1D	Piper Aircraft: Comanche (PA–24).
	Lake Aircraft: Colonial (LA–4, 4A or 4P).
	Doyn Aircraft: Doyn-Beech (Beech 95).
	Mooney Aircraft: Master "21"(M–20E), Mark "20B", "20D", (M20B, M20C), Mooney Statesman (M–20G).
	Dinfia: Querandi (1A–45).
	Wassmer: (WA–50).
	Malmo: Vipan (MF1–10).
	Cessna Aircraft: Skyhawk.
	Doyn Aircraft: Doyn-Piper (PA–23 "160").
O–360–A1F6	Cessna Aircraft: Cardinal.
O–360–A1F6D	Cessna Aircraft: Cardinal 177.
	Teal III: TSC (1A3).
O–360–A1G6	Aero Commander.
O–360–A1G6D	Beech Aircraft: Duchess 76.
O–360–A1H6	Piper Aircraft: Seminole (PA–44).
O–360–A1LD	Wassmer: Europa WA–52.
O–360–A1P	Aviat: Husky.
O–360–A2A	Center Est Aeronautique: Regente (DR–253).
	S.O.C.A.T.A.: Rallye Commodore (MS–893).
	Societe Aeronautique Normande: Mousquetaire (D–140).
	Bolkow: Klemm (K1–107C).
	Partenavia: Oscar (P–66).
	Beagle: Husky (D5–180) (J1–U).
O–360–A2D	Piper Aircraft: Comanche (PA–24), Cherokee "C"(PA–28 "180").
	Mooney Aircraft: Master "21"(M–20D), Mark "21"(M–20E).
O–360–A2E	Std. Helicopter.
O–360–A2F	Aero Commander: Lark (100).
	Cessna Aircraft: Cardinal.
O–360–A2G	Beech Aircraft: Sport.
O–360–A3A	C.A.A.R.P.S.A.N.: (M–23III).
	Societe Aeronautique Normande: Jodel (D–140C).
	Robin: Regent (DR400/180), Remorqueur (DR400/180R). R–3170.
	S.O.C.A.T.A.: Rallye 180GT, Sportavia Sportsman (RS–180).
	Norman Aeroplace Co.: NAC–1 Freelance.
	Nash Aircraft Ltd.: Petrel.
O–360–A3AD	S.O.C.A.T.A.: TB–10.
	Robin: Aiglon (R–1180T).
O–360–A4A	Piper Aircraft: Cherokee "D"(PA–28 "180").
O–360–A4D	Varga: Kachina.
O–360–A4G	Beech Aircraft: Musketeer Custom III.
O–360–A4K	Grumman American: Tiger.
	Beech Aircraft: Sundowner 180.
O–360–A4M	Piper Aircraft: Archer II (PA–28 "18").
	Valmet: PIK–23.
O–360–A4N	Cessna Aircraft: 172 (Optional).
O–360–A4P	Penn Yan: Super Cub Conversion.
O–360–A5AD	C. Itoh and Co.: Fuji FA–200.
O–360–B2C	Seabird Aviation: SB7L.
O–360–C1A	Intermountain Mfg. Co.: Call Air (A–6).

O–360–C1E	Bellanca Aircraft: Scout (8GCBC–CS).
O–360–C1F	Maule: Star Rocket MX–7–180.
O–360–C1G	Christen: Husky (A–1).
O–360–C2B	Hughes Tool Co.: (269A).
O–360–C2D	Hughes Tool Co.: (269A).
O–360–C2E	Hughes Tool Co.: (YHO–2HU) Military.
	Bellanca Aircraft: Scout (8GCBC FP).
O–360–C4F	Maule: MX–7–180A.
O–360–C4P	Penn Yan: Super Cub Conversion.
O–360–F1A6	Cessna Aircraft: Cutlass RG.
O–360–J2A	Robinson: R22.
IO–360–B1A	Beech Aircraft: Travel-Air (B–95A).
	Doyn Aircraft: Doyn-Piper (PA–23 "200").
IO–360–B1B	Beech Aircraft: Travel-Air (B–95B).
	Doyn Aircraft: Doyn-Piper (PA–23 "200").
	Fuji: (FA–200).
IO–360–B1D	United Consultants: See-Bee.
IO–360–B1E	Piper Aircraft: Arrow (PA–28 "180R").
IO–360–B1F	Utva: 75.
IO–360–B2E	C.A.A.R.P. C.A.P. (10).
IO–360–B1F6	Great Lakes: Trainer.
IO–360–B1G6	American Blimp: Spector 42.
IO–360–B2F6	Great Lakes: Trainer.
LO–360–A1G6D	Beech Aircraft: Duchess.
LO–360–A1H6	Piper Aircraft: Seminole (PA–44).
IO–360–E1A	T.R. Smith Aircraft: Aerostar.
IO–360–L2A	Cessna Aircraft: Skyhawk C–172.
IO–360–M1A	Diamond Aircraft: DA–40.
IO–360–M1B	Vans Aircraft: RV6, RV7, RV8
	Lancair: 360.
AEIO–360–B1F	F.F.A.: Bravo (200).
	Grob: G115/Sport-Acro.
AEIO–360–B1G6	Great Lakes.
AEIO–360–B2F	Mundry: CAP–10.
AEIO–360–B4A	Pitts: S–1S.
AEIO–360–H1A	Bellanca Aircraft: Super Decathalon (8KCAB–180).
AEIO–360–H1B	American Champion: Super Decathalon.
VO–360–A1A	Brantly Hynes Helicopter: (B–2).
VO–360–A1B	Brantly Hynes Helicopter: (B–2, B2–A). Military (YHO–3BR).
VO–360–B1A	Brantly Hynes Helicopter: (B–2, B2–A).
IVO–360–A1A	Brantly Hynes Helicopter: (B2–B).
HO–360–B1A	Hughes Tool Co.: (269A).
HO–360–B1B	Hughes Tool Co.: (269A).
HO–360–C1A	Schweizer: (300C).
HIO–360–B1A	Hughes Tool Co.: Military (269–A–1) (TH–55A).
HIO–360–B1B	Hughes Tool Co.: (269A).
HIO–360–G1A	Schweizer: (CB).
O–540–A1A	Rhein-Flugzeugbau: (RF–1).

O–540–A1A5	Piper Aircraft: Comanche (PA–24 "180").
	Helio: Military (H–250).
	Yoeman Aviation: (YA–1).
O–540–A1B5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250").
O–540–A1C5	Piper Aircraft: Comanche (PA–24 "250").
O–540–A1D	Found Bros.: (FBA–2C).
	Dornier: (DO–28–B1).
O–540–A1D5	Piper Aircraft: Aztec (PA–23 "250"), Comanche (PA–24 "250"), Military Aztec (U–11A).
	Dornier: (DO–28).
O–540–A2B	Aero Commander: (500).
	Mid-States Mfg. Co.: Twin Courier (H–500), (U–5).
O–540–A3D5	Piper Aircraft: Navy Aztec (PA–23 "250").
O–540–B1A5	Piper Aircraft: Apache (PA–23 "235").
O–540–B1B5	Piper Aircraft: Comanche (PA–24 "250").
	Doyn Aircraft: Doyn-Piper (PA–24 "250").
O–540–B1D5	Wassmer: (WA–421).
O–540–B2B5	Piper Aircraft: Pawnee (PA–25 "235"), Cherokee (PA –28 "235"), Aztec (PA–23 "235").
	Intermountain Mfg. Co.: Call Air (A–9).
	Rawdon Bros.: Rawdon (T–1).
	S.O.C.A.T.A.: Rallye 235CA.
O–540–B2C5	Piper Aircraft: Pawnee (PA–25 "235").
O–540–B4B5	Piper Aircraft: Cherokee (PA–28 "235").
	Embraer: Corioca (EMB–710).
	S.O.C.A.T.A.: Rallye 235GT, Rallye 235C
	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235).
O–540–E4A5	Piper Aircraft: Comanche (PA–24 "260").
	Aviamilano: Flamingo (F–250).
	Siai-Marchetti: (SF–260), (SF–208).
O–540–E4B5	Britten-Norman: (BN–2).
	Piper Aircraft: Cherokee Six (PA–32 "260").
O–540–E4C5	Pilatus Britten-Norman: Islander (BN–2A–26), Islander (BN–2A–27), Islander II (BN–2B–26), Islander (BN–2A–21),Trislander (BN–2A–Mark III–2).
O–540–F1B5	Omega Aircraft: (BS–12D1).
	Robinson: (R–44).
O–540–G1A5	Piper Aircraft: Pawnee (PA–25 "260").
O–540–H1B5D	Aero Boero: 260.
O–540–H2A5	Embraer: Impanema "AG".
	Gippsland: GA–200.
O–540–H2B5D	Aero Boero: 260.
O–540–J1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235).
O–540–J3A5	Robin: R–3000/235.
O–540–J3A5D	Piper Aircraft: Dakota (PA–28–236).
O–540–J3C5D	Cessna Aircraft: Skylane RG.
O–540–L3C5D	Cessna Aircraft: TR–182, Turbo Skylane RG.
O–540–C1B5	Piper Aircraft: Aztec B (PA–23 "250"), Comanche (PA–24 "250").
IO–540–C1C5	Riley Aircraft: Turbo-Rocket.

IO–540–C4B5	Piper Aircraft: Aztec C (PA–23 "250"), Aztec F.
	Wassmer: (WA–421).
	Avions Pierre Robin: (HR100/250).
	Bellanca Aircraft: Aries T–250.
	Aerofab: Renegade 250.
IO–540–C4D5	S.O.C.A.T.A.: TB–20.
IO–540–C4D5D	S.O.C.A.T.A.: Trinidad TB–20.
IO–540–D4A5	Piper Aircraft: Comanche (PA–24 "260").
	Siai-Marchetti: (SF–260).
IO–540–D4B5	Cerva: (CE–43 Guepard).
IO–540–J4A5	Piper Aircraft: Aztec (PA–23 "250").
IO–540–R1A5	Piper Aircraft: Comanche (PA–24).
IO–540–T4A5D	General Aviation: Model 114.
IO–540–T4B5	Commander: 114B.
IO–540–T4B5D	Rockwell: 114.
IO–540–T4C5D	Lake Aircraft: Seawolf.
IO–540–V4A5	Maule: MT–7–260, M–7–260.
	Aircraft Manufacturing Factory.
IO–540–V4A5D	Brooklands: Scoutmaster.
IO–540–W1A5	Maule: MX–7–235, MT–7–235, M7–235.
IO–540–W1A5D	Maule: Star Rocket (MX–7–235), Super Rocket (M–6–235), Super Std. Rocket (M–7–235).
IO–540–W3A5D	Schweizer: Power Glider.
AEIO–540–D4A5	Christen: Pitts (S–2S), (S–2B).
	Siai-Marchetti: SF–260.
	H.A.L.: HPT–32.
	Slingsby: Firefly T3A.
AEIO–540–D4B5	Moravan: Zlin-50L.
	H.A.L.: HPT–32.
AEIO–540–D4D5	Burkhart Grob: Grob G, 115T Aero.
TIO–540–C1A	Piper Aircraft: Turbo Aztec (PA–23–250).
TIO–540–K1AD	Piper Aircraft.
TIO–540–AA1AD	Aerofab Inc.: Turbo Renegade (270).
TIO–540–AB1AD	S.O.C.A.T.A.: Trinidad TC TB–21.
TIO–540–AB1BD	Schweizer.
TIO–540–AF1A	Mooney Aircraft: "TLS"M20M.
TIO–540–AG1A	Commander Aircraft: 114TC.
TIO–540–AK1A	Cessna Aircraft: Turbo Skylane T182T.
LTIO–540–K1AD	Piper Aircraft.

Unsafe Condition

(d) This AD results from reports of applicability errors found in AD 2005-26-10. We are issuing this AD to prevent loss of engine power due to cracks in the cylinder assemblies and possible engine failure caused by separation of a cylinder head.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines Not Overhauled or Repaired Since New

(f) If your engine has not been overhauled or had any major repair since new, no further action is required.

Engines Overhauled or Repaired Since New

(g) If your engine was overhauled or repaired since new, do the following:

(1) Determine if ECi cylinder assemblies, P/N AEL65102 series "Classic Cast", having casting head markings EC 65099-REV-1 and SNs 1 through 9879 (SN may have an "L" prefix for a long reach spark plug) are installed on your engine, as follows:

(i) Inspect the engine log books and maintenance records for reference to the subject ECi cylinder assemblies.

(ii) If the engine log books and maintenance records did not record the P/N and SN of the cylinder assemblies, visually inspect the cylinder assemblies and verify the P/N and SN of the cylinder assemblies.

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

(3) If any cylinder assembly is an ECi P/N AEL65102 series "Classic Cast", having casting head markings EC 65099-REV-1 and a SN 1 through 9879 (SN may have an "L" prefix for a long reach spark plug), do the following:

(i) If the cylinder assembly has fewer than 800 operating hours-in-service (HIS) on the effective date of this AD, replace the cylinder assembly at no later than 800 operating HIS. No action is required until the operating HIS reaches 800 hours.

(ii) If the cylinder assembly has 800 operating HIS or more on the effective date of this AD, replace the cylinder assembly within 60 operating HIS after the effective date of this AD.

Definition of a Replacement Cylinder Assembly

(h) For the purpose of this AD, a replacement cylinder assembly is defined as follows:

(1) A serviceable cylinder assembly made by Lycoming Engines.

(2) A serviceable FAA-approved, Parts Manufacturer Approval cylinder assembly from another manufacturer.

(3) A serviceable ECi cylinder assembly, P/N AEL65102 series, "Titan", having casting P/N AEL85099.

(4) A serviceable ECi cylinder assembly, P/N AEL65102 series "Classic Cast", having casting head markings EC 65099-REV-1, that has a SN 9880 or higher (SN may have an "L" prefix for a long reach spark plug).

Prohibition of Cylinder Assemblies, P/N AEL65102 Series "Classic Cast", Having Casting Head Markings EC 65099-REV-1 and SNs 1 Through 9879

(i) After the effective date of this AD, do not install any ECi cylinder assembly, P/N AEL65102, having casting head markings EC 65099-REV-1 that has a SN 1 through 9879 (SN may have an "L" prefix for a long reach spark plug), onto any engine.

Alternative Methods of Compliance

(j) The Manager, Special Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Related Information

(k) ECi Service Bulletin No. 05-08, Revision 2, dated February 28, 2006, pertains to the subject of this AD.

Issued in Burlington, Massachusetts, on May 31, 2006.
Thomas A. Boudreau,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. 06-5127 Filed 6-5-06; 8:45 am]
BILLING CODE 4910-13-P

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 61

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2006-053 **"CRANCKSHAFT FAILURES"**

Påbudet gjelder:

Lycoming Engines motorer, alle modeller som er beskrevet i vedlagte kopi av FAA AD 2006-20-09.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2006-20-09.

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2006-20-09 med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2006-20-09.

Gyldighetsdato:

2006-11-27.

MERK! For at angjeldende flymateriell skal være luftdyktig må påbudet være utført til rett tid og notat om utførelsen ført inn i vedkommende journal med henvisning til denne LDPs nummer.

2006-20-09 Lycoming Engines (formerly Textron Lycoming): Amendment 39-14778. Docket No. FAA-2006-24785; Directorate Identifier 2006-NE-20-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective November 3, 2006.

Affected ADs

(b) None.

Applicability

(c) This AD applies to those Lycoming Engines (L)O-360, (L)IO-360, AEIO-360, O-540, IO-540, AEIO-540, (L)TIO-540, IO-580, and IO-720 series reciprocating engines listed by engine model number and serial number in Table 1, Table 2, Table 3, or Table 4 of Lycoming Mandatory Service Bulletin (MSB) 569A, dated April 11, 2006, and those engines with crankshafts listed by crankshaft serial number in Table 5 of Lycoming MSB 569A, dated April 11, 2006. These applicable engines are manufactured new or rebuilt, overhauled, or had a crankshaft installed after March 1, 1997. These engines are installed on, but not limited to, the following aircraft:

Engine Model	Manufacturer	Aircraft Model
AEIO-360-A1B6	Moravan	Z242L Zlin
	Scottish Avia	Bulldog
	Valmet	Leko 70
AEIO-360-A1E6	Integrated Systems	Omega
IO-360-A1B6	Aircraft Manufacturing Factory	Mushshak
	Beech	C-24R Sierra or 200 Sierra
	Cessna	R-G Cardinal
	Korean Air	Chang Gong-91
	Partenavia	P-68C
	Saab	MFI-15 Safari, MFI-17 Supporter
	Scottish Avia	Bulldog
IO-360-A1B6D	Cessna	R-6 Cardinal
	Siai Marchetti	S-205

IO-360-A3B6	Mod Works	Trophy 212 Conversion
IO-360-A3B6D	Mooney	M20J-201
IO-360-B1G6	American	Blimp Spector 42
IO-360-C1C6	Piper Aircraft	PA-28-200R Arrow IV
	Ruschmeyer	MF-85
IO-360-C1D6	M.B.B.	Flamingo 223
	Rockwell	112
IO-360-C1E6	Piper	PA-34-200 Seneca I
IO-360-C1G6	Zeppelin	NT
IO-360-X178	Ly-Con	STC
(L)O-360-A1G6D	Beech	76 Duchess
(L)O-360-A1H6	Piper	PA-44 Seminole
O-360-A1F6	Cessna	177 Cardinal
O-360-A1F6D	Cessna	177 Cardinal
	Teal III	TSC 1A3
O-360-A1G6D	Beech	76 Duchess
O-360-A1H6	Piper	PA-44 Seminole
O-360-E1A6D	Piper	PA-44-180 Seminole
O-360-F1A6	Cessna	C-172RG Cutlass RG
AEIO-540-D4A5	Christen	Pitts S-2S, S-2B
	H.A.L.	HPT-32
	Siai-Marchetti	SF-260
	Slingsby	T3A Firefly
AEIO-540-L1B5	Extra-Flugzeugbau	Extra 300
	F.F.A.	FFA-2000 Eurotrainer
AEIO-540-L1D5	Apex	Apex
IO-540-AA1A5	Piper	602P Sequoia
IO-540-AB1A5	Cessna	C-182 Skylane
IO-540-AC1A5	Cessna	C-206 Stationair
IO-540-AE1A5	Robinson	R44

IO-540-C4B5	Aerofab	250 Renegade
	Avions Pierre Robin	HR100/250
	Bellanca	T-250 Aries
	Piper	Aztec C PA-23 "250", Aztec F
	Wassmer	WA4-21
IO-540-C4D5	S.O.C.A.T.A.	TB-20
IO-540-C4D5D	S.O.C.A.T.A.	TB-20 Trinidad
IO-540-D4A5	Piper	PA-24 260 Comanche
	Siai-Marchetti	SF-260
IO-540-D4B5	Cerva	CF-34 Guepard
IO-540-E1A5	Aero Commander	500-E
IO-540-E1B5	Aero Commander	500-U
	Poeschel	P-300
	Shrike	500-S
IO-540-J4A5	Piper	Aztec PA-23 "250"
IO-540-K1A5	Aeronautica Agricula Mexicana	Quail
	Celair	Eagle
	Embraer	EMB-720 Minuano, EMB-721 Sertanejo
	Piper	PA-32-300 Cherokee Six
IO-540-K1A5D	Piper	PA-32-300
IO-540-K1B5	Evangel-Air	Evangel-Air
	Pilotus Britton-Norman	BN-2B Islander
	Transavara	T-300 Skyfarmer
IO-540-K1E5	Bellanca	Bellanca
IO-540-K1F5	Ted Smith	Aerostar 600
IO-540-K1G5	Embraer	EMB-720 Minuano
	Piper	Saratoga PA-32-300, Brave 300
IO-540-K1G5D	Embraer	EMB-721 Sertanejo
	Piper	PA-32-300R Lance, SP PA-32-300R Saratoga
IO-540-K1H5	Seawind	Seawind
IO-540-K1J5	Piper	600A Aerostar
IO-540-K1J5D	Embraer	EMB-201 Ipanema
IO-540-K1K5	Piper	T35

IO-540-L1C5	Swearingen	SX300
IO-540-M1A5	Piper	PA-31-300 Navajo
IO-540-M1C5	King Engineering	Angel
IO-540-S1A5	Piper	601B Aerostar, 601P Aerostar
IO-540-T4A5D	General Aviation	Model 114
IO-540-T4B5	Commander	114B
IO-540-T4B5D	Rockwell	114
IO-540-V4A5	Aircraft Manufacturing Factory	Aircraft Manufacturing Factory
	Maule	MT-7-260, M-7-260
IO-540-W1A5	Maule	MX-7-235, MT-7-235, M7-235
IO-540-X160	Airship Management	Airship Management
IO-540-X170	Robinson	Robinson
O-540-A1A5	Helio	Military H-250
O-540-A1B5	Piper	PA-32 "250" Aztec, PA-24 "250" Comanche
O-540-A1C5	Piper	PA-24 "250" Comanche
O-540-A1D5	Piper	PA-24 "250" Comanche
O-540-A4D5	American Champion	American Champion
	Gomozig	Gomozig
	Avipro	Bearhawk
O-540-B1A5	Piper	PA-23 "235" Apache
O-540-B2B5	S.O.C.A.T.A.	235CA Rallye.
O-540-B2C5	Piper	PA-24 "235" Pawnee
O-540-B4B5	Embraer	EMB-710 Corioca
	Maule	MX-7-235 Star Rocket, M-6-235 Super Rocket, M-7-235 Super Rocket
	Piper	PA-28 "235" Cherokee
	S.O.C.A.T.A.	235GT Rallye, 235C Rallye
O-540-E4A5	Aviamilano	F-250 Flamingo
	Piper	PA-24 "260" Comanche
	Siai-Marchetti	SF-260, SF-208
O-540-E4B5	Britton-Norman	BN-2
	Piper	PA-32 "260" Cherokee Six

O-540-E4C5	Pilotus Britton-Norman	BN-2A-26 Islander; BN-2A-27 Islander; BN-2B-26 Islander II; BN-2A-21 Islander; BN-2A-Mark III-2 Trislander
O-540-F1B5	Robinson	R-44
O-540-G1A5	Piper	PA-25 "260" Pawnee
O-540-J1A5D	Maule	MX-7-235 Star Rocket, M-6-235 Super Rocket, M-7-235 Super Rocket
O-540-J3A5	Robin	R-3000/235
O-540-J3A5D	Piper	PA-28-236 Dakota
O-540-J3C5D	Cessna	R-182 Skylane
O-540-L3C5D	Cessna	TR-182 Turbo Skylane
TIO-540-AA1AD	Aerofab Inc	270 Turbo Renegade
TIO-540-AB1AD	S.O.C.A.T.A.	TC TB-21 Trinidad
TIO-540-AE2A	Piper	PA-46-350P Mirage
TIO-540-AF1B	Mooney	TLS M20M
TIO-540-AG1A	Commander Aircraft	112TC
TIO-540-AH1A	Piper	TC PA-32-301T TurboSaratoga
TIO-540-AK1A	Cessna	T182T Turbo Skylane
TIO-540-C1A	Piper	PA-23-250 Turbo Aztec
TIO-540-J2B	Piper	T-1020
TIO-540-U2A	Piper	700P Aerostar
TIO-540-W2A	Aero Mercantil	Gavilan
TIO-540-X136	Schweizer	Schweizer
TIO-540-X155	Cessna	T182 (AK1A)
IO-720-D1B	Embraer	EMB-400 Ipanema, IAR-821
	Nauchang	N5
IO-720-D1C	Piper	PA-36-375 Brave

Unsafe Condition

(d) This AD results from reports of 23 confirmed failures of similar crankshafts in Lycoming Engines 360 and 540 series reciprocating engines. We are issuing this AD to prevent failure of the crankshaft, which will result in total engine power loss, in-flight engine failure, and possible loss of the aircraft.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Engines for Which No Action Is Required

(f) If your engine meets any of the following conditions, and you have not had the crankshaft replaced since meeting the condition, no further action is required:

(1) Engines that are in compliance with Lycoming MSB No. 552 (AD 2002-19-03) or MSB No. 553 (AD 2002-19-03 Table 3 or Table 5); or

(2) Engines that are in compliance with Lycoming MSB No. 566 AD (2005-19-11); or

(3) Engines that are in compliance with Lycoming Supplement No. 1 to MSB No. 566 (AD 2006-06-16); or

(4) Engines that are in compliance with the original issue of Lycoming MSB No. 569, or MSB No. 569A.

(5) For engines identified in paragraphs (f), (g), (h), or (i) of this AD, owners or operators may make an entry in the AD status log required by 14 CFR 91.417(a)(2)(v) that this AD required no action for compliance.

(g) If Lycoming Engines manufactured new, rebuilt, overhauled, or repaired your engine, or replaced the crankshaft in your engine before March 1, 1997, and you have not had the crankshaft replaced, no further action is required.

(h) If Table 1, Table 2, Table 3, or Table 4 of Lycoming MSB No. 569A, dated April 11, 2006, lists your engine serial number (SN), and Table 5 of MSB No. 569A, dated April 11, 2006, does not list your crankshaft SN, no further action is required.

(i) For engine model TIO-540-U2A, SN L-4641-61A, no action is required.

Engines for Which Action Is Required

(j) If Table 1, Table 2, Table 3, or Table 4 of Lycoming MSB No. 569A, dated April 11, 2006, lists your engine SN, and Table 5 of MSB No. 569A, dated April 11, 2006, lists your crankshaft SN, replace the affected crankshaft with a crankshaft that is not listed in Table 5 of MSB No. 569A at the earliest of the following:

(1) The time of the next engine overhaul as specified in Lycoming Engines Service Instruction No. 1009AS, dated May 25, 2006; or

(2) The next separation of the crankcase; or

(3) No later than 12 years from the time the crankshaft first entered service or was last overhauled, whichever is later.

(k) If Table 1, Table 2, Table 3, or Table 4 of Lycoming MSB No. 569A, dated April 11, 2006, does not list your engine SN, and Table 5 of MSB No. 569A does list your crankshaft SN (an affected crankshaft was installed as a replacement), replace the affected crankshaft with a crankshaft that is not listed in Table 5 of MSB No. 569A at the earliest of the following:

(1) The time of the next engine overhaul as specified in Lycoming Engines Service Instruction No. 1009AS, dated May 25, 2006; or

(2) The next separation of the crankcase; or

(3) No later than 12 years from the time the crankshaft first entered service or was last overhauled, whichever is later.

Prohibition Against Installing Certain Crankshafts

(l) After the effective date of this AD, do not install any crankshaft that has a SN listed in Table 5 of Lycoming MSB No. 569A, dated April 11, 2006, into any engine.

Alternative Methods of Compliance

(m) The Manager, New York Aircraft Certification Office, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Material Incorporated by Reference

(n) You must use the service information specified in Table 1 of this AD to perform the actions required by this AD. The Director of the Federal Register approved the incorporation by reference of the documents listed in Table 1 of this AD in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Lycoming, 652 Oliver Street, Williamsport, PA 17701; telephone (570) 323-6181; fax (570) 327-7101, or on the internet at http://www.Lycoming.Textron.com for a copy of this service information. You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Table 1 – Incorporation by Reference

Service Information	Page	Revision	Date
Lycoming Engines Service Instruction No. 1009AS	All	AS	May 25, 2006
Total Pages: 4			
Lycoming Engines Mandatory Service Bulletin No. 569A	All	A	April 11, 2006
Total Pages: 59			

Issued in Burlington, Massachusetts, on September 20, 2006.
Francis A. Favara,
Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. E6-15958 Filed 9-28-06; 8:45 am]

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LUFTDYKTIGHETSPÅBUD (LDP)

MOTORER

LYCOMING - 62

Med hjemmel i lov av 11. juni 1993 nr. 101 om luftfart, § 15-4 jf. § 4-1 og det vedtak om delegering av myndighet til Luftfartstilsynet av 10. desember 1999 nr. 1273.

2007-045 **" CYLINDER ASSEMBLY SEPARATION - CYLINDER ASSEMBLIES PRODUCED BY SUPERIOR AIR PARTS"**

Påbudet gjelder:

Lycoming Engines og Avco Lycoming Engines: alle modeller som er beskrevet i vedlagte kopi av FAA AD 2007-04-19R1.

Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 2007-04-19R1.

Tid for utførelse:

Til de tider som er beskrevet i vedlagte kopi av FAA AD 2007-04-19R1 med virkning fra denne LDP's gyldighetsdato.

Referanse:

FAA AD 2007-04-19R1.

Gyldighetsdato:

2007-10-24.

2007-04-19R1 Superior Air Parts, Inc.: Amendment 39-15005. Docket No. FAA-2006-25948; Directorate Identifier 2006-NE-32-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective May 7, 2007.

Affected ADs

(b) This AD revises AD 2007-04-19.

Applicability

(c) This AD applies to Superior Air Parts, Inc. (SAP), cylinder assemblies, manufactured between April 2005 and November 2005, part numbers (P/Ns): SA47000L-A1, SA47000L-A20P, SA47000S-A1, SA47000S-A20P, SA47000S-A21P, SA52000-A1, SA52000-A20P, SA52000-A21P, SA52000-A22P, SA52000-A23P, SA55000-A1, and SA55000-A20P, installed in Teledyne Continental Motors (TCM) 470, 520, and 550 series reciprocating engines. These P/N cylinder assemblies may be installed in the TCM engine models listed in the following Table 1.

Table 1 – Affected Teledyne Continental Engine Models

Engine Model	
O-470	-G, -K, -L, -M, -P, -R, -S, -U
IO-470	-C, -D, -E, -F, -G, -H, -L, -M, -N, -P, -R, -S, -U, -V
IO-520	- A, B, BA, C, CB, D, E, F, J, K, L, M, BB, MB
TSIO-520	- AF, B, BB, C, CE, D, DB, E, EB, G, H, J, JB, K, KB, L, LB, M, N, NB, P, R, T, UB, VB, WB
IO-550	- A, B, C, D, E, F, L

These engine models are installed in, but not limited to, the aircraft models listed in the following Table 2:

Table 2 – Teledyne Continental Motors-related Aircraft Models

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
IO-470-C	Beechcraft	J, K, M35
IO-470-D	Cessna	310 G & H
IO-470-D	Rockwell	200 A, B, & C
IO-470-E	Cessna	210 & A
IO-470-F	Bellanca	14-19-3
IO-470-F	Cessna	185
IO-470-H	Sierra Hotel Aero, Inc. (Navion)	Navion F &G (Rangemaster)
IO-470-L	Beechcraft	B55 Baron
IO-470-M	Gulfstream	500 A
IO-470-N	Beechcraft	N & P
IO-470-N	Beechcraft	G33
IO-470-S	Cessna	210 B & C
IO-470-S	Cessna	205
IO-470-U	Cessna	310 I & J
IO-470-V/VO	Cessna	310K, L, N, P & Q
IO-520-A	Cessna	210 D, E, F, G, & H
IO-520-A	Cessna	206
IO-520-A	Cessna	P206
IO-520-A	Rockwell	200 D
IO-520-B	Beechcraft	36 Bonanza
IO-520-B	Beechcraft	A36
IO-520-B	Sierra Hotel Aero, Inc. (Navion)	Navion H
IO-520-BA	Beechcraft	A36
IO-520-BA	Beechcraft	S & V35, V35A, V35B
IO-520-BA	Beechcraft	C33 A
IO-520-BA	Beechcraft	E33 A & C
IO-520-BA	Beechcraft	F33 A & C
IO-520-BA	Sierra Hotel Aero, Inc.	Navion G (Rangemaster)
IO-520-BA	Sierra Hotel Aero, Inc.	Navion H
IO-520-BB	Beechcraft	A36

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
IO-520-BB	Beechcraft	V35B
IO-520-BB	Beechcraft	F33 A
IO-520-C & CB	Beechcraft	C55 - E55 Baron
IO-520-D	Bellanca	17-30 Viking
IO-520-D	Cessna	A188-300 AG Truck
IO-520-D	Cessna	185
IO-520-E	(Cessna 310)	Exec 600
IO-520-E	(Beech Baron)	Pres 600
IO-520-F	Cessna	207
IO-520-F	Cessna	U206
IO-520-K	Bellanca	17-30A
IO-520-L	Cessna	210 K, L, M, N & R
IO-520-L	Cessna	210N II
IO-520-L	Cessna	210R
IO-520-M	Cessna	310R
IO-520-MB	Cessna	310R
IO-550-A	Cessna	310 Conversion
IO-550-B	Beechcraft	A36
IO-550-B	(Beech Bonanza)	Foxstar
IO-550-C	Beechcraft	58 Baron
IO-550-D	Cessna	185/188 Conversion
IO-550-E	Cessna	310 Conversion
IO550-F	Cessna	206/207 Conversion
IO-550-L	Cessna	210 Conversion
O-470-M	Cessna	310
O-470-G	Beechcraft	H35
O-470-K	Bellanca	14-19-2
O-470-K	Cessna	180 (230 HP)
O-470-L	Cessna	182
O-470-L	Cessna	180D
O-470-M	Cessna	310 B
O-470-P	Sierra Hotel Aero, Inc. (Navion)	Navion

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-470-R	Cessna	188-230
O-470-R	Cessna	182
O-470-R	Cessna	180 E-J
O-470-S	Cessna	182
O-470-U	Cessna	182
O-470-U	Cessna	180 K
TSIO-520-AF	Cessna	P210N II
TSIO-520-B	Cessna	320D, E & F
TSIO-520-B	Cessna	T310-Q & R
TSIO-520-BB	Cessna	T310R
TSIO-520-BE	Piper	PA-46-310 Malibu
TSIO-520-C	Cessna	T210 F, G, & H
TSIO-520-C	Cessna	TU206
TSIO-520-C	Cessna	TP206
TSIO-520-C&CB	Beechcraft	58 Baron
TSIO-520-CE	Cessna	T210R
TSIO-520-CF	Cessna	P210R
TSIO-520-D	Beechcraft	V35, V35A, V35B-TC
TSIO-520-E	Cessna	402, A & B
TSIO-520-E	Cessna	401, A & B
TSIO-520-EB	Cessna	335
TSIO-520-G	Cessna	T207
TSIO-520-H	Cessna	T210 J, K & L
TSIO-520-J	Cessna	210 J
TSIO-520-J	Cessna	414
TSIO-520-J	Riley Conversions	340 Super Riley
TSIO-520-L&LB	Beechcraft	58P Baron
TSIO-520-L&LB	Beechcraft	58TC Baron
TSIO-520-M	Cessna	T207
TSIO-520-M	Cessna	TU206
TSIO-520-N	Cessna	414-II Chancellor
TSIO-520-N	Cessna	340

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
TSIO-520-NB	Cessna	414-II
TSIO-520-NB	Cessna	340
TSIO-520-P	Cessna	P210N
TSIO-520-R	Cessna	T210 M
TSIO-520-R	Cessna	T210N II
TSIO-520-T	Cessna	T188C AG Husky
TSIO-520-UB	Beechcraft	A36TC Bonanza
TSIO-520-UB	Beechcraft	B36TC
TSIO-520-VB	Cessna	402 C
TSIO-520-WB	Beechcraft	58P Baron
TSIO-520-WB	Beechcraft	58TC Baron

This AD also applies to 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, installed in Lycoming Engines (LE) 320, 360, and 540 series reciprocating engines and Avco Lycoming 540 series reciprocating engines. These P/N cylinder assemblies may be installed in the LE and AL engine models listed in the following Table 3.

Table 3 – Affected Lycoming Engines and Avco Lycoming Engine Models

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

These engine models are installed in, but not limited to, the aircraft models listed in the following Table 4:

Table 4 –Lycoming Engines and Avco Lycoming-related Aircraft Models

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-320-A	Mooney Aircraft	Mark 20A
O-320-A1A	Piper Aircraft	PA-23-150 Apache
O-320-A1A	Piper Aircraft	PA-22-150 Tri-Pacer
O-320-A1A	Piper Aircraft	PA-22S-150 Tri-Pacer
O-320-A1A	Piper Aircraft	PA-25 Pawnee
O-320-A1A	Doyne Aircraft	Doyn-Cessna 170,170A,170B
O-320-A1A	Dinfia	Ranquel 1A-46
O-320-A1A	Simmering-Graz Pauker	Flamingo SGP-M-222
O-320-A1A	Aviamilano	Scricciolo P-19
O-320-A1A	Vos Helicopter Co.	Spring Bok
O-320-A1A	Mooney Aircraft	Mark 20A
O-320-A1B	Piper Aircraft	PA-22-150 Tri-Pacer
O-320-A1B	Piper Aircraft	PA-22S-150 Tri-Pacer
O-320-A1B	Piper Aircraft	PA-23 Apache
O-320-A1B	Doyne Aircraft	Doyn-Cessna 170,170A,170B
O-320-A1B	S.O.C.A.T.A	Horizon (Gardan)
O-320-A2A	Piper Aircraft	PA-22-150
O-320-A2A	Piper Aircraft	PA-22S-150
O-320-A2A	Piper Aircraft	Agriculture PA-18A-150
O-320-A2A	Piper Aircraft	Super Cub PA-18-150
O-320-A2A	Piper Aircraft	Caribbean PA-22-150
O-320-A2A	Piper Aircraft	PA-25 Pawnee
O-320-A2A	Lake Aircraft	Colonial C1
O-320-A2A	Intermountain Mfg. Co.	Call Air Texas A-5, A-5T
O-320-A2A	Rawdon Bros.	Rawdon T-1, T-15, T-15D
O-320-A2A	Shinn Engineering	Shinn 2150-A
O-320-A2A	Dinfia	Ranquel 1A-46
O-320-A2A	Neiva	1PD-5802
O-320-A2A	Sud	Gardan-Horizon (GY-80)
O-320-A2A	La Verda	Falco F8L Series II, America

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-320-A2A	Malmo	Vipan MF1-10
O-320-A2A	Kingsford Smith	Autocrat SCRM-153
O-320-A2B	Aero Commander	100
O-320-A2B	Piper Aircraft	PA-22-150
O-320-A2B	Piper Aircraft	PA-22S-150
O-320-A2B	Piper Aircraft	Cherokee PA-28-150
O-320-A2B	Piper Aircraft	Super Cub PA-18-150
O-320-A2B	Champion Aircraft	Challenger 7GCA, 7GCB, 7KC
O-320-A2B	Champion Aircraft	Citabria 7GCAA, 7GCRC
O-320-A2B	Champion Aircraft	Agriculture 7GCBA
O-320-A2B	Beagle	Pup 150
O-320-A2B	Arctic	Interstate S1B2
O-320-A2B	Robinson Helicopters	R-22
O-320-A2C	Robinson Helicopters	R-22
O-320-A2C	Varga	Kachina 2150a
O-320-A2C	Cicare	Cicare AG
O-320-A2D	Bellanca Aircraft	Citabria 150 (7GCAA)
O-320-A2D	Bellanca Aircraft	Citabria 150S (7GCBC)
O-320-A2D	Bellanca	Citabria 150S (7G(.HU)
O-320-A2F	Cessna Aircraft	177A
O-320-A3A	Piper Aircraft	Apache PA-23
O-320-A3A	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-A3A	Corben-Fettes	Globe Special (Globe GC-1B)
O-320-A3B	Piper Aircraft	Apache PA-23
O-320-A3B	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-A3B	Teal II	TSC 1A2
O-320-B1A	Piper Aircraft	Apache PA-23-160
O-320-B1A	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-B1A	Malmo	Vipan MF1-10
O-320-B1B	Piper Aircraft	Apache PA-23-160
O-320-B1B	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-B2A	Piper Aircraft	PA-22-160
O-320-B2A	Piper Aircraft	PA-22S-160

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-320-B2B	Piper Aircraft	PA-22-160
O-320-B2B	Piper Aircraft	PA-22S-160
O-320-B2B	Beagle	Airedale D5-160
O-320-B2B	Fuji-Heavy Industries	Fuji F-200
O-320-B2B	Uirapuru	Aerotec 122
O-320-B2C	Robinson Helicopters	R22-HP, Alpha, Beta
O-320-B2D	Maule	MX-7-160
O-320-B2E	Lycon	
O-320-B3A	Piper Aircraft	Apache PA-23-160
O-320-B3A	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-B3B	Piper Aircraft	PA-23-160 Apache
O-320-B3B	Doyn Aircraft	Doyn-Cessna 170, 170A, 170B
O-320-B3B	Sud	Gardan (GY8O-160)
O-320-C1A	Piper Aircraft	Apache PA-23-160
O-320-C1A	Riley Aircraft	Rayjay (Apache)
O-320-C1B	Piper Aircraft	Apache PA-23-160
O-320-C3A	Piper Aircraft	Apache PA-23-160
O-320-C3B	Piper Aircraft	Apache PA-23-160
O-320-D1A	Sud	Gardan (GY80)
O-320-D1A	Gyroflug	Speed Cancard
O-320-D1A	Grob	G115
O-320-D1D	Gulfstream	GA-7
O-320-D1F	Slingsby	T67 Firefly
O-320-D2A	Piper Aircraft	Cherokee PA-28S-160
O-320-D2A	Robin	Major DR400-140B
O-320-D2A	Robin	Chevalier DR-360, R-3140
O-320-D2A	S.0.C.A.T.A.	Tampico TB9
O-320-D2A	Slingsby	T67C Firefly
O-320-D2A	Daetwyler	MD-3-160
O-320-D2A	Nash Aircraft Ltd.	Petrel
O-320-D2A	Aviolight	P66D Delta
O-320-D2A	General Avia	Pinguino
O-320-D2B	Beechcraft	Musketeer A23

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-320-D2B	Piper Aircraft	Cherokee PA-28-160
O-320-D2J	Cessna	Skyhawk 172 P
O-320-D3G	Piper Aircraft	Cadet PA-28-161
O-320-D3G	Piper Aircraft	Warrior II
O-320-E1A	Grob	G115
O-320-E1C	M.B.B. (Messerschmitt-Boelkow-Blohm)	Monsun (BO-209-B)
O-320-E1F	M.B.B.	Monsun (BO-209-B)
O-320-E2A	Piper Aircraft	Cherokee PA-28-140
O-320-E2A	Piper Aircraft	Cherokee PA-28-150
O-320-E2A	Robin	Major (DR-340)
O-320-E2A	Robin	Sitar
O-320-E2A	Robin	Bagheera (GY-100-135)
O-320-E2A	S.O.C.A.T.A.	Super Rallye (MS-886)
O-320-E2A	S.O.C.A.T.A.	Rallye Commodore (MS-892)
O-320-E2A	Siai-Marchetti	S-202
O-320-E2A	F.F.A.	Bravo (AS-202/15)
O-320-E2A	Partenavia	Oscar (P66B)
O-320-E2A	Partenavia	Bucker (131 APM)
O-320-E2A	Aeromot	Paulistina P-56
O-320-E2A	Pezetel	Koliber 150
O-320-E2C	Beechcraft	Musketeer (B19)
O-320-E2C	Beechcraft	Musketeer III (M-23111)
O-320-E2C	M.B.B.	Monsun (BO-209-B)
O-320-E2D	Beechcraft	B19 Sport
O-320-E2D	Cessna	177
O-320-E2D	Cessna	172 I – M
O-320-E2D	Piper Aircraft	PA-28-151
O-320-E2D	Piper Aircraft	PA-28-140
O-320-E2D	Cessna	Cardinal (172.1, 177)
O-320-E2F	M.B.B.	Monsun (BO-209-B)
O-320-E2F	M.B.B.	Wassmer Pacific (WA-5 1)
O-320-E2G	Gulfstream	AA5 Traveler

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-320-E2G	Gulfstream	AA5A Cheetah
O-320-E3D	Beechcraft	B19 Sport
O-320-E3D	Piper Aircraft	Cherokee (140)
O-320-H2AD	Cessna	Skyhawk 172 N
O-320-H2AD	Partenavia	P-66C
O-320A2C	Varga	Kachina 2150
IO-320-B2A	Piper Aircraft	Twin Comanche (PA-30)
IO-320-B1C	Hi	
IO-320-B1C	Shear	
IO-320-B1C	Wing	
IO-320-B1D	Ted Smith Aircraft	Aerostar
IO-320-D1A	M.B.B.	Monsun (BO-209-C)
IO-320-D1B	M.B.B.	Monsun (BO-209-C)
IO-320-E1A	Champion	KCAB
IO-320-E1A	M.B.B.	Monsun (BO-209-C)
IO-320-E1B	Bellanca Aircraft	
IO-320-E2A	Champion	7 KCAB
IO-320-E2A	Champion Aircraft	Citabria
IO-320-E2B	Bellanca Aircraft	
IO/LIO-320-B1A	Piper Aircraft	PA-30 Comanche (2)
IO/LIO-320-B1A	Piper Aircraft	Twin Comanche (PA-39)
AIO-320-Bl B	M.B.B.	Monsun (BO-209-C)
AEIO-320-D1B	Slingsby	T67M Firefly
AEIO-320-D2B	Hindustan Aeronautics Ltd.	HT-2
AEIO-320-E1A	Bellanca Aircraft	
AEIO-320-E1A	Champion Aircraft	
AEIO-320-EIB	Bellanca Aircraft	
AEIO-320-EIB	Champion Aircraft	Decathalon (8KCAB-CS)
AEIO-320-E2B	Bellanca Aircraft	
AEIO-320-E2B	Champion Aircraft	Decathalon (8KCAB)
O-320-A1A	Riley Aircraft	Riley Twin
O-360-A1A	Beechcraft	Travel Air (95, B-95)

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-360-A1A	Piper Aircraft	Comanche (PA-24)
O-360-A1A	Intermountain Mfg. Co.	Call Air (A-6)
O-360-A1A	Lake Aircraft	Colonial (C-2, LA-4, 4A or 4P)
O-360-A1A	Doyn Aircraft	Doyn-Cessna (170B, 172, 172A, 172B)
O-360-A1A	Mooney Aircraft	Mark "20B" (M-20B)
O-360-A1A	Earl Horton	Pawnee (Piper PA-25)
O-360-A1A	Dinfia	Ranquel (IA-51)
O-360-A1A	Neiva	(IPD-5901)
O-360-A1A	Regente	(N-591)
O-360-A1A	Wassmer	Super 4 (WA-50A)
O-360-A1A	Wassmer	Sancy (WA-40)
O-360-A1A	Wassmer	Baladou (WA-40)
O-360-A1A	Wassmer	Pariou (WA-40)
O-360-A1A	Sud	Gardan (GY-180)
O-360-A1A	Bolkow	(207)
O-360-A1A	Partenavia	Oscar (P-66)
O-360-A1A	Siai-Marchetti	(S-205)
O-360-A1A	Procaer	Picchio (F-15-A)
O-360-A1A	S.A.A.B.	Safir (91-D)
O-360-A1A	Malmo	Vipan (MF-1OB)
O-360-A1A	Aero Boero	AB-180
O-360-A1A	Beagle	Airedale (A-109)
O-360-A1A	DeHavilland	Drover (DHA-3MK3)
O-360-A1A	Kingsford-Smith	Bushmaster (J5-6)
O-360-A1A	Aero Engine Service Ltd.	Victa (R-2)
O-360-A1AD	S.O.C.A.T.A.	Tabago TB-10
O-360-A1D	Piper Aircraft	Comanche (PA-24)
O-360-A1D	Lake Aircraft	Colonial (LA-4, 4A or 4P)
O-360-A1D	Doyn Aircraft	Doyn-Beech (Beech 95)
O-360-A1D	Mooney Aircraft	Master 21 (M-20E)
O-360-A1D	Mooney Aircraft	Mark 20B, 20D, (M2OB, M2OC)
O-360-A1D	Mooney Aircraft	Mooney Statesman (M-20G)

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-360-A1D	Dinfia	Querandi (IA-45)
O-360-A1D	Wassmer	(WA-50)
O-360-A1D	Malmo	Vipan (MFI-10)
O-360-A1D	Cessna Aircraft	Skyhawk
O-360-A1D	Doyn Aircraft	Doyn-Piper PA-23-160
O-360-AIF6	Cessna Aircraft	Cardinal
O-360-AIF6D	Cessna Aircraft	Cardinal 177
O-360-AIF6D	Teal III	TSC (1A3)
O-360-A1G6	Aero Commander	
O-360-A1G6D	Beech Aircraft	Duchess 76
O-360-AIH6	Piper Aircraft	Seminole (PA-44)
O-360-Al LD	Wassmer	Europa WA-52
O-360-AIP	Aviat	
O-360-AIP	Husky	
O-360-A2A	Center Est Aeronautique	Regente (DR-253)
O-360-A2A	S.O.C.A.T.A.	Rallye Commodore (MS-893)
O-360-A2A	Societe Aeronautique Normande	Mousquetaire (D-140)
O-360-A2A	Bolkow	Klemm (Kl -1 07C)
O-360-A2A	Partenavia	Oscar (P-66)
O-360-A2A	Beagle	Husky (D5-180) (J1-U)
O-360-A2D	Piper Aircraft	Comanche PA-24
O-360-A2D	Piper Aircraft	Cherokee C PA-28-180
O-360-A2D	Mooney Aircraft	Master 21 (M-20D)
O-360-A2D	Mooney Aircraft	Mark 21 (M-20E)
O-360-A2E	Std. Helicopter	
O-360-A2F	Aero Commander	Lark(100)
O-360-A2F	Cessna Aircraft	Cardinal
O-360-A2G	Beech Aircraft	Sport
O-360-A3A	C.A.A.R.P.S.A.N.	(M-23111)
O-360-A3A	Societe Aeronautique Normande	Jodel (D-140C)
O-360-A3A	Robin	Regent (DR400/180)
O-360-A3A	Robin	Remorqueur (DR400/180R)

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-360-A3A	Robin	R-3170
O-360-A3A	S.O.C.A.T.A.	Rallye 180GT
O-360-A3A	S.O.C.A.T.A.	Sportavia Sportsman (RS-180)
O-360-A3A	Norman Aerospace Co.	NAC-1 Freelance
O-360-A3A	Nash Aircraft Ltd.	Petre
O-360-A3AD	S.O.C.A.T.A.	TB-l0
O-360-A3AD	Robin	Aiglon (R-l 180T)
O-360-A4A	Piper Aircraft	Cherokee "D" PA-28-180
O-360-A4D	Varga	Kachina
O-360-A4G	Beech Aircraft	Musketeer Custom III
O-360-A4K	Grumman American	Tiger
O-360-A4K	Beech Aircraft	Sundowner 180
O-360-A4M	Piper Aircraft	Archer II PA-28-18
O-360-A4M	Valmet	PIK-23
O-360-A4N	Cessna Aircraft	172 (Optional)
O-360-A4P	Penn Yan	Super Cub Conversion
O-360-A5AD	C. Itoh and Co.	Fuji FA-200
O-360-B2C	Seabird Aviation	SB7L
O-360-C1A	Intermountain Mfg. Co.	Call Air (A-6)
O-360-CIE	Bellanca Aircraft	Scout (8GCBC-CS)
O-360-C1F	Maule	Star Rocket MX-7-180
O-360-C1G	Christen	Husky (A-1)
O-360-C2B	Hughes Tool Co.	(269A)
O-360-C2D	Hughes Tool Co.	(269A)
O-360-C2E	Hughes Tool Co.	YHO-2HU Military
O-360-C2E	Bellanca Aircraft	Scout 8GCBC FP
O-360-C4F	Maule	MX-7-180A
O-360-C4P	Penn Van	Super Cub Conversion
O-360-F1A6	Cessna Aircraft	Cutlass RG
O-360-J2A	Robinson	R22
IO-360-B1A	Beech Aircraft	Travel-Air (B-95A)
IO-360-B1A	Doyn Aircraft	Doyn-Piper PA-23-200
IO-360-B1B	Beech Aircraft	Travel-Air (B-95B)

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
IO-360-B1B	Doyn Aircraft	Doyn-Piper PA-23-200
IO-360-B1B	Fuji	FA-200
IO-360-B1D	United Consultants	See-Bee
IO-360-BIE	Piper Aircraft	Arrow PA-28-180R
IO-360-BIF	Utva	75
IO-360-B2E	C.A.A.R.P.	C.A.P. (10)
IO-360-BIF6	Great Lakes	Trainer
IO-360-B1G6	American Blimp	Spector 42
IO-360-B2F6	Great Lakes	Trainer
LO-360-A1 G6D	Beech Aircraft	Duchess
LO-360-A1H6	Piper Aircraft	Seminole (PA-44)
IO-360-EIA	T.R. Smith Aircraft	Aerostar
IO-360-L2A	Cessna Aircraft	Skyhawk C-172
IO-360-M1A	Diamond Aircraft	DA-40
IO-360-M1B	Vans Aircraft	RV6, RV7, RV8
IO-360-M1B	Lancair	360
AIO-360-B1B	Moravan	Zim (Z-526-L)
AEIO-360-B1G6	Great Lakes	
AEIO-360-B2F	Mundry	CAP-10
AEIO-360-B4A	Pitts	S-1S
AEIO-360-HIA	Bellanca Aircraft	Super Decathalon (8KCAB-180)
AEIO-360-HIB	American Champion	Super Decathalon
HO-360-B1A	Hughes Tool Co.	269A
HO-360-B1B	Hughes Tool Co.	269A
HO-360-C1A	Schweizer	300C
HIO-360-A1A	Hughes Tool Co.	300
H1O-360-A1B	Silvercraft	
HIO-360-B1A	Hughes Tool Co.	Military 269-A-1
HlO-360-BIB	Hughes Tool Co.	269A
HIO-360-D1A	Hughes Tool Co.	269C, 300C
HIO-360-D1A	Schweizer	300C
HIO-360-E1AD	Enstrom Helicopter	F28C
HIO-360-E1BD	Enstrom Helicopter	F28C

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
HIO-360-F1AD	Enstrom Helicopter	Faicon F28F
HIO-360-F1AD	Enstrom Helicopter	Shark 280FX
HIO-360-F1AD	Enstrom Helicopter	Sentine F28F-P
HIO-360-G1A	Schweizer	CB
LHIO-360-C1A	Silvercraft	SH-4 Helicopter
LHIO-360-C1B	Silvercraft	SH-3 Helicopter
O-540-AIA	Rhein-Flugzeugbau	RF-1
O-540-AIA5	Piper Aircraft	Comanche PA-24-150
O-540-AIA5	Helio	Military H-250
O-540-AIA5	Yoeman Aviation	YA-1
O-540-A1B5	Piper Aircraft	Aztec PA-23-250
O-540-A1B5	Piper Aircraft	Comanche PA-24-250
O-540-AIC5	Piper Aircraft	Comanche PA-24-250
O-540-A1D	Found Bros.	FBA-2C
O-540-A1D	Dornier	DO-28-B1
O-540-AID5	Piper Aircraft	Aztec PA-23 -250
O-540-AID5	Piper Aircraft	Comanche PA-24-250
O-540-AID5	Piper Aircraft	Military Aztec U-1 1A
O-540-AID5	Dornier	DO-28
O-540-A2B	Aero Commander	500
O-540-A2B	Mld-States Mfg. Co.	Twin Courier 11-500, U-5
O-540-A3D5	Piper Aircraft	Navy Aztec PA-23-250
O-540-B1A5	Piper Aircraft	Apache PA-23-235
O-540-BIB5	Piper Aircraft	Cherokee PA-24-250
O-540-BIB5	Doyn Aircraft	Doyn-Piper PA-24-250
O-540-BID5	Wassmer	WA-421
O-540-B2B5	Piper Aircraft	Pawnee PA-24-235
O-540-B2B5	Piper Aircraft	Cherokee PA-28-235
O-540-B2B5	Piper Aircraft	Aztec PA-23-235
O-540-B2B5	Intermountain Mfg. Co.	Call Air A-9
O-540-B2B5	Rawdon Bros.	Rawdon T-l
O-540-B2B5	S.O.C.A.T.A.	Rallye 235CA
O-540-B2C5	Piper Aircraft	Pawnee PA-24-235

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-540-B4B5	Piper Aircraft	Cherokee PA-28-235
O-540-B4B5	Embraer	Corioca EMB-710
O-540-B4B5	S.O.C.A.T.A.	Rallye 235GT
O-540-B4B5	S.O.C.A.T.A.	Rallye 235C
O-540-B4B5	Maule	Star Racket MX-7-235
O-540-B4B5	Maule	Super Rocket M-6-235
O-540-B4B5	Maule	Super Std. Racket M-7-235
O-540-E4A5	Piper Aircraft	Comanche PA-24-260
O-540-E4A5	Aviamilano	Flamingo F-250
O-540-E4A5	Siai-Marcbetti	SF-260, SF-208
O-540-E4B5	Britten-Norman	BN-2
	Piper Aircraft	Cherokee Six PA-32-260
O-540-E4C5	Pilatus Britten-Norman	Islander BN-2A-26
O-540-E4C5	Pilatus Britten-Norman	Islander BN-2A-27
O-540-E4C5	Pilatus Britten-Norman	Islander II BN-2B-26
O-540-E4C5	Pilatus Britten-Norman	Islander BN-2A-2 1
O-540-E4C5	Pilatus Britten-Norman	Trislander BN-2A-Mark 111-2
O-540-F1B5	Omega Aircraft	BS-12D1
O-540-F1B5	Robinson	R-44
O-540-G1A5	Piper Aircraft	Pawnee PA-25-260
O-540-H1B5D	Aero Boero	260
O-540-H2A5	Embraer	Impanema "AG"
O-540-H2A5	Gippsland	GA-200
O-540-H2B5D	Aero Boero	260
O-540-J1A5D	Maule	Star Rocket MX-7-235
O-540-J1A5D	Maule	Super Rocket M-6-235
O-540-J1A5D	Maule	Super Std. Rocket M-7-235
O-540-J3A5	Robin	R-3000/235
O-540-J3A5D	Piper Aircraft	Dakota PA-28-236
O-540-J3C5D	Cessna Aircraft	Skylane RG
IO-540-A1A5	Doyn Aircraft	Doyn-Piper PA-23-250
IO-540-A1A5	Riley Aircraft	Rocket-Cessna 310
IO-540-A1A5	Dornier	DO-8-B 1

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
IO-540-A1A5	Siai-Marchetti	
IO-540-C1B5	Piper Aircraft	Aztec B PA-23-250
IO-540-C1B5	Piper Aircraft	Comanche PA-24-250
IO-540-C1C5	Riley Aircraft	Turbo-Rocket
IO-540-C4B5	Piper Aircraft	Aztec C PA-23-250
IO-540-C4B5	Piper Aircraft	Aztec F
IO-540-C4B5	Wassmer	WA4-2 1
IO-540-C4B5	Avions Pierre Robin	HR 100/250
IO-540-C4B5	Bellanca Aircraft	Aries T-250
IO-540-C4B5	Aerofab	Renegade 250
IO-540-C4D5	S.O.C.A.T.A.	TB-20
IO-540-C4DSD	S.O.C.A.T.A.	Trinidad TB-20
IO-540-D4A5	Piper Aircraft	Comanche PA-24-260
IO-540-D4A5	Siai-Marchetti	SF-260
IO-540-D4B5	Cerva	CE-43 Guepard
IO-540-E1A5	Aero Commander	500-E
IO-540-EIB5	Aero Commander	500-U
IO-540-EIB5	Shrike	500-S
IO-540-EIB5	Poeschel	P-300
IO-540-GIA5	Doyn Aircraft	Doyn-Piper PA-23-250
IO-540-GIA5	Riley Aircraft	Turbo-Aztec
IO-540-GIA5	DeHavilland	Heron Conversion
IO-540-GIB5	T.R. Smith Aircraft	Aerostar 600
IO-540-GIB5	Found Bros.	Centennial 100
IO-540-G1C5	Intermountain Mfg. Co.	Call Air 1AR821
IO-540-G1DS	Intermountain Mfg. Co.	IAR-822, IAR-826, IAR-823
IO-540-G1F5	Bellanca Aircraft	
IO-540-N 1A5	Piper Aircraft	Comanche 260
IO-540-T4A5D	General Aviation	Model 114
IO-540-T4B5	Commander	1 14B
IO-540-T4B5D	Rockwell	114
IO-540-T4C5D	Lake Aircraft	Seawolf
IO-540-WIA5	Maule	MX-7-235, MT-7-235, M7235

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
IO-540-W1A5D	Maule	Star Rocket MX-7-235
IO-540-W1A5D	Maule	Super Rocket M-6-235
IO-540-W1A5D	Maule	Super Std. Rocket M-7-235
IO-540-W3A5D	Schweizer	Power Glider
IO-540-AB1A5	Cessna Aircraft	Skylane C-182
AEIO-540-D4A5	Christen	Pitts S-2S, S-2B
AEIO-540-D4A5	Siai-Marchetti	SF-260
AEIO-540-D4A5	H.A.L.	HPT-32
AEIO-540-D4A5	Slingsby	Firefly T3A
AEIO-540-D4B5	Moravan	Zlin-50L
AEIO-540-D4B5	H.A.L.	HPT-32
AEIO-540-D4D5	Burkhart Grob	Grob G, 1 15T Aero

These engine models are known to be installed in the aircraft models listed in the following Table 5:

Table 5 – Superior Air Parts, Inc. -related Aircraft Models

Engine Model	Aircraft Manufacturer	Aircraft Model Designation
O-360-A3A2	American Champion	7GCBC & 7GCAA

Unsafe Condition

(d) This AD results from comments from the Public on the existing AD. We are issuing this AD to prevent cylinder separation that can lead to engine failure, a possible engine compartment fire, and damage to the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified unless the actions have already been done.

Determining Which Cylinder Assemblies Are Installed

(f) If aircraft engine records do not list the P/N of the cylinder installed during engine overhaul or repair, visually inspect the cylinders. The affected SAP cylinder head barrel 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, or SA55000-A20P or 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, or SL36006W-A21P.

Cylinder Assembly Removal

(g) Remove all cylinder assemblies with a serial number of 47LE053559 through 47LF053643, or 47SE054212 through 47SF054251, or 52D0531708 through 52H0532197, or 55E05223 through 55G05289, or 32WE059006 through 32WF059067, or 32WHE05379 through 32WHE05392, or 326WF055517 through 326WF055532, or 36TWF05430 through 36TWG05453, or 36WF058058 through 36WG058124, or 366WE056944 through 366WF057061, or 366WF057150 through 366WF057232, or 366WF057259 through 366WG057534, or 366WG057556, 366WG057569, 366WG057598, 366WG057616, 366WG057621, 366WG057624, or 366WJ057770 through 366WJ057776, or 366WL058131 no later than 150 hours total time-in-service (TIS) to preclude cylinder head fatigue failure and separation at the head-to-barrel threaded interface.

(h) For cylinder assemblies with more than 150 hours total TIS on the effective date of this AD, a 10 hour TIS extension is permitted for the purpose of flying the aircraft to a location where maintenance action can be done to meet the requirements of this AD.

(i) After the effective date of this AD, do not install any cylinder assemblies with P/Ns SA47000L-A1, SA47000L-A20P, SA47000S-A1, SA47000S-A20P, SA47000S-A21P, SA52000-A1, SA52000-A20P, SA52000-A21P, SA52000-A22P, SA52000-A23P, SA55000-A1, or SA55000-A20P,or 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, or SL36006W-A21P with a serial number of 47LE053559 through 47LF053643, or 47SE054212 through 47SF054251, or 52D0531708 through 52H0532197, or 55E05223 through 55G05289, or 32WE059006 through 32WF059067, or 32WHE05379 through 32WHE05392, or 326WF055517 through 326WF055532, or 36TWF05430 through 36TWG05453, or 36WF058058 through 36WG058124, or 366WE056944 through 366WF057061, or 366WF057150 through 366WF057232, or 366WF057259 through 366WG057534, or 366WG057556, 366WG057569, 366WG057598, 366WG057616, 366WG057621, 366WG057624, or 366WJ057770 through 366WJ057776, or 366WL058131 into any engine.

Alternative Methods of Compliance

(j) The Manager, Special Certification Office, FAA, Rotorcraft Directorate, has the authority to approve alternative methods of compliance for this AD if requested using the procedures found in 14 CFR 39.19.

Special Flight Permits

(k) For aircraft with engines that have between 140 hours and 150 hours TIS only, special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the requirements of this AD can be done. Special flight permits may not be issued for aircraft that have utilized the provisions of paragraph (h) of this AD.

Related Information

(l) Superior Air Parts, Inc. Mandatory Service Bulletin B06-01, Rev. E, dated January 24, 2007, contains information related to the subject of this AD.

(m) Contact Jurgen Priester, Aerospace Engineer, Special Certification Office, FAA, Rotorcraft Directorate, Southwest Regional Headquarters, 2601 Meacham Blvd., Fort Worth, Texas 76137; e-mail: Jurgen.E.Priester@faa.gov; telephone (817) 222-5159; fax (817) 222-5785 for more information about this AD.

Material Incorporated by Reference

(n) None.

Issued in Burlington, Massachusetts, on March 23, 2007.
Peter A. White,
Acting Manager, Engine and Propeller Directorate, Aircraft Certification Service.
[FR Doc. E7-5915 Filed 3-30-07; 8:45 am]

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