

LUFTFARTSDIREKTORATET  
Avd. for Luftfartsinspeksjon  
FORNEBU-OSLO/Dep.  
Tlf. : Oslo (02) 12 13 40  
AFTN: ENFBYA  
Tlgr. : CIVILAIR OSLO  
Telex : 11032 Oslo



# LUFTDYKTIGHETSPÅBUD

(LDP)

MAULE  
SAMMENDRAG  
1946 - 1970

Med hjemmel i lov om luftfart av 16. desember 1960 § 47, 2. ledd og § 214, Kgl. res av 8. desember 1961, litra K og Samferdselsdepartementets brev datert 23. mars 1964, fastsetter Luftfartsdirektoratet følgende forskrift.

## 8/68 BESKYTTELSE AV BENSINLEDNING UNDER FORRESTE SETE I MAULE

Forandringen er "Mandatory" og gjelder for følgende modeller av Maule:

M4, M4C, M4T, M4S, M-4-210, M-4-210C, M-4-220C og M-4-220S.  
Med serie nr.: 68-94, 1C-10C, 1T-3T, 1S-3S, 1001-1045,  
1001C-1062C, 2001C-2004C og 2001S.

Bensinledningen i cockpit på nevnte fly ligger så nær justeringshåndtaket for setet at det er mulighet for å gripe feil når man skal flytte setet og derved lage bensinlekkasje innvendig i flyet.

Luftfartsdirektoratet bestemmer derfor at fabrikkens påbudte forandring i Service Letter nr. 13 av 29. august 1967 skal gjøres gjeldende for alle norskregistrerte fly av nevnte typer.

Forandringen går ut på at det skal monteres beskyttelsesplater på senterseksjonen foran bensinrøret slik at det ikke lenger er mulig å gripe feil. Platenes fasong og befestigelse fremgår av skisser i nevnte S.L. fra Maule, som kan fås fra fabrikkens eller fra forhandleren i Norge.

## 19/68 FORANDRING AV SIDETRIMRORETS OPPLAGRINGER PÅ MAULE

Forandringen gjelder for fly av typene:

Maule M-4	S/N 3	til og med 94
" M-4C	" 1C	" " " 10C
" M4S	" 1S	" " " 3S
" M4T	" 1T	" " " 3T
" M-4-210	" 1001	" " " 1045
" M-4-210C	" 1001	" " " 1064C
" M-4-220S	" 2001S	" " " 2003S
" M-4-220C	" 2001C	" " " 2006C

Luftfartsdirektoratet bestemmer herved at trimrorets opplagringer i sideroret på de ovenfor nevnte fly skal forandres i henhold til Maule Aircraft Corp. Service Letter No. 14 så snart som mulig, og senest ved første 25 timers ettersyn. Service Letter No. 14 datert 19. februar 1968 fås ved henvendelse til forhandleren av flytypen.

Ref.: FAA AD No. 68-7-8 og LVA 305/68.

17/69 FORANDRING AV TRINSE FOR BALANSERORS WIRE PÅ KONTROLLSØYLEN I MAULE

Forandringen gjelder følgende fly av typen Maule:

M-4	S/N 3 til og med 94
M-4T	S/N 1T til og med 3T
M-4C	S/N 1C til og med 11C
M-4S	S/N 1S til og med 3S
M-4-210	S N 1001 til og med 1045
M-4-210C	S/N 1001C til og med 1075C, 1079C og 1080C
M-4-220C	S/N 2001C til og med 2029C og 2032C

På grunn av at lageret i den forreste trinse for balanserors wire som er montert nederst på kontrollsøylen på de ovenfor nevnte fly kan løsne og trinsen derved falle av, bestemmer Luftfartsdirektoratet at følgende forandring skal utføres:

For å hindre trinsen i å falle av opplagringsbolten i tilfelle som nevnt, skal det monteres en stor skive på forsiden av trinsen og opplagringsbolten skal skiftes ut med lengre bolt.

Den nye bolten settes inn forfra med skivene i følgende orden:

1. AN5-27 bolt med hode forover
2. AN970-5 skive
3. AN960-516 skive
4. Trinse
5. Kontrollsøylen
6. AN960-516 skive
7. AN365-524 mutter

Forandringen skal utføres ved første 25 timers ettersyn.

Ref.: FAA AD No. 69-20-2 og Maule Service Letter No. 19, datert 4. september 1969 omhandler samme sak.

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## LUFTDYKTIGHETSPÅBUD (LDP)

Motordrevne luft-  
fartøy  
Maule-la  
Erstatter Maule-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.

48/75 KONTROLL OG MODIFIKASJON AV BENSINSYSTEMET PÅ MAULE

### Påbudet gjelder:

Maule Aircraft Corporation modell M-4-210, M-4-210C og M-5-210C med følgende serienr.:

M-4-210 serienr. 1001 til og med 1045  
M-4-210C serienr. 1001C til og med 1117C  
M-5-210C serienr. 6001C til og med 6069C, 6072C, 6076C, 6077C, 6079C,  
6080C, 6084C, 6087C.

### Påbudet omfatter:

For å hindre bensinlekkasje i fremre del av kabinen skal følgende kontroll og modifikasjon utføres:

1. Vri bensinsystemets velgekran i posisjon "off".
2. Demonter den del av bensinsystemets returledning fra motorens "fuel injector", som går fra brannskottet til samletanken. Returledningen er installert på venstre side i fremre del av kabinen.
3. Kontroll av den korte returledningen:

Kontroller den korte delen av returledningen som er plassert mellom brannskottet og enveisventilen for sprekker i området rundt flensene. Dersom en finner sprekker skal ledningen skiftes ut med ny etter generelle anvisninger gitt i FAA Advisory Circular 43.13.

4. Utskifting av den lange returledningen:

Den del av returledningen som er plassert mellom enveisventilen og samlertanken skal skiftes ut med ny, som gir en mer fleksibel innmontering. Den nye returledningen skal være 8" lang i 1/4" aluminiumsrør av godkjent kvalitet og skal være utstyrt med godkjente "fittings". (Se FAA Advisory Circular 43.13 for retningslinjer.) På midten av returledningen skal det bøyes til en "løkke" med en diameter på 1,5" - 2,0". Ved montering av returledninger skal "løkken" plasseres horisontalt.

5. Monter enveisventilen med pilen pekende bakover.
6. Utfør funksjonsprøve av den sammenmonterte returledningen med hensyn til bensinlekkasje.

Anm.: Maule Aircraft Corporation Service Letter 31 omhandler samme sak.

forts.

2. august 1979

Motordrevne luftfartøy  
Maule-1a  
Erstatter Maule-1  
48/75  
forts.

Tid for utførelse:

Innen 30 flytimer regnet fra 20. juli 1975.

Referanser:

FAA AD 75-11-02 og Maule Aircraft Corporation Service Letter 31 omhandler samme sak.

44/79

KONTROLL AV FREMRE RØRFESTE MELLOM HALEFLATE OG SKROG

Påbudet gjelder:

Maule Aircraft Corp modeller M-4 og M-5 med serienr:

M-4 serienr	4 til 94	M-4-210C serienr	1001C til 11117C
"	"	M-4-220S	" 2001S
"	1001 til 1045	M-4-220C	" 2001C til 2190C
"	1S til 3S	M-4-180C	" 3001C til 3006C
"	1T til 3T	M-5 alle	"
"	1C til 11C		

M-5-210C serienr	6001C til 6206C	M-5-235C serienr	7001C til 7283C
M-5-220C	" 5001C til 5057C	M-5-180C	" 8001C til 8004C
M-5-210TC	" 9001C		

Påbudet omfatter:

For å unngå brudd på røret som fester fremre del av haleflatene til bak-kroppen skal paragraf (1) og (5) i Maule Aircraft Corp Service Bulletin No 1 datert 3. mai 1979 eller senere revisjoner utføres. Dersom sprekker blir funnet skal delene skiftes ut med nye deler fra Maule Aircraft Corp før første flyging. Forandre haleflate til skrog festet som vist i ovennevnte Service Bulletins paragraf (3) og (4).

Tid for utførelse:

Innen 25 timers gangtid etter 2. august 1979 eller 60 dager etter denne dato, det som kommer først.

Referanser:

FAA AD 79-12-01.

R. Ullettang

J. Jacobs  
2 august 1979

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## LUFTDYKTIGHETSPÅBUD (LDP)

Motordrevne luft-  
fartøy  
Maule-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.

### 47/81 REPARASJON OG UTSKIFTING AV SIDERORSPEDALENES "V-BAR"-RØR

#### Påbudet gjelder:

Maule Aircraft Corp. modeller M-4 med serienr. 1001 til og med 1045 og  
M-4-210C med serienr. 1001 C til og med 1117 C.

#### Påbudet omfatter:

For å forhindre svikt i siderorspedalens "V-bar" og tilhørende struktur skal "V-bar"-røret kontrolleres for sprekker ved hjelp av en lupe som forstørrer minst 10 ganger. Anmerk.: Maule Aircraft Corp Service Bulletin nr. 2, datert 17. februar 1981 eller senere revisjoner viser fremgangs-  
måte for demontering for å gjøre rorpedalrøret tilgjengelig. Dersom ingen  
sprekker blir funnet skal røret modifiseres som vist i S.B..

1. Dersom sprekker blir funnet skal pkt. 2 eller 3 utføres før første flyging.
2. Dersom sprekker på 1 tomme eller mindre blir funnet skal "V-bar"-røret skiftes ut med modifisert rør med delnr. 4130F-12 som angitt i S.B. eller sprekken stoppbores, sveises og forsterkes som vist i S.B. og i.h.t. Advisory Circular 43.13A, Chapter 2, Aircraft Metal Structure, Section 2, Welding.
3. Dersom sprekker lengre 1 tomme blir funnet skal "V-bar"-røret skiftes ut som i pkt. 1..

#### Tid for utførelse:

Innen 25 tiners gangtid etter 28-9-81.

#### Referanser:

FAA AD 81-14-02 Amendment 39-4146

28-9-81

## 6/85 DRENERING AV DRIVSTOFFSYSTEMET

Påbudet gjelder:

Maule Aerospace Technology, modell M-4 og M-5, utstyrt med dreneringsplugger i hoved- og reservetankene.

Påbudet omfatter:

1. For å lette drenering av drivstofftankene skal dreneringspluggene skiftes ut med Quick Drain Valves i henhold til Maule Service Bulletin nr. 5 og Maule Service Letter nr. 32 eller senere revisjoner av disse.
2. Følgende revisjoner skal inngå i flygehåndbøkene:

M-4 AFM Rev. 2	M-5-180C Rev. D
M-4-180C " A	M-5-210TC " B
M-4-220C " 5	M-5-235C " A (AFM datert 12.8.81)
M-5-210C " B	M-5-235C AFM (datert 6.4.76)
M-5-220C " A	Supplement No 13
	M-4-210 og M-4-210C AFM Supplement No. 10.

Tid for utførelse:

Innen 50 timers gangtid etter 8.2.85.

Referanser:

FAA AD 84-09-07.

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## LUFTDYKTIGHETSPÅBUD (LDP)

MOTORDREVNE  
LUFTFARTØY

MAULE - 3

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.

### 96-018 KONTROLL OG UTSKIFTING AV «WING LIFT STRUTS»

**Påbudet gjelder:**

Maule Aerospace Technology, inc., følgende modeller:

M-4, M-5, M-6, M-7, MX-7, MXT-7 alle serier, og MT-7-235, M-8-235 (alle serienummer).

**Påbudet omfatter:**

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 95-26-18.

**Tid for utførelse:**

Innen 24.02.96. (NB, berørte eiere er informert).

**Referanse:**

FAA AD 95-26-18

**Gyldighetsdato:**

01.03.96



# 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).

**95-26-18 MAULE AEROSPACE TECHNOLOGY, INC.:** Amendment 39-9476; Docket No. 95-CE-97-AD.

Applicability: M-4, M-5, M-6, M-7, MX-7, MXT-7 Series and Models MT-7-235, and M-8-235 Airplanes (all serial numbers), certificated in any category that are equipped with part number (P/N) 2079E rear wing lift struts and P/N 2080E front wing lift struts.

NOTE 1: This AD applies to each airplane identified in the preceding applicability revision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes 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 within the next 30 calendar days after the effective date of this AD, unless already accomplished.

NOTE 2: The compliance times and inspection intervals indicated in this AD take precedence over the compliance times and inspection intervals called for in the Maule Service Bulletin (SB) No. 11, Issued: October 30, 1995.

NOTE 3: The paragraph structure of this AD is as follows:

Level 1: (a), (b), (c), etc.

Level 2: (1), (2), (3), etc.

Level 3: (i), (ii), (iii), etc.

Level 2 and Level 3 structures are designations of the Level 1 paragraph they immediately follow.

To prevent corrosion of the wing lift strut, which, if not detected and corrected, could cause the wing to separate from the airplane, accomplish the following:

(a) Inspect the two rear wing lift struts, (P/N 2079E) and the two front wing lift struts (P/N 2080E) for internal corrosion in accordance with the **INSTRUCTIONS** and **INSPECTION PROCEDURE** sections specified in Maule SB No. 11, Issued: October 30, 1995.

(1) If evidence of corrosion damage is found, prior to further flight, accomplish one of the following:

(i) Replace the damaged strut with an airworthy strut of the same part number that has been treated internally with corrosion preventative in accordance with the **INSPECTION PROCEDURE** section specified in Maule SB No. 11, Issued October 30, 1995, or

(ii) Replace the damaged strut with a sealed wing lift strut, P/N 2200E or P/N 2201E, as applicable, in accordance with the instructions specified in PART II of the **INSTRUCTIONS** section of Maule SB No. 11, Issued October 30, 1995.

(2) If no evidence of corrosion damage is found, prior to further flight, treat the strut internally with corrosion preventative in accordance with the NOTE in the **INSPECTION PROCEDURE** section in Maule SB No. 11, Issued October 30, 1995.

(b) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta Aircraft Certification Office.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta Aircraft Certification Office.

(c) The inspection and possible replacements required by this AD shall be done in accordance with Maule Service Bulletin No. 11, Issued: October 30, 1995. 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 Maule Aerospace Technology, Inc., 2099 GA Hwy., 133 South, Moultrie, Georgia, 31768. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., 7th Floor, suite 700, Washington, DC.

(d) This amendment (39-9476) becomes effective on January 26, 1996.

FOR FURTHER INFORMATION CONTACT: Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7357; facsimile (404) 305-7348.



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## LUFTDYKTIGHETSPÅBUD (LDP)

MOTORDREVNE  
LUFTFARTØY

MAULE - 4

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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.

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### 96-041 OMPLOSSERING AV «GASCOLATOR» OG DRIVSTOFFPUMPE

#### Påbudet gjelder:

Maule Aerospace Technologies, Inc: Model M-4-210 S/N 1001 t.o.m. 1045  
Model M-4-210C S/N 1001C t.o.m. 1080C,  
som har installert «Dual Exhaust System 5230F».

#### Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 96-10-05.

#### Tid for utførelse:

Innen neste 50 timers ettersyn etter 21.06.96, hvis ikke allerede utført.

#### Referanse:

FAA AD 96-10-05.

#### Gyldighetsdato:

01.06.96.

# AIRWORTHINESS DIRECTIVE

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



Bilag til LDP 96-041  
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).

**96-10-05 MAULE AEROSPACE TECHNOLOGIES, INC.:** Amendment 39-9610; Docket No. 95-CE-22-AD.

**Applicability:** The following airplane models and serial numbers, certificated in any category, that have Dual Exhaust System 5230F installed:

<b>Model</b>	<b>Serial Numbers</b>
M-4-210	1001 through 1045
M-4-210C	1001C through 1080C

**NOTE 1:** This AD applies to each airplane 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 airplanes 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 within the next 50 hours time-in-service after the effective date of this AD, unless already accomplished.

To prevent an airplane engine fire caused by the close proximity of the fuel gascolator and electric fuel pump to the exhaust system, accomplish the following:

(a) Relocate the gascolator and fuel pump from above the air egress to the left-side of the airplane in accordance with Maule Service Bulletin No. 10, dated September 16, 1994.

(b) 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 accomplished.

(c) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

**NOTE 2:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(d) The relocation required by this AD shall be done in accordance with Maule Service Bulletin No. 10, dated September 16, 1994. 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 Maule Aerospace Technology, Inc., Lake Maule, Route 5, Box 318, Moultrie, Georgia 31768. Copies may be inspected at the FAA, Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on June 21, 1996.

#### FOR FURTHER INFORMATION CONTACT:

Ms. Juanita Craft-Lloyd, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748; telephone (404) 305-7373; facsimile (404) 305-7348.

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# LUFTDYKTIGHETSPÅBUD (LDP)

MOTORDREVNE  
LUFTFARTØY

MAULE - 5

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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.

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## 98-018 REVISJON AV FLIGHT MANUAL

### Påbudet gjelder:

Alle Maule modeller som er listet i vedlagte kopi av FAA AD 97-26-14.

### Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA AD 97-26-14.

### Tid for utførelse:

Innevn 30 dager etter 1998-02-01, dersom ikke allerede utført.

### Referanse:

FAA AD 97-26-14.

### Gyldighetsdato:

1998-02-01



# 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).

**97-26-14 MAULE:** Amendment 39-10257; Docket No. 97-CE-40-AD.

**Applicability:** The following airplane models, certificated in any category:

- Models MXT-7-420 and MX-7-420 airplanes, all serial numbers; and
- Models M-7-235 and M-7-235A airplanes, all serial numbers, that are modified in accordance with

Maule Supplemental Type Certificate (STC) SA2661SO.

**NOTE 1:** Maule STC SA2661SO includes the procedures for incorporating the following items on the Maule Models M-7-235 and M-7-235A airplanes:

- an Allison 250-B17C gas turbine engine;
- Edo Model 797-2500 amphibious floats; and
- Hartzell Model HC-B3TF-7A/T10173-11R or HC-B3TF-7A/T10173F-11R propellers.

**NOTE 2:** This AD applies to each airplane 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 airplanes 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 within the next 30 days after the effective date of this AD, unless already accomplished.

To prevent loss of airplane control or engine overspeed with consequent loss of engine power caused by the power levers being positioned below the flight idle stop while the airplane is in flight, accomplish the following:

(a) Amend the Limitations Section of the airplane flight manual (AFM) by inserting the following language:

"Positioning of power levers below the flight idle stop while in flight is prohibited. Such positioning could lead to loss of airplane control or may result in an engine overspeed condition and consequent loss of engine power."

(b) This action may be accomplished by incorporating a copy of this AD into the Limitations Section of the AFM.

(c) Amending the AFM, as required by this AD, may be performed by the owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), and must be entered into the aircraft records showing compliance with this AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).

(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 airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the compliance time that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), Campus Building, 1701 Columbia Avenue, suite 2-160, College Park, Georgia 30337-2748. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

**NOTE 3:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(f) Information related to this AD may be examined at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

(g) This amendment (39-10257) becomes effective on January 28, 1998.

## FOR FURTHER INFORMATION CONTACT:

Wayne A. Shade, Aerospace Engineer, FAA, Atlanta Certification Office, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703-6094; facsimile (770) 703-6097.

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MOTORDREVNE  
LUFTFARTØY  
  
MAULE - 6

# LUFTDYKTIGHETSPÅBUD (LDP)

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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.

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## 98-075A KONTROLL/UTSKIFTING AV "WING LIFT STRUT"

### Påbudet gjelder:

Alle Maule modeller som er listet i vedlagte kopi av FAA Corrected AD 98-15-18.

### Påbudet omfatter:

Utfør tiltak som beskrevet i vedlagte kopi av FAA Corrected AD 98-15-18.

### Tid for utførelse:

Til de tider som beskrevet i vedlagte kopi av FAA Corrected AD 98-15-18, med virkning fra denne LDP's gyldighetsdato.

*Anm.: Denne LDP erstatter og opphever LDP 96-018.*

### Referanse:

FAA Corrected AD 98-15-18.

### Gyldighetsdato:

1998-12-01



# CORRECTED 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).

**98-15-18 MAULE AEROSPACE TECHNOLOGY CORP.:** Amendment 39-10669; Docket No. 98-CE-01-AD; Supersedes AD 95-26-18, Amendment 39-9476.

**Applicability:** The following airplane models, all serial numbers, certificated in any category, that are equipped with part number (P/N) 2079E (or FAA-approved equivalent part number) rear wing lift struts or P/N 2080E (or FAA-approved equivalent part number) front wing lift struts:

Bee Dee M-4	M-4	M-4C	M-4S
M-4T	M-4-180C	M-4-180S	M-4-180T
M-4-210	M-4-210C	M-4-210S	M-4-210T
M-4-220	M-4-220C	M-4-220S	M-4-220T
M-5-180C	M-5-200	M-5-210C	M-5-210TC
M-5-220C	M-5-235C	M-6-180	M-6-235
M-7-235	MX-7-235	MX-7-180	MX-7-420
MXT-7-180	MT-7-235	M-8-235	MX-7-160
MXT-7-160	MX-7-180A	MXT-7-180A	MX-7-180B
MXT-7-420	M-7-235B	M-7-235A	M-7-235C

**NOTE 1:** This AD does not apply to airplanes equipped with four Maule sealed lift struts, P/N 2200E and P/N 2201E. These sealed lift struts are identified by two raised weld spots on the upper end of the strut just below the serial number plate. Removal of the upper cuff is needed to locate the weld spots.

**NOTE 2:** This AD applies to each airplane 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 airplanes 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 in the body of this AD, unless already accomplished.

To prevent failure of the wing lift struts caused by corrosion damage, which could eventually result in the wing separating from the airplane, accomplish the following:

**NOTE 3:** The paragraph structure of this AD is as follows:

- Level 1: (a), (b), (c), etc.
- Level 2: (1), (2), (3), etc.
- Level 3: (i), (ii), (iii), etc.

Level 2 and Level 3 structures are designations of the Level 1 paragraph they immediately follow.

(a) Upon accumulating 2 years on a lift strut affected by this AD; within 3 calendar months after the effective date of this AD; or within 2 years after the last inspection accomplished in accordance with AD 95-26-18 (superseded by this action), whichever occurs later, remove the wing lift struts in accordance with the INSTRUCTIONS section of Maule Service Bulletin (SB) No. 11, dated October 30, 1995, and accomplish one of the following (the actions in either paragraph (a)(1), (a)(2), (a)(3), or (a)(4), including all subparagraphs, of this AD):

(1) Inspect the wing lift struts for corrosion in accordance with the INSPECTION PROCEDURE section of Maule SB No. 11, dated October 30, 1995.

(i) If no perceptible dents (as defined in the above SB) are found in the wing lift strut and no corrosion is externally visible, apply corrosion inhibitor to each strut in accordance with Maule SB No. 11, dated October 30, 1995. Re-inspect the wing lift struts at intervals not to exceed 24 calendar months provided no perceptible dents or external corrosion is found.

October 30, 1995. Re-inspect the wing lift struts at intervals not to exceed 24 calendar months provided no perceptible dents or external corrosion is found.

(ii) If a perceptible dent (as defined in the above SB) is found in the wing lift strut or external corrosion is found, prior to further flight, accomplish one of the installations (and subsequent actions presented in each paragraph) specified in paragraphs (a)(3) and (a)(4) of this AD.

(2) Inspect the wing lift struts for corrosion in accordance with the Appendix to this AD. The inspection procedures in this Appendix must be accomplished by a Level 2 or Level 3 inspector certified using the guidelines established by the American Society for Non-destructive Testing, or MIL-STD-410.

(i) If no external corrosion is found and all requirements in the Appendix to this AD are met, prior to further flight, apply corrosion inhibitor to each strut in accordance with Maule SB No. 11, dated October 30, 1995. Reinspect the lift struts at intervals not to exceed 24 calendar months provided no external corrosion is found and all of the requirements included in the Appendix of this AD are met.

(ii) If external corrosion is found or if any of the requirements in the Appendix of this AD are not met, prior to further flight, accomplish one of the installations (and subsequent actions presented in each paragraph) specified in paragraphs (a)(3) and (a)(4) of this AD.

(3) Install original equipment manufacturer (OEM) part number wing lift struts (or FAA-approved equivalent part numbers) that have been inspected in accordance with the specifications presented in either paragraph (a)(1) or (a)(2) of this AD, and are found to be airworthy according to the inspection requirements included in these paragraphs. Accomplish this installation in accordance with the applicable maintenance manual. Thereafter, inspect these wing lift struts at intervals not to exceed 24 calendar months in accordance with the specifications presented in either paragraph (a)(1) or (a)(2) of this AD.

(4) Install new Maule sealed wing lift struts, P/N 2200E or P/N 2201E, as applicable (or FAA-approved equivalent part numbers) on each wing as specified in the INSTRUCTIONS section in Part II of Maule SB No. 11, dated October 30, 1995.

(b) If holes are drilled into the sealed wing lift strut assemblies installed as specified in paragraph (a)(4) of this AD in order to attach cuffs, door clips, or other hardware, inspect the wing lift struts at intervals not to exceed 24 calendar months using the procedures specified in either paragraph (a)(1) or (a)(2), including all subparagraphs, of this AD.

(c) The repetitive inspections required by this AD may be terminated after installing new wing lift strut assemblies as specified in paragraph (a)(4) of this AD provided no holes are drilled in these strut assemblies as specified in paragraph (b) of this AD.

(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 airplane to a location where the requirements of this AD can be accomplished.

(e) An alternative method of compliance or adjustment of the initial or repetitive compliance times that provides an equivalent level of safety may be approved by the Manager, Atlanta Aircraft Certification Office (ACO), One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349.

(1) The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

(2) Alternative methods of compliance approved in accordance with AD 95-26-18 are considered approved as alternative methods of compliance for this AD.

**NOTE 4:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(f) The removal, the lift strut inspection (in paragraph (a)(1) of this AD), the applications, and the installation required by this AD shall be done in accordance with Maule Service Bulletin No. 11, dated October 30, 1995. This incorporation by reference was previously approved by the Director of the Federal Register as of January 26, 1996 (61 FR 623, January 9, 1996). Copies may be obtained from Maule Aerospace Technology, Inc., 2099 GA Hwy. 133 South, Moultrie, Georgia 31768. Copies may be inspected at the FAA, Central Region, Office of the Regional Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(g) This amendment supersedes AD 95-26-18, Amendment 39-9476.

(h) This amendment becomes effective on September 9, 1998.

**FOR FURTHER INFORMATION CONTACT:**

Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6078; facsimile: (770) 703-6097.

## APPENDIX TO AD 98-15-18

PROCEDURES AND REQUIREMENTS  
FOR ULTRASONIC INSPECTION OF MAULE WING LIFT STRUTS

## EQUIPMENT REQUIREMENTS

1. A portable ultrasonic thickness gauge or flaw detector with echo-to-echo digital thickness readout capable of reading to 0.001 inch and an A-trace waveform display will be needed to accomplish this inspection.
2. An ultrasonic probe with the following specifications will be needed to accomplish this inspection: 10 MHz (or higher), 0.283 inch (or smaller) diameter dual element or delay line transducer designed for thickness gauging. The transducer and ultrasonic system shall be capable of accurately measuring the thickness of AISI 4340 steel down to 0.020 inch. An accuracy of +/- 0.002 inch throughout a 0.020 inch to 0.050 inch thickness range while calibrating shall be the criteria for acceptance.
3. Either a precision machined step wedge made of 4340 steel (or similar steel with equivalent sound velocity) or at least three shim samples of same material will be needed to accomplish this inspection. One thickness of the step wedge or shim shall be less than or equal to 0.020 inch, one shall be greater than or equal to 0.050 inch and at least one other step or shim shall be between these two values.
4. Glycerin, light oil, or similar non-water based ultrasonic couplants are recommended in the setup and inspection procedures. Water-based couplants, containing appropriate corrosion inhibitors, may be utilized, provided they are removed from both the reference standards and the test item after the inspection procedure is completed and adequate corrosion prevention steps are then taken to protect these items.

**NOTE:** Couplant is defined as "a substance used between the face of the transducer and test surface to improve transmission of ultrasonic energy across the transducer/strut interface."

**NOTE:** If surface roughness due to paint loss or corrosion is present, the surface should be sanded or polished smooth before testing to assure a consistent and smooth surface for making contact with the transducer. Care shall be taken to remove a minimal amount of structural material. Paint repairs may be necessary after the inspection to prevent further corrosion damage from occurring. Removal of surface irregularities will enhance the accuracy of the inspection technique.

## INSTRUMENT SETUP

1. Set up the ultrasonic equipment for thickness measurements as specified in the instrument's user's manual. Because of the variety of equipment available to perform ultrasonic thickness measurements, some modification to this general setup procedure may be necessary. However, the tolerance requirement of step 13 and the record keeping requirement of step 14, must be satisfied.
2. If battery power will be employed, check to see that the battery has been properly charged. The testing will take approximately two hours. Screen brightness and contrast should be set to match environmental conditions.
3. Verify that the instrument is set for the type of transducer being used, i.e. single or dual element, and that the frequency setting is compatible with the transducer.
4. If a removable delay line is used, remove it and place a drop of couplant between the transducer face and the delay line to assure good transmission of ultrasonic energy. Reassemble the delay line transducer and continue.
5. Program a velocity of 0.231 inch/microsecond into the ultrasonic unit unless an alternative instrument calibration procedure is used to set the sound velocity.
6. Obtain a step wedge or steel shims per item 3 of the **EQUIPMENT REQUIREMENTS**. Place the probe on the thickest sample using couplant. Rotate the transducer slightly back and forth to "ring" the transducer to the sample. Adjust the delay and range settings to arrive at an A-trace signal display with the first backwall echo from the steel near the left side of the screen and the second backwall echo near the right of the screen. Note that when a single element transducer is used, the initial pulse and the delay line/steel interface will be off of the screen to the left. Adjust the gain to place the amplitude of the first backwall signal at approximately 80% screen height on the A-trace.
7. "Ring" the transducer on the thinnest step or shim using couplant. Select positive half-wave rectified, negative half-wave rectified, or filtered signal display to obtain the cleanest signal. Adjust the pulse voltage, pulse width, and damping to obtain the best signal resolution. These settings can vary from one transducer to another and are also user dependent.
8. Enable the thickness gate, and adjust the gate so that it starts at the first backwall echo and ends at the second backwall echo. (Measuring between the first and second backwall echoes will produce a measurement of the steel thickness that is not affected by the paint layer on the strut). If instability of the gate trigger occurs, adjust the gain, gate level, and/or damping to stabilize the thickness reading.



