



Date: 8/25/82

Rev. A: OCT 01 1996

**SERVICE LETTER NO. 45**

Page 1 of 4

Rev. A: 9/6/96

**SUBJECT:** Modification for gross weight increase.

**AIRPLANES AFFECTED:** MAULE Model M-5-210C, Serial Numbers 6001C thru 6206C.

**COMPLIANCE:** Optional.

**AUTHORITY:** This Service Letter is FAA Approved.

**BACKGROUND:** Many MAULE M-5-210C owners have requested additional useful load for their airplanes. By incorporating this modification, most M-5-210C airplanes will have a useful load in excess of 1000 pounds.

**ACTION TO BE TAKEN AND INSTALLATION INSTRUCTIONS:**

- (1) Attach AFM Supplement No. 4 to FAA Approved Airplane Flight Manual dated 28 December 1973.
- (2) Substitute the enclosed pages 1C, 5 and 6C dated 3/10/83 of the Weight and Balance Data for the corresponding pages you now have. Page 6C now revised and dated 5/19/83.
- (3) Comply with Service Letter No. 46, modification for increased flap travel.  
NOTE: Supplement No. 4 supersedes Supplement No. 5 when modification per Service Letter No. 45 is in effect.
- (4) Change Cylinder Head Temperature probe from No. 4 to No. 5 cylinder. (Ser. No. 6001C thru 6014C, 6039C and 6043C thru 6045C may already be probed on No. 5).
- (5) Remark Green Arc of Airspeed Indicator in accordance with page 2 of AFM Supplement No. 4. Since the instrument must be opened, it is required that an approved instrument shop do the work.
- (6) Install the following in accordance with Maule drawing 5162E, rev. K or later revision:
  - a. Required on Serial Numbers 6001C thru 6014C, 6039C, 6043C thru 6045C only:

|       |         |   |
|-------|---------|---|
| 1 ea. | 5084E-7 | Bracket                                       |
| 1 ea. | 5207B   | Baffle - Inner Aft Oil                        |
| 1 ea. | 5208B   | Baffle - Inner Forward Oil                    |
| 1 ea. | 5209B   | Baffle - Outer Oil                            |
| 1 ea. | 5210B   | Baffle - Center (w/Baffle Sealing Extensions) |
| 1 ea. | 5211B   | Bracket - Right Rear Baffle                   |
| 6 ea. | SB-4-2  | Rivets  |

**ACTION TO BE TAKEN AND INSTALLATION INSTRUCTIONS: (Cont'd)**

2 ea. AN526-832-R6 Screw  
2 ea. AN365-832 Nut

b. Required on Serial Numbers 6001C thru 6099C only:

1 ea. 5213B Baffle Sealing Extension  
1 ea. 5215B Baffle - Oil Cooler

(7) Install the following per drawing 2158E, rev. B or later revision:

1 ea. 2157E-1 Plate, Rear Left  
1 ea. 2157E-2 Plate, Rear Right  
1 ea. 2157E-3 Plate, Front Left  
1 ea. 2157E-4 Plate, Front Right  
2 ea. 2036B-2 Fitting - Wing Front  
2 ea. 2037B-2 Fitting - Wing Rear  
42 ea. AN470AD4-6 Rivets  
18 ea. AN426AD3-6 Rivets  
4 ea. AN5-10 Bolt  
10 ea. AN5-13 Bolt  
2 ea. 2040F-3 Rib, Leading Edge  
2 ea. 2041X-3 Rib, Center  
14 ea. AN470AD4-7 Rivets  
14 ea. AN365-524 Nut

**INSTALLATION INSTRUCTIONS:**

1. Remove wing gap fairings at fuselage, proceed by disconnecting fuel lines and wiring at tank. Also, remove flap cables by disconnecting at the wing and remove rubbing block. Remove aileron cables by disconnecting turnbuckles above headliner and removing rubbing blocks attached to fuselage. Detach struts at wings and remove wings.
2. Remove screws holding tank skin down, then lift tank skin just high enough to disconnect gas tank straps and remove tank.
3. Remove ribs 2040F and 2041X.
4. Remove wing root fittings 2035B, 2036B and 2037B.
5. Place 2157E-3 or -4 in position flush with end of front spar. Drill as per print. Mark contour of end.
6. Remove reinforcement 2157E and cut to fit. Reinstall and rivet.

Cont'd

7. Remove first two inboard nut plates from rear spar. Place rear spar reinforcement 2157E-1 or -2 (predrilled) in position flush with end of spar. Mark end and drill spar. Locate holes for wing root fitting. Remove, cut and profile. Drill wing root fitting holes underside. Position reinforcement, rivet in place. Ream wing root fitting holes .312 +.002/-.001. Install root fittings. Reinstall nut plates.
8. Use above procedure to install front reinforcement.
9. Temporarily install center rib 2041X. Locate and drill holes for tank door. Remove and install nut plates. Reinstall and rivet. Install nose rib using skin holes for rivet pattern.
10. Reinstall wings: Reverse procedures for removal of wings.

**CAUTION: Service Bulletin #11 (AD 95-26-18) Wing Lift Strut Inspection/Replacement must be complied with.**

**CAUTION: If decision is made to retain the original wing lift struts, inspect the strut fork for thread diameter. Models M-5 and later must have 1/2 inch diameter strut fork thread. (Early M-4 models were produced with 7/16 inch diameter strut fork threads.**

When modification is completed, make proper log entries, fill out Compliance Record Sheet, page 4, and return.

**MAULE SERVICE LETTER NO. 45**

**COMPLIANCE RECORD SHEET**

Airplane Serial Number \_\_\_\_\_

Airplane Registration Number \_\_\_\_\_

The following action was taken with respect to this service letter:

( ) Service Letter No. 45 completed

Certified by \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Printed name)

Title \_\_\_\_\_  
(Owner, A&P, IA, etc.)

Date performed: \_\_\_\_\_

In an effort to keep our mailing list current for sending service bulletins, service letter, etc., please fill in the following:

Owner's name \_\_\_\_\_

Owner's address \_\_\_\_\_ Zip \_\_\_\_\_

Mail this compliance record to: Maule Air, Inc.  
2099 GA Hwy. 133 S.  
Moultrie, GA 31788  
ATTN: Engineering Records

MAULE AIRCRAFT CORPORATION

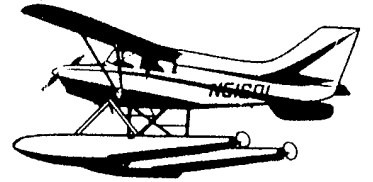
AIRPLANE FLIGHT MANUAL

**MAULE M-5-210C**

LOG OF SUPPLEMENTS

| SUPP. NO. | NO. OF PAGES | DESCRIPTION  | APPROVAL DATE |
|-----------|--------------|--|---------------|
| 1         | 2            | Installation of <b>EDO 248A2440</b> or <b>248B2440 Floats</b> - Maule Dwg <b>9080A</b> .   | 06/27/74      |
| 2         | 3            | Installation of <b>FluidDyne C2200H</b> - Maule drawing <b>9021X</b> .   | 04/02/75      |
| -         | 3            | Installation of <b>Pee Kay 2300 Floats</b> .   | 03/02/77      |
| 4         | 2            | Installation of <b>20°/40° Flap Ratchet</b> <u>and</u> <b>2500#</b> upgross modification.  | 04/01/83      |
| 5         | 2            | Installation of <b>20°/40° Flap Ratchet</b> Maule p/n 3207B.   | 03/11/83      |
| 6         | 5            | Installation of <b>Fli-Lite 3000 MK IIIA Skis</b> - Maule drawing <b>9079A</b>   | 02/04/83      |
| -         | 3            | Installation of <b>Aqua 2400 Floats</b> .  | 07/20/77      |
| 7         | 8            | Inst. of <b>EDO 248B2440 Floats @ 2500# GW</b> - Maule Dwg <b>9173A</b> .  | 12/08/98      |
| 8         | 2            | Installation of <b>Continental IO-360-A engine</b> - Maule Mod Kit No. 19.   | 11/19/96      |
| -         | 2            | Operation of aircraft when <b>M-5 Wing assemblies 2110X-30</b> (with 2167X Main Fuel Tanks) are installed - Maule <b>Modification Kit No. 15</b> . | 10/08/96      |
| 9         | 2            | Flight operation with <b>either one</b> (not both) of the <b>Front Doors removed</b> .   | 10/26/98      |
| 10        | 6            | Installation of <b>S-TEC System 55 Two Axis Autopilot Model ST-620 (14v)</b> - Maule Drawing <b>9196A</b> , Rev. A or later. (Land)                | 04/04/00      |
| 11        | 6            | Installation of <b>S-TEC System 55 Two Axis Autopilot Model ST-620 (14v)</b> - Maule Drawing <b>9196A</b> , Rev. A or later. (Sea)                 | 04/04/00      |
| 12        | 9            | Installation of <b>S-TEC System 50 Two Axis Autopilot Model ST-418-50 (14v)</b> - Maule Drawing <b>9193A</b> , Rev. B or later.                    | 01/05/00      |
| 13        | 9            | Installation of <b>S-TEC System 30 Two Axis Autopilot Model ST-810-30 (14v)</b> - Maule Drawing <b>9197A</b> , Rev. A or later. (Land)             | 01/21/00      |
| 14        | 9            | Installation of <b>S-TEC System 30 Two Axis Autopilot Model ST-810-30 (14v)</b> - Maule Drawing <b>9197A</b> , Rev. A or later. (Sea)              | 01/21/00      |
| 15        | 7            | Installation of <b>S-TEC System 40 Single Axis Autopilot Model ST-418-40 (14v)</b> - Maule Drawing <b>9193A</b> , Rev. C or later.                 | 10/29/01      |
| 16        | 9            | Installation of <b>S-TEC System 20 Single Axis Autopilot Model ST-810-20 (14v)</b> - Maule Drawing <b>9197A</b> , Rev. B or later. (Land)          | 03/20/00      |
| 17        | 9            | Installation of <b>S-TEC System 20 Single Axis Autopilot Model ST-810-20 (14v)</b> - Maule Drawing <b>9197A</b> , Rev. B or later. (Sea)           | 03/20/00      |
| -         | 5            | Installation of <b>Apollo MX20 Multi-Function Display</b> - Maule Drawing <b>7265A</b> .   | 08/15/02      |
|           |              |  |               |

*Maule Aircraft Corporation*  
SPENCE AIR BASE :: MOULTREE, GEORGIA 31768 :: PHONE 912/985-2045



FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT NO. 4

FOR

MODEL M-5-210C

Reg. No. \_\_\_\_\_

Ser. No. \_\_\_\_\_

This Supplement must be attached to the FAA Approved Airplane Flight Manual dated 28 December 1973 when modification for gross weight increase is incorporated in accordance with Maule Service Letter No. 45 and when ratchet p/n 3207B is installed in accordance with Maule Service Letter No. 46.

The information contained herein supersedes and supplements the information for the basic Airplane Flight Manual; for limitations, procedures and performance information not contained in this Supplement, consult the basic Airplane Flight Manual.

FAA APPROVED: \_\_\_\_\_

*Thomas C. Stittley*  
Acting Manager, Atlanta Aircraft Certification Office  
FAA, Central Region

DATE: **APR 1 1983**  
\_\_\_\_\_

MAULE AIRCRAFT CORPORATION

MOULTRIE, GEORGIA

AFM SUPPLEMENT NO. 4

M-5-210C

I. LIMITATIONS

The following limitations must be observed in the operation of this airplane:

F. Airspeed Limits: (CAS)

NOTE: Airspeed Instrument Markings and their significance:

(c) GREEN arc denotes normal operating speed range; 65 - 145 mph (57 - 126K): Extends from flaps up, power off minimum steady flight speed at 2500 lbs. ( $V_{S1}$ ) to design cruise speed ( $V_C$ ).

(d) WHITE arc denotes flap operating range, 56 - 94 mph (49 - 82K): Extends from full flap, power off minimum flaps extended speed ( $V_{FE}$ ).

I. Maximum Weight: 2500 lbs.

J. Center of Gravity Limits: +17.0 to +20.5 inches @ 2500 lbs.

+15.0 to +20.5 inches @ 2100 lbs.

+12.0 to +20.5 inches @ 1600 lbs. or less

II. PROCEDURES

A. Normal Procedures

1. Wing Flap Setting:

Takeoff - Normal - 20° (First Notch). No-Flap (0°) takeoff permissible

- Shortfield - 40° (Second Notch) until safely airborne, then retract to 20°

Normal Climb - 0°

Best Angle of Climb - 20°

Landing - 40° (0° or 20° permissible)

3. Best Rate of Climb - 90 mph CAS, no flaps

Best Angle of Climb - 75 mph CAS, 20° flaps

WEIGHT AND BALANCE DATA

FOR MAULE M-5-210C @ 2500# GW  
(SERVICE LETTER NO. 45 C/W)

Serial Number \_\_\_\_\_ Registration Number \_\_\_\_\_

It is the responsibility of the airplane owner and the pilot to insure that the airplane is loaded properly. The empty weight, empty weight center of gravity and useful load are listed below for this airplane as delivered from the factory. If the airplane has been altered, refer to the aircraft log and/or aircraft records for this information.

WEIGHT AND BALANCE DATA SUMMARY AS DELIVERED FROM THE FACTORY:

Empty Weight (including engine oil)..... \_\_\_\_\_ Lbs.  
 Gross Weight..... 2500 Lbs.  
 Useful Load..... \_\_\_\_\_ Lbs.  
 Empty Center of Gravity..... \_\_\_\_\_ Inches  
 Empty Weight Moment..... \_\_\_\_\_ Inch Lbs.

CENTER OF GRAVITY RANGE:

| <u>At Weight of</u> | <u>Center of Gravity Range</u> |
|---------------------|--------------------------------|
| 2500 lbs.           | +17.0 to +20.5 inches          |
| 2100 lbs.           | +15.0 to +20.5 inches          |
| 1600 lbs. or less   | +12.0 to +20.5 inches          |

NOTE: Straight line variation between given points  
DATUM: Wing leading edge

CERTIFIED BY \_\_\_\_\_ DATE \_\_\_\_\_



WEIGHT AND BALANCE DATA

DATE: 3/10/83

REV'D: 5/19/83

MAULE M-5-210C

