

Maule Aircraft Corporation

SPENCE AIR BASE - MOULTREE, GEORGIA 31768 - PHONE 912/985-2045



Date: 8/10/81

SERVICE LETTER NO. 43

Page 1 of 4

Rev. B: OCT 01 1996

Rev. B: 9/6/96

SUBJECT: Modification for gross weight increase.

AIRPLANES AFFECTED: Maule Model M-5-235C, Serial Numbers 7001C thru 7320C, 7322C thru 7346C, 7348C and 7349C.

NOTE: Serial numbers 7001C thru 7026C, 7028C, 7030C thru 7032C and 7037C must have Service Letter #36 expanded C.G. Limits and revised airspeed markings complied with.

NOTE: S/N's 7345C, 7346C, 7348C and 7349C had modification incorporated in left wing only at factory. Examine at wing root thru zipper in headliner to assure reinforcement plates are in place on spars in left wing in these airplanes for compliance on left side.

COMPLIANCE: Optional.

AUTHORITY: This Service Letter is FAA Approved.

BACKGROUND: Many MAULE M-5-235C owners have requested additional useful load for their airplanes. By incorporating this modification, most M-5-235C airplanes will have a useful load in excess of 1000 pounds.

ACTION TO BE TAKEN AND MATERIAL REQUIRED:

- (1) Attach FAA Approved Airplane Flight Manual Supplement #5 dated 9/10/81 to your Airplane Flight Manual.
- (2) Substitute the following enclosed pages of Weight and Balance Data for the corresponding pages you now have:
 - Page 1 dated 4/22/81
 - " 3 " 6/10/81
 - " 5 " 4/22/81
 - " 6 " 8/03/81

NOTE: If Service Letters #43 and #44 are both accomplished on aircraft, discard AFM Supplements #5 and #6 and attach enclosed AFM Supplement #11 to Airplane Flight Manual and substitute enclosed pages 1 through 6 dated 8/3/81 of the Weight and Balance Data for the corresponding pages you now have.

- (3) Install the following in accordance with drawing 2158E:

1	ea.	2157E-1	Plate, Rear Left
1	ea.	2157E-2	Plate, Rear Right

(3) Install the following in accordance with drawing 2158E: (Cont'd)

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

FIELD INSTALLATION - WEIGHT INCREASE

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.
7. Remove first two inboard nut plates from rear spar. Place rear spar reinforcement 2157E-1 or -2 (pre-drilled) in position flush with end of spar. Mark end and drill spar. Locate holes for wing root fitting. Remove, cut end 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. Note: Reinstall original 2035B fittings.
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.

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10. Reinstall wings: Reverse procedures for removal of wings. (Cont'd)

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 ½ 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 AIRCRAFT CORPORATION

MAULE SERVICE LETTER NO. 43

COMPLIANCE RECORD SHEET

Airplane Serial Number _____

Airplane Registration Number _____

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

() Service Letter No. 43 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

MOULTRIE, GEORGIA

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT NO. 5

FOR

MODEL M-5-235C

Reg. No. _____

Ser. No. _____

This Supplement must be attached to the FAA Approved Airplane Flight Manual dated 6 April 1976 when modification for gross weight increase is incorporated in accordance with Maule Service Letter No. 43.

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: Richard I. Blythe

CHIEF, ENGINEERING AND MANUFACTURING BRANCH
FAA, SOUTHERN REGION

DATE: September 10, 1981

MAULE AIRCRAFT CORPORATION

MOULTRIE, GEORGIA

AFM SUPPLEMENT NO. 5

M-5-235C

OPERATING LIMITATIONS

AIRSPEED LIMITS:

EXPLANATION OF AIRSPEED INDICATOR MARKINGS:

Green Arc - Normal Operating Range, 70* - 145 mph (61* - 126 k): Extends from flaps up, power off minimum steady flight speed* at 2500 lbs. (V_{s1}) to design cruise speed (V_c).

White Arc - Flap Operating Range, 65* - 94 mph (56* - 82 k): Extends from full flap, power off minimum steady flight speed* at 2500 lbs. (V_{s0}) to the maximum flaps extended speed (V_{fe}).

*Note: When loaded to 2500 lbs. at the extreme forward C.G. limit (13.2 in.), the airplane will not stall at an airspeed bleed-off rate of 1 mph per second. Thus a minimum steady flight speed, or the steady-state speed obtained in a glide with the control wheel full aft, is published. At C.G. positions aft of approximately 16 inches a true stall will occur, at 60 mph (52 Knots) with full flaps and at 64 mph (56 Knots) with no flaps.

MAXIMUM WEIGHT: 2500 Pounds

CENTER OF GRAVITY LIMITS: +13.2 to +20.5 inches @ 2500#

+10.5 to +20.5 inches @ 1700# or less

FAA APPROVED
DATE: 10 SEP 1981

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