

Maule Aircraft Corporation

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



10 August 1981
Page 1 of 2
Rev. A dated: 9/3/86

SERVICE LETTER #44

SUBJECT: New Flap Ratchet.

AIRCRAFT AFFECTED: Maule Model M-5-235C, Ser. No. 7001C thru 7320C, 7322C thru 7346C, 7348C thru 7350C, 7352C thru 7362C, 7364C thru 7367C.

COMPLIANCE: Optional.

AUTHORITY: This Service Letter is FAA Approved.

BACKGROUND: Many Maule owners have requested increased flap travel for their airplanes. The new flap ratchet allows 5°-8° more travel at each setting. There is also available an alternate lever which is bent upward. This allow more clearance under the lever for easier grasping. Either unit can be used separately.

MATERIAL REQUIRED:

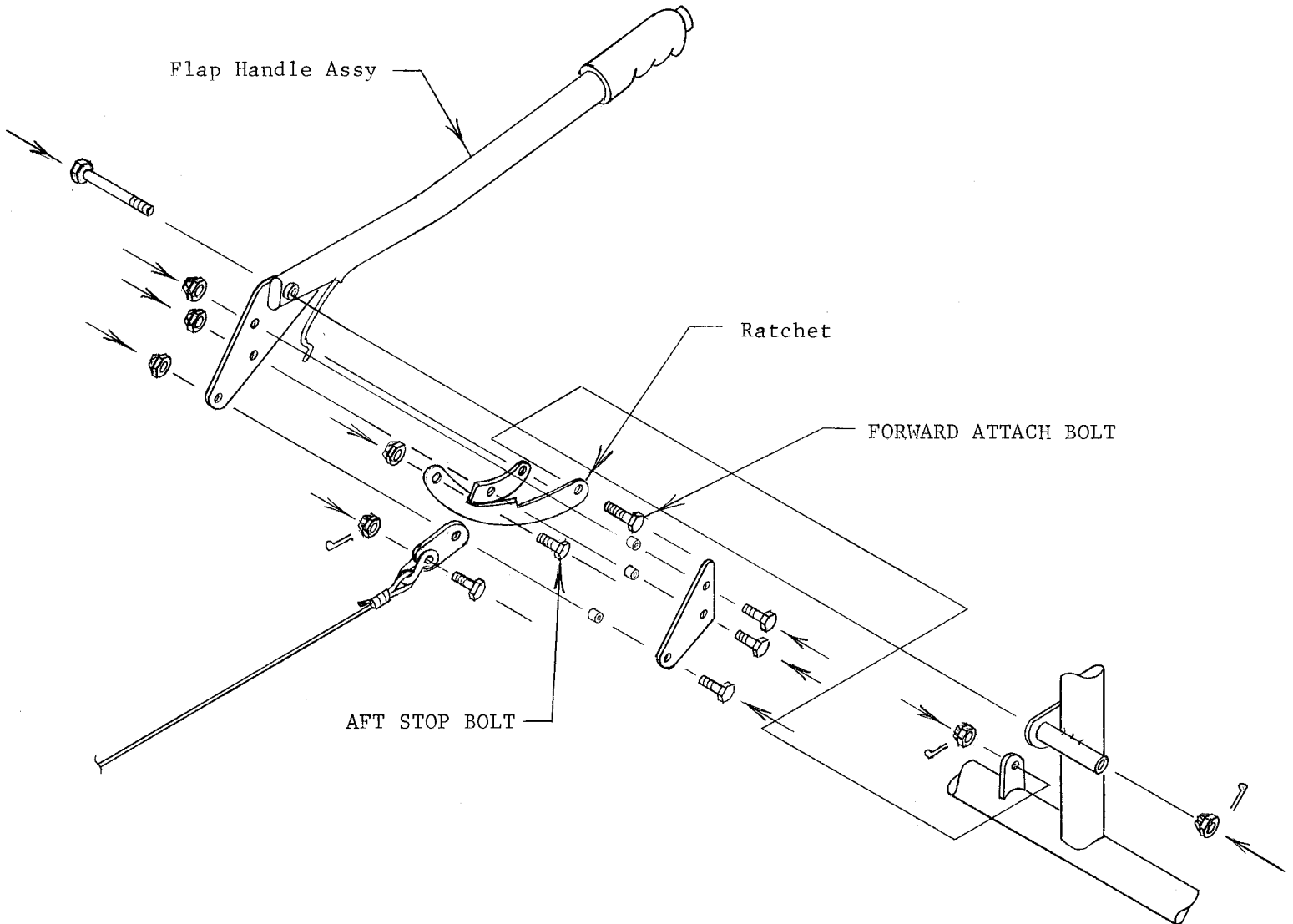
- (1) Flap Ratchet p/n 3207B
- (1) Alternate Flap Lever Assy p/n 3058F-28 (Opt.)
- (1) Flap Handle Placard (20°/40°)
- (1) Installation Sketch

INSTALLATION INSTRUCTIONS AND ACTION TO BE TAKEN:

1. Remove left front seat.
2. Remove control cover (ref. Item 6, Group C-4 of Parts Catalog).
3. Remove old ratchet: (See Sketch on page 2)
 - (a) Remove forward ratchet attach bolt and nut.
 - (b) Remove aft stop bolt and nut.
 - (c) Slide ratchet forward thru plates of flap handle assembly.
4. Install new ratchet:
 - (a) Slide ratchet aft thru plates of flap handle assembly
 - (b) Install forward attach bolt and nut and secure with cotter pin.
 - (c) Install aft stop bolt and nut removed from old ratchet.
NOTE: 20°/40° ratchet has forward stop bolt and nut deleted.
 - (d) Operational check flap system.
5. Reinstall control cover.
6. Reinstall left front seat.
7. Remove 15°/35° placard from flap handle and apply new placard.
8. Remark White and Green arc of Airspeed Indicator in accordance with page 2 of AFM Supplement No. 6. Since the instrument must be opened, it is required that an approved instrument shop do the work.
NOTE: Remark same if SL #43 is also complied with. (Supp. No. 6 of this SL and Supp. No. 11 of SL #43 have same Airspeed markings.)
9. Attach AFM Supplement No. 6 to FAA approved Airplane Flight Manual dated 4/6/76.
10. Substitute the enclosed pages 1, 3 and 5 dated 1 Oct 81 of the Weight and Balance data for the corresponding pages you now have.

SERVICE LETTER # 44
INSTALLATION INSTRUCTIONS

26 May 1981
Page 2 of 2
Rev. A dated:
9/3/86



NOTE: M-5-235C airplanes having ser. no. 7001C thru 7045C, 7047C thru 7052C which have the 20°/40° Flap Ratchet installed in compliance with this Service Letter #44, must also comply with Service Bulletin #7 (AD#86-17-11) concerning fuel crossover line located under the front seats.

When modification is completed, make proper log entries, fill out Service Letter #44 Compliance Record Sheet and return.

MAULE AIRCRAFT CORPORATION

SERVICE LETTER # 44 - COMPLIANCE RECORD

Airplane Serial Number _____

Airplane Registration Number _____

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

Service Letter # 44 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:

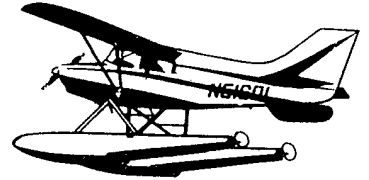
Owner's name _____

Owner's address _____

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

Maule Aircraft Corporation

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



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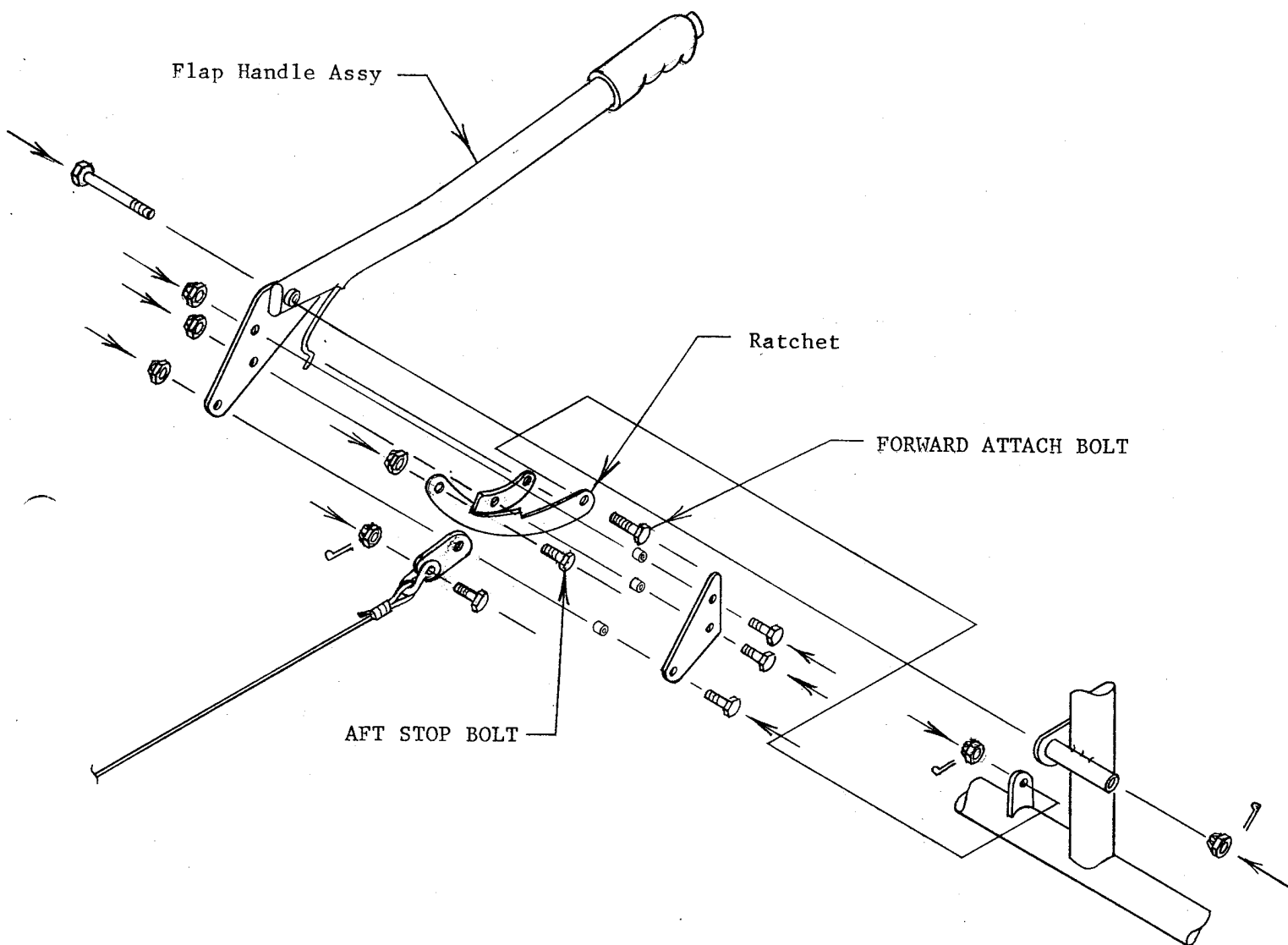
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INSTALLATION INSTRUCTIONS



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(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 _____

Mail this compliance record to: Maule Aircraft Corporation
Engineering Records
Spence Field
Moultrie, GA 31768

MAULE AIRCRAFT CORPORATION

MOULTRIE, GEORGIA

FAA APPROVED

AIRPLANE FLIGHT MANUAL SUPPLEMENT NO. 6

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 ratchet p/n 3207B is installed in accordance with Maule Service Letter No. 44.

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

FAA APPROVED:

Keith J. Blythe

CHIEF, ENGINEERING AND MANUFACTURING BRANCH
FAA, SOUTHERN REGION

DATE:

September 10, 1981

MAULE AIRCRAFT CORPORATION

MOULTRIE, GEORGIA

AFM SUPPLEMENT No. 6

M-5-235C

OPERATING LIMITATIONS

AIRSPEED LIMITS:

AIRSPEED INDICATOR MARKINGS:

Green Arc - 68-145 mph (60-126K)

White Arc - 60-94 mph (52-82K)

CENTER OF GRAVITY LIMITS: +11.7 to +20.5 inches @ 1700# or less

NORMAL OPERATING PROCEDURES

NORMAL FLIGHT OPERATIONS:

FLAP SETTING:

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

Normal Climb - 0°

Best Angle Climb - 20°

Landing - 40° (0° or 20° permissible)

CLIMBING:

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

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

FAA APPROVED

DATE:

SEP 10 1981

WEIGHT AND BALANCE DATA

AIRCRAFT MODEL M-5-235C

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.

Maximum Gross Weight..... 2300 lbs.
 Empty Weight..... lbs.
 Useful Load..... lbs.
 Empty Weight Center of Gravity..... inches
 Empty Weight Moment..... inch lbs.

NOTE: The empty weight includes 3.0 gallons, 18 pounds, of unuable fuel and 3 quarts, 6 pounds, of undrainable oil.

For computing weight and moment for flight, it is more convenient to use a weight and moment that includes the normal engine oil service of 10 quarts of drainable oil at station -34.0 inches for the O-540 engine and the normal engine oil service of 8 quarts of drainable oil at station -34.0 inches for the IO-540 engine. The weight and moment determined by adding oil service to empty weight and moment will be referred to as basic weight and moment.

As delivered from the factory:

Basic Weight..... lb.
 Basic Weight Center of Gravity..... in.
 Basic Weight Moment..... in. lb.

CENTER OF GRAVITY RANGE

<u>At Weight of</u>	<u>Center of Gravity Range</u>
2300 lbs.	+12.5 to +20.5 inches
1700 lbs. or less	+11.7 to +20.5 inches

NOTE: Straight line variation between given points.

DATUM: Wing Leading Edge

CERTIFIED BY _____ DATE _____

WEIGHT AND BALANCE DATA

5. Calculations for determining weight, c.g. and moment:

a. Center of Gravity (inches) = $(\frac{L \times T}{W}) - D$

ie. C.G. = $(\frac{X}{\quad}) - \quad = \quad$ inches.

b. Moment (inch pounds) = C.G. x W

ie. Moment = $\quad \times \quad = \quad$ inch lb

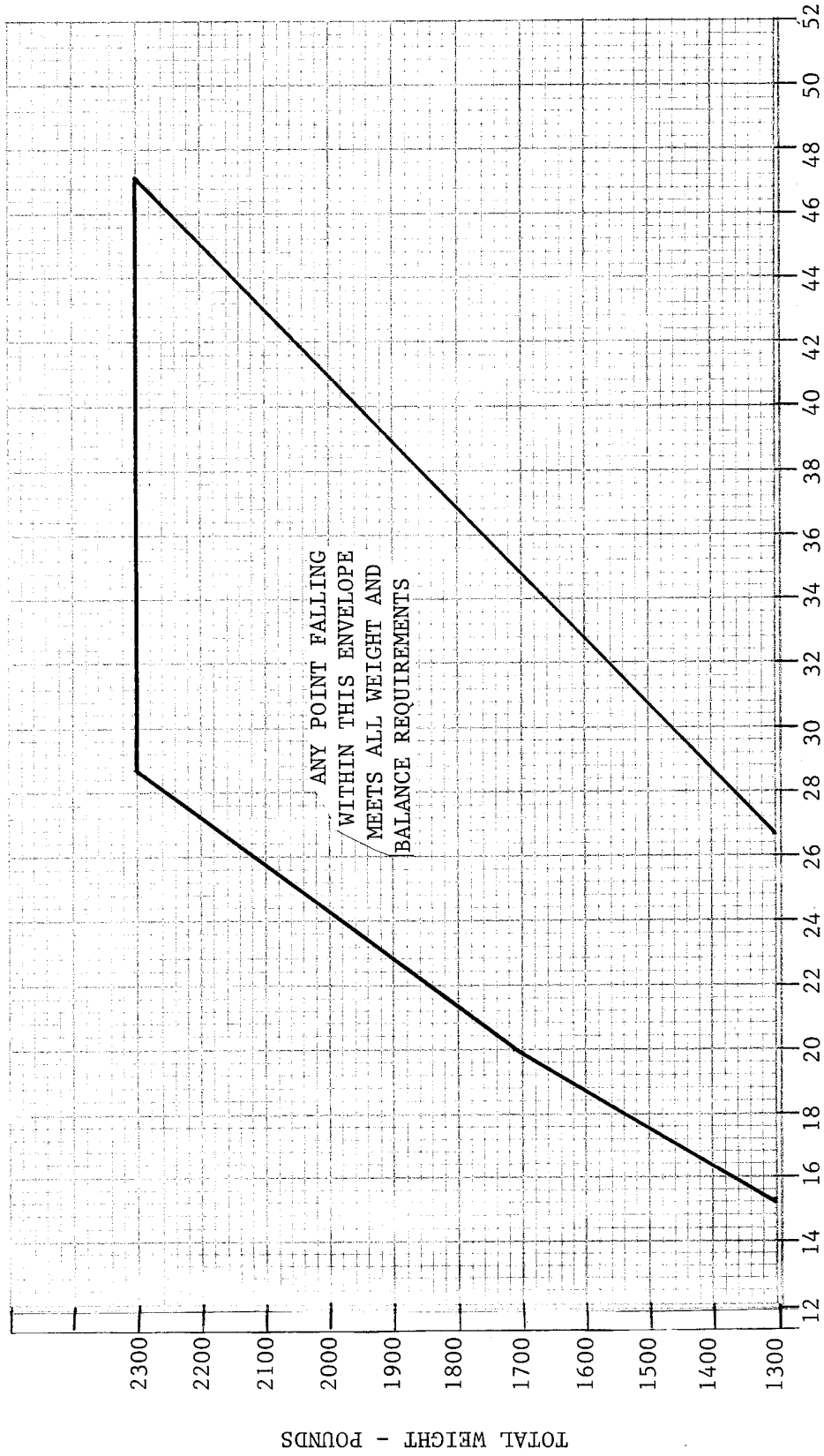
EXAMPLE OF WEIGHT AND BALANCE CALCULATION FOR LOADED AIRCRAFT.

"An airplane" with basic weight of 1460 lbs. and moment of 15,622 inch lb. is loaded with a pilot and front seat passenger, full main and auxiliary tanks, and 100 pounds of baggage in the baggage compartment.

<u>Item</u>	<u>Weight, lb.</u>	<u>arm, in.</u>	<u>Moment, in. lb.</u>
Basic Weight	1460	10.7	15,622
Pilot and Front Passenger	340	*	6,800
Fuel - 40 gal. added in Mains plus 23 gal. in Aux's.	378	*	9,072
Baggage (Area "C")	<u>100</u>	*	<u>7,000</u>
Gross Weight:	2278		<u>38,494</u>

*Moments can be read directly from the loading graph.

By locating the point corresponding to 2278 lb. aircraft weight and 38,494 inch lb. total moment on the Center of Gravity envelop graph, you can see that this point falls within the envelope, signifying the loading is OK.



TOTAL MOMENT - THOUSANDS OF INCH - POUNDS
CENTER OF GRAVITY ENVELOPE

M-5-235C