

MAJOR REPAIR AND ALTERATION FORM (AIRFRAME, POWERPLANT, PROPELLER OR APPLIANCE)

1. AIRCRAFT	MAKE Mooney	MODEL M-18C	SERIAL NO. 248	NATIONALITY AND REGISTRATION MARK N4051
2. OWNER	NAME (First, middle, last) Clark E. Rice		ADDRESS (Street and number, city, zone and State) 325 Moore Dr, Abilene, Texas	

3. COMPLETE ONLY FOR UNIT REPAIRED AND/OR ALTERED. DESCRIBE WORK ACCOMPLISHED ON REVERSE IN ACCORDANCE WITH CIVIL AERONAUTICS MANUAL 18.

UNIT	MAKE	MODEL	SERIAL NO.	NATURE OF WORK (Check)	
				MAJOR REPAIR	MAJOR ALTERATION
1. AIRFRAME	***** (As described in item 1 above) *****				II II
2. POWERPLANT			304 304 identified herein controlled with applicable requirements and is approved by the FAA. Subject to conformity with 33 CFR 118.11 (b).		33 CFR 118.11 (b) approved in 1962
3. PROPELLER			3-22-62		ADL/ing
4. APPLIANCE	TYPE AND MANUFACTURER		CAI	CAI	ADL/ing

4. AIRCRAFT WEIGHT AND BALANCE DATA. This item must be completed by repair or alteration agency. However, in the case of a spare component, it will not be completed until such component is installed in an aircraft. At this time, it will be completed by the installing agency, if applicable.
*AFTER the repairs and/or alterations described below were made.

CATEGORY	EMPTY WEIGHT (Pounds)*	EMPTY CENTER OF GRAVITY (Inches from datum)*	USEFUL LOAD (Pounds)*
Normal	618.0	30.41	232.0

5. CONFORMITY STATEMENT (Complete and check)

1. AGENCY'S NAME AND ADDRESS Frank B. Johnston, DBA Hutchinson Aircraft Service Box 524 Borger, Texas	2. KIND OF AGENCY <input checked="" type="checkbox"/> U. S. Certificated Mechanic. <input type="checkbox"/> Foreign Certificated Mechanic. <input type="checkbox"/> Certificated Repair Station. <input type="checkbox"/> Manufacturer. <input type="checkbox"/> (Check if repair or alteration was made under delegation option procedures.)	3. CERTIFICATE NO. A&E 371307
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6. I certify that the repair and/or alteration made to the unit(s) identified under item 3 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 18 of the U. S. Civil Air Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Jan 12, 1961

(Date repair and/or alteration completed)

Frank B. Johnston
Frank B. Johnston
(Signature of authorized individual)

7. APPROVAL FOR RETURN TO SERVICE (Check and complete appropriate items)

Pursuant to the authority specified below the unit identified in item 3 was inspected in the manner prescribed by the Administrator and is

APPROVED } BY CAA Designee Manufacturer Canadian Department of Transport Inspector of Aircraft
 REJECTED } CAA Aviation Safety Agent Repair Station Other (Specify)

3-22-61

(Date of approval or rejection)

ADL/ing SW G-ADU-1
(Signature of authorized individual; title or identification number)

7. TO BE COMPLETED ONLY BY CAA PERSONNEL

Forwarded for engineering comment See attached memorandum
 Accepted Reinspected Spot Checked

Reg. 2 FW
GSDO 1

(CAA designation number)

(Signature & Aviation Safety Agent)

INSTRUCTIONS

This form must be completed in duplicate each time a major repair and/or alteration is made of an aircraft, airframe, powerplant, propeller or appliance. After the repair and/or alteration has been inspected and item 8 completed, the original copy of this form will be made available to the aircraft owner for retention as part of the aircraft records. The duplicate copy is retained by the CAA for administrative purposes.

See CAM 18 for detailed instructions concerning the information to be furnished with this form and instructions concerning its preparation.

8. DESCRIPTION OF WORK ACCOMPLISHED.

Substituted Continental C-75-12 engine for Continental A-65-8. Engine de-rated to 65HP by tachometer RED LINE at 2170 RPM, (CMC Power Curve 65 BHP prop load), and by installation of Flottorp 65A66 propeller which holds the max RPM to 1975RPM in Vn2 throttle closed dive, *As per STC SA2-1506*

Electrical system as installed by Factory activated. Battery, Regulator, Ammeter, and fuses added restored to system. All wiring, cables, switches, lights, battery box already in place.

Employed all original cowls, baffles, exhaust system components, fuel system components, carburetor heater components, and engine mount. A-65-8 and C-75-12 are dimensionally identical. C-75-12 is 12 lbs. heavier.

Aircraft was originally certified with an A-65-12, and the factory provided space for starter and generator.

Ref: FAA Engine Specs on weight differences.

Aircraft test flown in 38deg. F. air with Bourdon tube temp bulb rigged in carb heat box. Application of heat gave a reading of 190 degrees.

Aircraft weighed ABSOLUTELY empty, with the following results:

Rt. wheel net	--	205.0 lb.
left " "	"	202.0
Nose " "	"	211.0

Ref: Mooney WT & BAL data, main gear is 46.9" aft datum.
Nose gear is - 1.4" fore datum.

205 + 202 = 407 lb. @ 46.9" = 19088.3 moment	
211 lb @ -1.4 = - 295.4 "	
<u>618</u>	<u>18792.9</u>

$\frac{18792.9}{618.0} = 30.41 \text{ ECG.}^*$

*If additional space is needed attach additional sheets bearing aircraft nationality and registration mark and date work completed.

Check block if additional sheets are attached.

Frank B. Johnston
Hutchinson Aircraft Service
Box 524
Berger, Texas

FAA APPROVED AIRPLANE
FLIGHT MANUAL SUPPLEMENT
MOONEY ML8C

This supplement must be attached to the ML8C airplane flight manual when the Continental C75-12 engine is installed per STC SA2-1506. Limitations contained herein supersede limitations appearing in the basic manual. For limitations, procedures, & performance not shown, consult the basic manual.

I. LIMITATIONS

- A. Engine: Continental C75-12 limits:
for all operations 2160 RPM 65 EHP
- C. Propeller: Flottrop 65A66. Static
RPM at full throttle: not more than
3000; not less than 1,800.
- D. Powerplant Instruments:
(c) Tachometer; Red radial at
2160—DO NOT EXCEED

II. PROCEDURES: NO CHANGE

III. PERFORMANCE: NO CHANGE

FAA APPROVED:

DATE: MARCH 22, 1962

D. A. Tuck, for
H.H. Slaughter,
Chief, Engineering & Manufacturing Br.
Southwest Region
FEDERAL AVIATION AGENCY