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Mooney Aircraft, Inc.

MOONEY MODEL M2OC (1964)
ACTUAL WEIGHT & BALANCE DATA

F.A.A.	Registration	No.
	Serial	Mo.

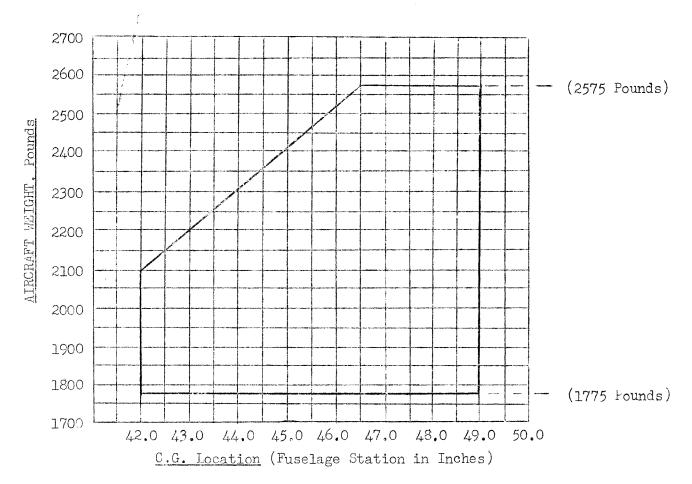
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### 1. WEIGHT AND CENTER OF CRAVITY LIMITS:

Maximum certificated aircraft weight for all operating conditions is 2575 pounds.

It is the responsibility of the airplane owner and of the pilot to insure that the aircraft is properly loaded. The empty weight, empty weight C.G., and useful load are noted below for this airplane as delivered from the factory. If the airplane or equipment have been altered, refer to the latest Approved Repair & Alteration Form (FAA-337) for this information.

The figure shown below is a plot of aircraft weight versus center of gravity (C.G.). The fore and aft location of the C.G. is plotted in terms of distance from the Horizontal Datum, which is the Centerline of the Mose Gear Support Bolts (Fuselage Station O). The aircraft must be operated strictly within the limits of the envelope defined by the dark lines on this figure. The loading envelops is based on the gear extended configuration.



The points marked 'A', 'B', and 'C' on the above figure are the plotted results of the sample Weight and Balance calculations shown on Page 2. The pilot should make a similar check of his specific loading as part of his Pre-Flight Check.

Mooney Aircraft, Inc.

MOONEY MODEL M20C (1964) AGTIAL WEIGHT & BALANCE DATA

F.A.A.	Registration	No.	
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Dat	;e	
	Dat	Date

### 2, <u>USEFUL LOAD</u>:

Maximum Useful Load is 2575	danský: <del>skipe ukonomi na poved podála odlada skipe na veznativno</del>	1b.s
Useful load items are:		
Item	<u>Weight</u>	<u>Arm</u>
Oil, 2 Gallons	15	-7.4
Pilots, (2) each	170	36.5 to 44.0
Fuel, 52 Gallons maximum	312	48.4
Rear Passengers, (2) each	170	70.7
Baggage maximum	120	93.0
Hatrack maximum	10	114.0
110. UL ack maximum		

The Empty Weight C.G. location is with the landing gear extended and with both front seats in the forward position (40.0"). Each seat weighs 17 pounds. Maximum seat travel is 7.5" in 6 equal adjustments. Therefore, seat positions are 1.25" apart.

3. SAMPLE WEIGHT & BALANCE COMPUTATIONS, GEAR EXTENCED:

3. SAMPLE WEIGHT & BALANCE COMPUTATIONS, GEAR EXTENTED:			
A. Most Forward at any Meight	TT 41	/ <b></b>	Moment
<u>Item</u>	<u>Weight</u>	Arm	FIGHETTE
Weight Impty	-4 /	-7.4	-111
Cil (2 Gals.)	15	-/•4	-111
Front Seats Moved Aft " Jach (Compute Moment Only,	min majorita		AND THE PARTY OF T
Empty Wt. Includes Seats)	7.00		
Pilot(Position of Seat)	170		And the second s
Front Passenger (Position of Seat)	170 90	48.4	4356
Fuel (15.0 Gals, Minimum in Tanks)	90	40.4	4))
Weight & C.G.			Maria and the Confession of th
B. Most Forward Loading With Full Tanks			
Weight Empty	15	-7.4	-111
Oil (2 Gals.) Front Seats Moved Aft " Each (Compute Moment Only,		1 6 24	
Empty Wt. Includes Seats)		The second secon	Name of Address of Company and an Address of
	170		
Pilot (Position of Seat) Front Passenger (Position of Seat)	170		
Front rassenger (	312	48.4	15,101
Fuel (52 Gals. Maximum in Tanks) Weight & C.G.			
weight a o.a.			
C. Most Rearward Loading at Gross Weight			
Weight Empty			
Oil (2 Gals.)	15	-7.4	-111
Front Seats Moved Aft " Mach (Compute Moment Only,	*******	-	and the second second second second
Empty Wt. Includes Seats)			
Pilot(Position of Seat)	170	standard and management and	
Front Passenger (Position of Seat)	170	-	***************************************
Fuel (Maximum)	**************************************	48.4	
Rear Passengers (2)	340	70.7	24,038
Baggage (maximum)		93.0	
Weight & C.G.	****		Name of the State

The above loadings are presented as <u>examples only</u>. Loadings other than the above must be substantiated by additional calcualtions. Two persons in the rear seat with only one pilot is not normally an acceptable loading.

Page 2

MODIES WIT OF OT OF THE	Mooney	Aircraft,	Inc.
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MOONEY MODEL M200 (1964) ACTUAL WEIGHT & BALANCE DATA

F.A.A.	Registration	No.	systymatopypioniminista satistata ar sutanastan minnistris dan
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# 4. EQUIPMENT LIST:

The following equipment was installed in this airplane as delivered from the factory and is included in the Empty Weight:

### Check Items Installed

No.		Wt.	Arm
( )	Hartzell Constant Speed Propeller  (a) Hartzell HC-C2YK Hub with 1/7666-2 Blades  (b) Hartzell Spinner Assembly 835-20  (c) Hartzell Governor D-1-6	53.75 3.25 4.5	(-30.16) (-29.18) (+ 3.6)
5. () () ()	<ul> <li>(a) McCauley 2D34C53-A Hub with 743-O Blades</li> <li>(b) McCauley D-2808 Dome, D-3148 Bulkhead &amp; Fillet Assembly</li> <li>(c) Woodward 210452 Propeller Governor</li> </ul>	49.25 3.25 3.0	(-30.31) (-29.18) (+ 4.0)
101. (x) (x)	Fuel Pumps (a) One Engine-Driven Pump, AC Part No. 5656880, Type AH (b) One Electric Pump, Dukes Part No. 4140-00-21	1.5 1.9	(+ 1.2) (- 1.5)
	Oil Radiator (b) Harrison 8526250 Carburetor Air Filter, Air-Maze 13219	2.0	(-18.0) (-17.0)
(x) 104.	(c) Delco-Remy 1109689	17.8	(-18.0)
(x) 201.	Two Main Wheel-Brake Assemblies, 6.00-6 (c) Cleveland Model DHB-3 Wheel Assembly No. 40-24	19.1	(64.5)
(x) 202.	Brake Assembly No. 30-5  (a) Two Main Wheel 6-Ply Rating Tires, 6.00-6  Type III, with Regular Tubes	17.0	(+64.5)
(x) 205. (x) 206.	One Nose Mheel, 5.00-5, Type III  (b) Cleveland Model 40-33  (a) One Nose Wheel 4-Ply Rating Tire, 5.00-5  Type III, with Regular Tube	4 7	(- 2.0) (- 2.0)
(x) 301. (x) 302.	Electric Generator (c) 50 AMP, Delco-Remy 1101915 (c) Auto-Lite Battery R-35	16.6 28.0	(-19.5) (+ 2.5)
(x) 303.	Voltage Regulator (c) 50 AMP, Delco-Remy 1119224	2.0	(+ 7.0)
(x) 401. (x) 601. 602.	FAA Approved Airplane Flight Manual dated 10-20-61 Stall Warning Indicator, Safe-Flight Model 164R	1.0	(+28.0)
( )	(a) In Accordance With Mooney Dwg. 610012 (8614)	6.0	(+ 2.0)
603.	Instruments (a) Horizon Gyro (b) Directional Gyro (c) Clock (d) Outside Air Temperature Gauge	4.5 4.0 .4 .2	(+19.0) (+20.0) (+23.8) (+33.0)
( )	(e) Rate of Climb Indicator (f) Electric Turn & Bank Indicator	1.0	(+22.3) (+21.4)

Mooney Aircraft, Inc.	Kerrvill	e, Texas
MOGNEY MODEL M20C (1964) ACTUAL WEIGHT & BALANCE DATA		
F.A.A. Registration No	Date	
4. EQUIPMENT LIST (Con't)  No.  (x) 604. Cigarette Lighter  () 605. Rotating Beacon, Grimes, In Accordance With Mooney  Dwg. 950018 (8234)  () 606. Dual Controls  () 607.  () 608.  () 609.  () 610.	Wt2 2.0 3.5	Arm (+21.0) (+163.0) (+14.0)
( ) 611. ( ) 612. ( ) 613. 5. EMPTY WEIGHT AFTER INSTALLATION OF OPTIONAL EQUIPMENT:		
<u>Item</u> <u>Weight</u>	<u>Arm</u>	<u>Moment</u>
Weight Empty as Weighed, Gear Extended		
	effective shows an accompany and the	Nacional Speciments of the Commission of the Com
	gargarasa dahan dasa menin 18118tina	
		managalanan magamin magaman gannad karafa
	ecopychanalitechnician void mad GPPHAP	epipalogovinico mono qui bine edizime equi di helici relia hele
	Typicagetics is define an engagement representation or the control of the control	
	disparament or establishment from	Magazina and Public Colonia and Association Colonia
Computed Empty Weight & C.G., Gear Extended		egyadegyan kaansah mencepangan provincian inga marian birabahasahan

<sup>\*\*</sup>Rebuilt Instruments
\*\*Removed after Production Weight & Balance

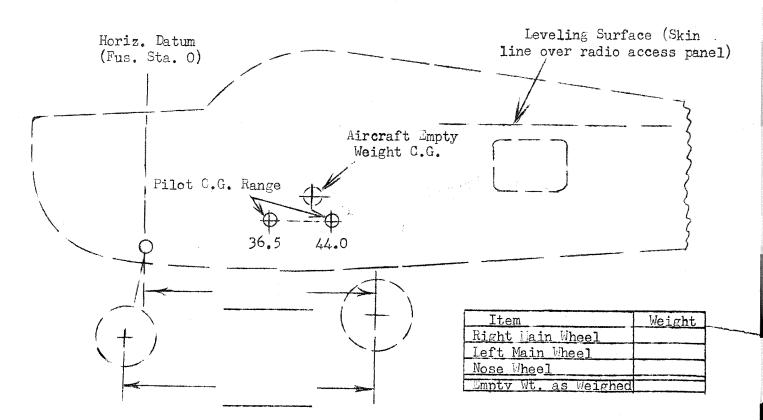
Kerrville, Texas

MOONEY MODEL N20C (1964) ACTUAL WEIGHT & BALANCE DATA

F.A.A. Registration No.

Date	
	**************************************

### 6. EMPTY WEIGHT & C.G. COMPUTATIONS:



Horizontal Datum is Centerline of Nose Gear Support Bolts (Sta. 0) and is 33.0" forward of Wing L.B. at Wing Sta. 59.25 (Inboard edge of stall strip). MAC is 59.2". L.E. of MAC is 33.1" aft Datum. Leveling means: Edge of skin splice over aft fuselage radio access panel. (Spirit level is used to level.)

#### Computations:

C.G.	Forward of Main	Wheels =	X		The second secon
C.G.	Aft Datum =			\$\$ o	
C.G.	% MAC = (	33.1)/59.2 =		_/59.2 =	% MAC

The Empty Weight C.G. location is with the landing gear extended and with both front seats in the forward location (40.0"). Each seat weighs 17.0 pounds. Maximum seat travel is 7.5" in 6 equal adjustments. Homent change per seat in aft position, (47.5") is 128 inch-pounds.

Mooney Aircraft, Inc.

MOONEY MODEL M20C (1964) ACTUAL WEIGHT & BALANCE

F.A.A. Reg	lstration	No.
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Date	
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#### 7. LOADING SCHEDULE:

The following information is offered as an aid in checking loadings without having to perform the computations shown on Page 2. These loadings are all based on an average passenger or pilot weight of 170 pounds and it is assumed that the forward seats are in the second position aft. If the actual loading does not correspond to one of these basic loading conditions, then a detailed check should be made according to the procedure shown on Page 2.

For normal usage, there are five basic loadings for this airplane. They are:

Loading #1 Pilot alone

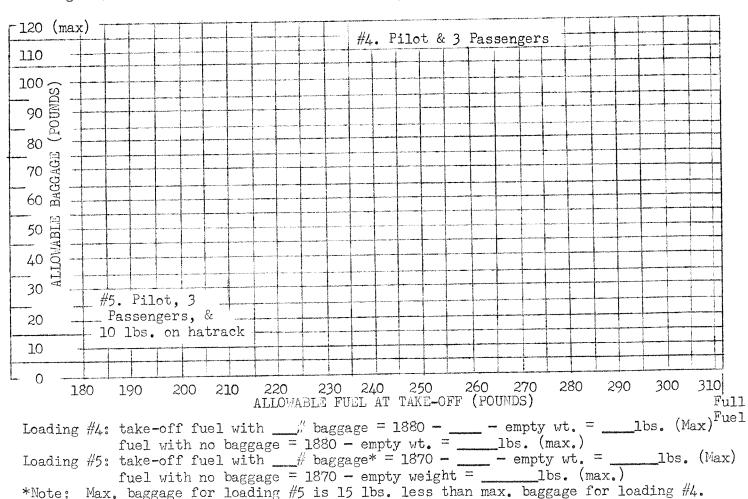
Loading #2 Pilot and front passenger

Loading #3 Pilot, front passenger and one rear passenger

Loading #4 Pilot and 3 passengers

Loading "5 Pilot, 3 passengers and 10 lbs. in hatbox

Loading #1 and #2 are not limited in any way. The maximum fuel, baggage, and hatbox loads can be carried without exceeding either gross weight or C.G. limits. Loading #3 is not limited as far as C.G. is concerned. However, it is possible to exceed the gross weight if the empty, equipped, weight of the airplane exceeds 1608 pounds. Loadings #4 and #5 are limited as shown in the graph below.



Page 6

# MOONEY CORPORATION Engineering Flight Test

# WEIGHT AND BALANCE

MODEL		SERIAL NUMBER		DATE	
LOAL	ED AS FOLLOW	<u>rs</u>			
			F	REFERENCE	
andre commence and all the first of a second commence				9	
4444				F <sub>n</sub>	F <sub>1</sub> &F <sub>r</sub>
				b	
$(\mathbf{F_r})$	Weight - Right	Main Wheel =	lbs	•	
(F <sub>1</sub> )	Weight - Left I	Main Wheel =	lbs	•	
(F <sub>n</sub> )	Weight - Nose	Wheel =	lbs	•	
(F <sub>t</sub> )	Total Weight of	f Aircraft =	LBS	3	
(a)	Distance - Nos	e Wheel C to Main	Wheel C =	- Annual Control of the Control of t	inches
(b)	Distance - Refe	erence to Main Whe	el C =		inches
(c)	C.G. Location		)(	)	
. ,		$(\mathbf{F}_{t})$	)		inches from
			enant enant		main wheels
(d)	Fuselage Static	on of Reference	=		inches
	Fuselage Static	on of C.G. = (b) - (c	(a) + (d) =	and the same of th	inches
					% MAC