

**MOONEY INTERNATIONAL CORPORATION
165 Al Mooney Road
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FAA APPROVED

**AIRPLANE FLIGHT MANUAL SUPPLEMENT
FOR**

MOONEY M20R, M20TN, M20U, M20V

**WITH
50 GALLON CAPACITY USEABLE FUEL
TANK CONFIGURATION INSTALLED**

MODEL NO. _____

REG. NO. _____

SERIAL NO. _____

This Supplement must be attached to the FAA Approved Airplane Flight Manual when the 50 Gallon Fuel Tank configuration is installed in accordance with Mooney Drawing Number 210217. The information contained herein supplements and / or replaces 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: _____

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SECTION I – GENERAL

DESCRIPTIVE DATA

FUEL

Minimum Fuel Grade (Color) 100LL (Blue) or 100 Octane (Green)
Total Capacity **106 U. S. Gal. (401.3 liters)**
Usable **100.0 U. S. Gal. (378.5 liters)**



SECTION II – LIMITATIONS

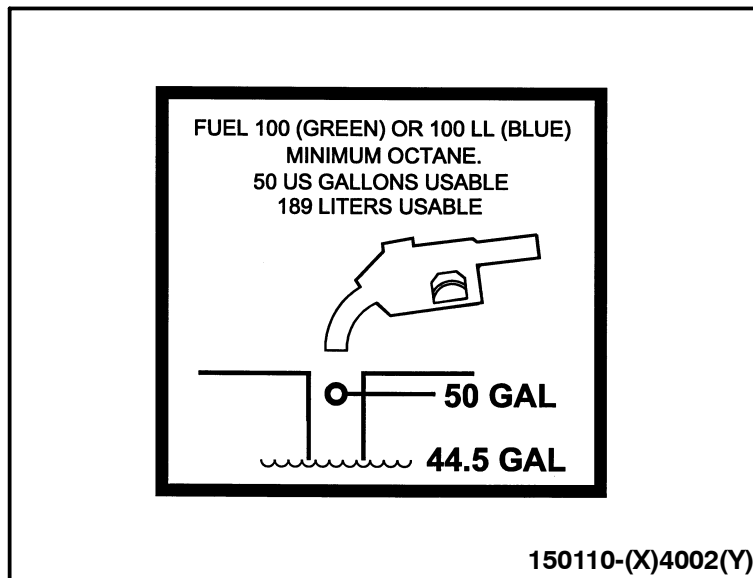
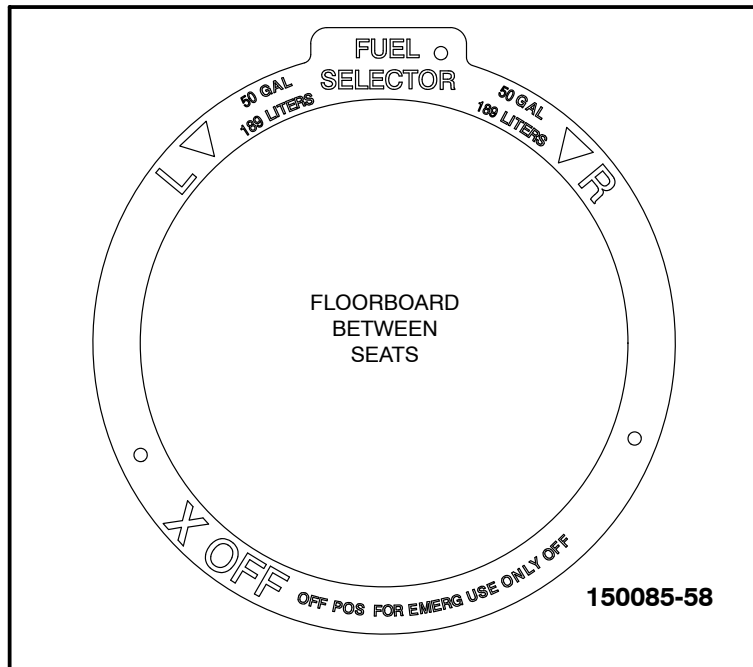
FUEL LIMITATIONS

Standard Tanks (2) 53.0 U. S. Gal. Each (200.6 liters)
Total Fuel Capacity 106 U. S. Gal. (401.3 liters)
Usable Fuel : 100.0 U. S. Gal. (378.5 liters)
Unusable Fuel : 6.0 U. S. Gal. (22.7 liters)
Fuel Grade (and color) : 100LL (low lead) (blue) or 100 Octane (green) is approved

DECALS AND PLACARDS

CABIN INTERIOR

FUSELAGE EXTERIOR



SECTION III – EMERGENCY PROCEDURES

SECTION IV – NORMAL PROCEDURES

No Changes to Section III and Section IV.

SECTION V – PERFORMANCE

M20R, M20U

INCREASE RANGE AND ENDURANCE BY 5.2 % OVER RANGE AND ENDURANCE OF 89 GALLON CAPACITY:

M20TN, M20V

INCREASE RANGE AND ENDURANCE BY 5.2 % OVER RANGE AND ENDURANCE OF 89 GALLON CAPACITY:

SECTION VI – WEIGHT AND BALANCE

AIRPLANE WEIGHING PROCEDURE

(A) LEVELING: Place a spirit level on the leveling screws above the tailcone left access door when leveling the aircraft longitudinally. Level the aircraft by increasing or decreasing air pressure in the nose wheel tire.

(B) WEIGHING: To weigh the aircraft, select a level work area and:

1. Check for installation of all equipment as listed in the Weight & Balance Record Equipment List.

2. Top off both wing tanks with full fuel. Subtract usable fuel, **100.0 U.S. gals. (378.5 liters)** @ 5.82 lb/gal(100LL) (.69 Kg/l) =**582.0 lbs. (264.0 Kgs.)**, from total weight as weighed.

_____*



M20R, M20U – OVATION 2 PROBLEM FORM

M20TN, M20V – ACCLAIM PROBLEM FORM

PROBLEM FORM – 50 GALLON TANKS					
STEP	ITEM	SAMPLE PROBLEM		YOUR PROBLEM	
		WEIGHT (Kg) Lbs	MOMENT (Kg-cm /1000) lb-in /1000	WEIGHT (Kg) Lbs	MOMENT (Kg-cm /1000) lb-in /1000
1.	A/C Basic Empty Wt.(W)(from page 6-5) (Includes Full Oil) 8 Qts.(7.57 Li) @1.875lbs /Qt.(.80 Kg/Li)(Sta. -20.19)(-51.3 cm) (Oil sump assumed FULL for all flights)	(1009) 2225	(114.6) 99.46		
2.	Pilot Seat (#1) *	(77.1) 170	(7.64) (aft pos) 6.63		
	Co-Pilot Seat (#2) *	(77.1) 170	(7.25) (2nd. pos) 6.29		
3.	Left Rear Seat (#3) or Cargo Area	(77.1) 170	(14.3) 12.41		
	Right Rear Seat (#4) or Cargo Area	(77.1) 170	(14.3) 12.41		
4	Fuel (Max. Usable – 100.0 Gal/582.0 Lbs) (378.5 Li/264.0 Kg) @ Sta 49.23(125 cm)	(164.7) 363	(20.59) 17.87		
5.	Baggage (Max. 120 Lbs(54.4 cm)@Sta.101.5 (257.8 cm)	(45.4) 100	(11.70) 10.15		
	Hat Rack (Max. 10 Lbs(4.54 Kg)@Sta. 126.0 (320 cm)				
6.	Loaded A/C Weight(Takeoff at Max. Weight) A/C will have to burn off 186 lbs. fuel before normal landing is accomplished.	(1528) 3368	(190.2) 165.0		
7.	Required Fuel Burn-Off 32 Gals (121 Li) @ 5.82 Lbs./Gal.	(84.3) 186	(-9.53) -8.27		
8.	MAXIMUM LANDING WEIGHT of A/C	(1452) 3200	(180.6) 156.7		
9.	Refer to Center of Gravity Moment Envelope, to determine whether your A/C loading is acceptable. CAUTION-DO NOT LAND A/C WHEN OVER 3200 LBS EXCEPT IN AN EMERGENCY SITUATION.				
*	Obtain the moment/1000 value for each seat position (FWD, MID or AFT) from loading computation graph.				

PRBFRM-50 GAL



SECTION VII – AIRPLANE AND SYSTEM DESCRIPTION

FUEL SYSTEM

Fuel is carried in two integrally sealed sections of the forward, inboard area of wing. Total usable fuel capacity is **100 U.S. gallons (378.5 liters)**. There are sump drains at the lowest point in each tank for taking fuel samples to check for sediment contamination or condensed water accumulation.

SECTION VIII – HANDLING AND SERVICING

SERVICING

REFUELING

Integrally sealed tanks, in forward, inboard sections of wing (LH & RH), carry the standard fuel quantity. With aircraft positioned on level ground, service each fuel tank after flight with 100 octane or 100LL aviation grade gasoline. **The fuel tank contains 44.5 gal (168.45 li) fuel when level is at bottom of filler standpipe. An additional 5.5 gallons (21.0 li.) of fuel may be added up to the 0.37” hole located top of the neck in the standpipe for a total of 50.0 gallons (189 li.) in each tank.**

SECTION IX – SUPPLEMENTAL DATA

SECTION X – SAFETY TIPS

No changes to Section IX or Section X.

