

**SUBJECT:** ALTERNATE FUEL BOOST PUMP, WELDON P/N 10054-A, FOR MOONEY M20K.

**MODELS/SERIAL NUMBERS AFFECTED:** Mooney M20K, S/N 25-0001 thru 25-0711.

**TIME OF COMPLIANCE:** At owners descretion.

**INTRODUCTION:** This Service Bulletin makes available the use of the Weldon auxiliary fuel boost pump, P/N 10054-1, as an alternate for the Dukes, P/N 1499-00-19, as installed in the Mooney M20K. Changes necessary to install this alternate pump are described in the instructions below.

**INSTRUCTIONS:**

1. Remove belly skin to gain access to fuel pump and related connections. Turn fuel selector OFF.
2. Remove Dukes Fuel Pump, 1499-00-19, after disconnecting tube assemblies, electrical connections and clamps.
3. Remove existing hardware from fuel system per Figure 1. See list of equipment to be removed under Parts List.
4. Remove 610260-3 brackets (2 ea.) from floorboard assy.; drill out rivets and deburr area.
5. Assemble new hardware and tube assemblies to Weldon Pump, P/N 10054-A. See Figure 1 for parts orientation. Install nipple, AN 816-4D, into pump body for drain fitting.
6. Assemble new 610260-13 brackets to Weldon Pump using existing clamps, AN735D40, and hardware. (See Figure 2 for position.)
7. Loosen gascolator retaining screws from inside cabin after removing gascolator trim cover. Gascolator position will change slightly for new installation. Existing holes may be elongated to allow gascolator position to shift. Remove tube assembly 610256-21 or -47 between fuel selector valve and gascolator, install tube assembly 610256-59. Remove fitting 610267-1 from gascolator and install C5405x8x4 elbow. Gascolator should now be in approximate new position.
8. Temporarily place assembled fuel pump, hardware and tube assemblies into position under floorboard and connect the tube assemblies to firewall fitting and gascolator fitting, C5405x8x4.  
NOTE: Brake hose assembly, 850109-059, must be repositioned to allow clearance for the Weldon Fuel Pump.
9. Be sure that all components have sufficient clearance for proper operation. Mark the locations for -13 brackets on the underside of the floorboard assembly, see Figure 2. Remove the fuel pump assembly from tube assembly connections and both -13 brackets. Attach -13 brackets to the floorboard assembly according to positions marked using 6 ea. AN470-4-4.5 (or length as needed) rivets.
10. Reinstall Weldon Fuel Pump into brackets and connect tube assemblies and electrical connections. Torque all connections and leak check. Secure all wiring and components as necessary. Tighten gascolator screws to secure gascolator in new position. Reinstall trim cover inside cabin.
11. Check tube assemblies, fuel pump, brake hose, and all components for adequate clearance and leakage.
12. Verify "Low Boost" fuel pressure. Install calibrated pressure gauge ("T" into fuel line at firewall fitting). Fuel pressure should be 6-8 P.S.I. If needed adjust slide tap on variable resistor until auxiliary pump puts out 6-8 P.S.I. on calibrated gauge with "Low Boost" switch ON. (Resistor located above nose wheel well near pilots right knee).  
NOTE: If "Low Boost" auxiliary pump pressure cannot be adjusted to 6-8 P.S.I. with variable resistor a voltage regulator (VR-436) is available which provides full bus voltage to start auxiliary pump then regulates to a lower voltage providing the desired fuel pressure continuously. Adjustment of voltage regulator is obtained by removing rubber plug and turning potentiometer until 6-8 P.S.I. is obtained. Mixture full rich, throttle at idle.
13. Remove calibrated gauge and reinstall belly skin.

**REFERENCE DATA:** None

S.B. M20-227B

DATE: 1-10-84

**PARTS LIST:** The following items will be removed from the aircraft and replaced with similar components supplied in this kit:

**REMOVE:**

	PART NO.	DESCRIPTION	QTY
1)	1499-00-19	Fuel Pump (Dukes)	1
2)	610256-21 or -47	Tube Assy (Gascolator to Selector)	1
3)	610256-25	Tube Assy (Gascolator to Pump)	1
4)	610256-33	Tube Assy (Pump to Firewall)	1
5)	610266-1	Fitting	1
6)	AN6289-6D	Nut	1
7)	AN6291-6	Backup Ring	1
8)	MS29512-06	O-Ring	1
9)	610269-1	Fitting	1
10)	610260-3	Bracket	2
11)	610267-1	Fitting (Gascolator)	1

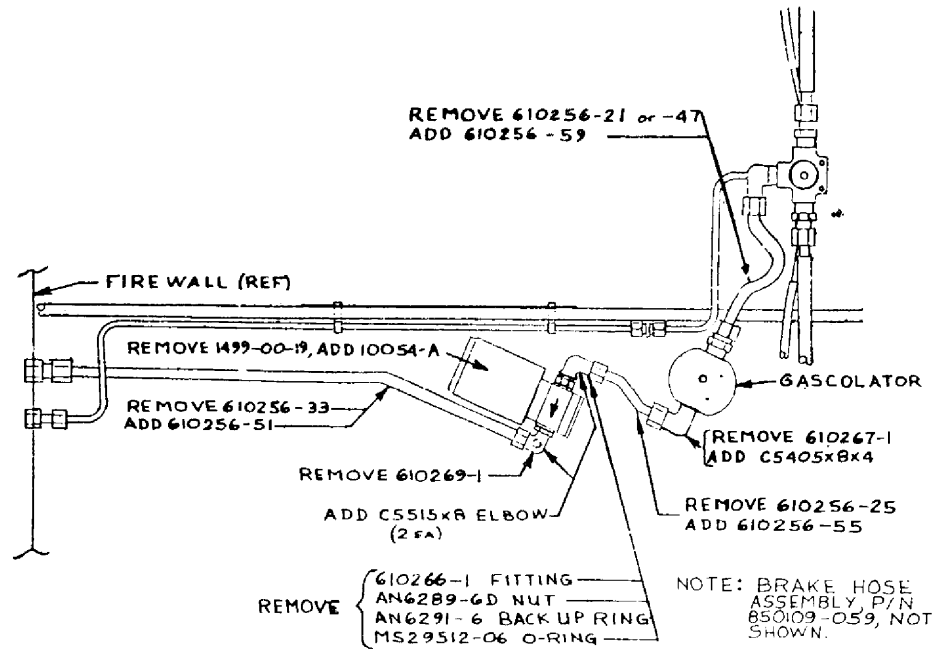
**KIT P/N S.B. M20-227-1**

	PART NO.	DESCRIPTION	QTY
1)	10054-A	Fuel Pump (Weldon)	1
2)	610256-51	Tube Assy (Pump to Firewall)	1
3)	610256-55	Tube Assy (Gascolator to Pump)	1
4)	610256-59	Tube Assy (Gascolator to Selector)	1
5)	610260-13	Bracket	2
6)	C5515x8	Elbow	2
7)	C5405x8x4	Elbow (Gascolator)	1
8)	AN816-4D	Nipple (Drain Fitting in Pump)	1

**KIT P/N S.B. M20-277-2 (Optional)**

	PART NO.	DESCRIPTION	QTY
1)	VR 436	Voltage Regulator	1

FIGURE/TABLES: Figure 1 - General View of Fuel System  
Figure 2 - View of Bracket Relocation



VIEW LOOKING DOWN

FIGURE 1

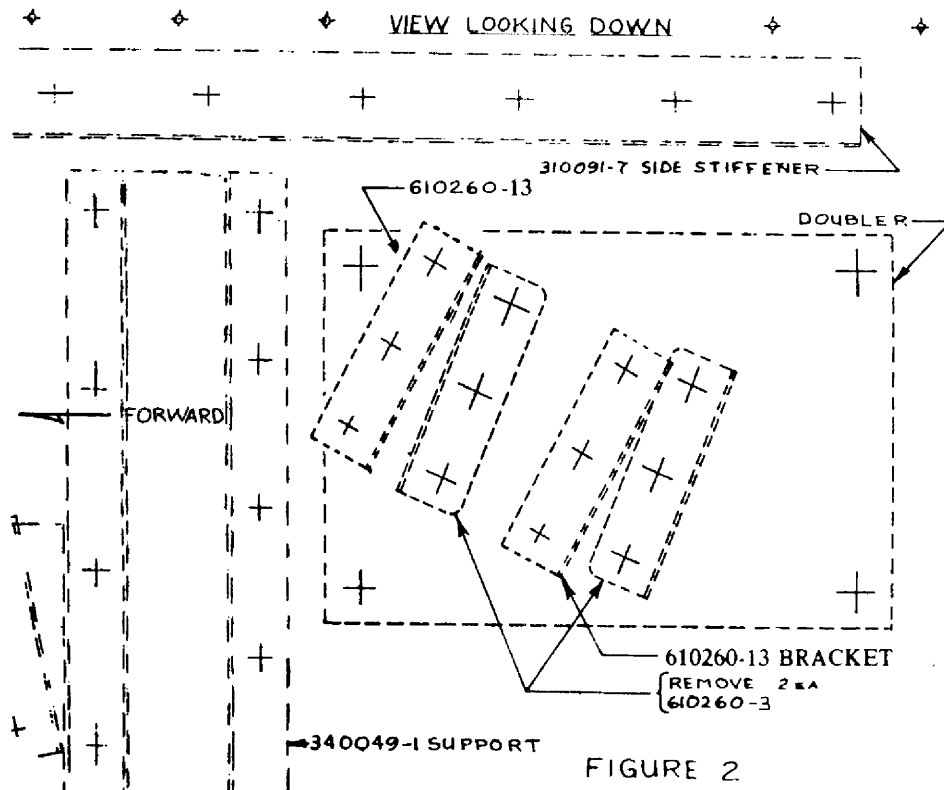


FIGURE 2