



SUBJECT: POSSIBLE FUEL LINE CHAFING

MODELS AFFECTED: M20C, S/N 20-0010 thru 20-0021  
M20E, S/N 21-0024 thru 21-0035  
M20F, S/N 22-0013 thru 22-0035

TIME OF COMPLIANCE: MANDATORY within the next 10 flight hours.

INTRODUCTION: Investigation of the fuel line routing from the electric fuel pump to the 45° bulkhead fitting at the firewall may reveal possible interference with the left wheel brake cylinder linkage. This condition will be aggravated by brake shoe wear and could result in a dent or possibly a cut in the line which could cause the engine to malfunction.

INSTRUCTIONS: Remove the left exhaust cavity closeout panel. Inspect the .375 Dia. fuel line which connects the electric pump outlet to the firewall fitting to see if the left wheel brake cylinder linkage has .06 clearance between the lever and the fuel line with the brake pedal fully depressed. See Fig. 1. To depress the pedal fully, open up the left brake bleed valve, depress the pedal completely and hold. Check for clearance, close the bleed valve, release the brake pedal and fill up the hydraulic reservoir with brake fluid. If there is more than .06 clearance, reinstall the left exhaust cavity exhaust panel. If there is less than .06 clearance, install Kit No. M20-187.

INSTALLATION OF KIT M20-187:

1. Put the selector valve in the "Off" position.
2. Remove the fuel line that connects the selector valve to the electric fuel pump.
3. Remove the fuel line that connects the electric fuel pump to the 45° bulkhead fitting on the firewall. Reclamp hyd. line with spacers.
4. Disconnect the two electrical wires to the pump.
5. Cut the safety wire from the four screws, remove the screws and the pump from its mounting bracket.
6. Loosen the nut and remove the 45° bulkhead fitting and seals from the outlet of the pump.



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Installation of  
Kit M20-187 cont'd.

7. Exchange the positions of the drain tube fitting and the pipe plug which is in the opposite drain hole.
8. Install a 90° bulkhead ell P/N 610076 nut (AN 6289-6D), "O" ring (MS 29512-06), and seal (AN 6291-6) as per AND 10046 and position the ell pointing forward.
9. Re-install Dukes pump by rotating 180° from original position and with the outlet pointing forward, tighten the four mounting screws, and safety wire the screw heads.
10. Install fuel line 610231-501 connecting the selector valve to the electric pump. See Fig. 2.
11. Install fuel line 610231-503 connecting the electric pump to the 45° bulkhead ell at the firewall. See Fig. 2.
12. Reconnect the electrical wires to the pump.
13. Wrap Spirawrap around fuel pump wires.
14. Turn fuel selector on and start pump.  
NOTE: If fuel pressure is not normal it may be necessary to bleed the line at the engine.
15. With pump running, check for leaks. If no leaks,
16. Inspect for positive clearance in all areas.
17. Reinstall the left exhaust cavity closeout panel.

SERVICE BULLETIN

KIT NO. SB M20-187:

1. Fuel Line Assy - P/N 610231-501 (one)
2. Fuel Line Assy - P/N 610231-503 (one)
3. 90° Bulkhead Ell P/N 610076 (one)
4. Nut P/N AN 6289-6D (one)
5. "O" Ring Seal P/N MS 29512-06 (one)
6. Spirawrap - P/N 500013-2 x 3.5" Long
7. Seal P/N AN 6291-6 (one)

COMPLIANCE:

Upon compliance with this Service Bulletin, please fill out the enclosed card and mail it to Mooney Aircraft Corporation. If no chafing exists, please indicate. Make entry note in aircraft log book if Service Bulletin is complied with.



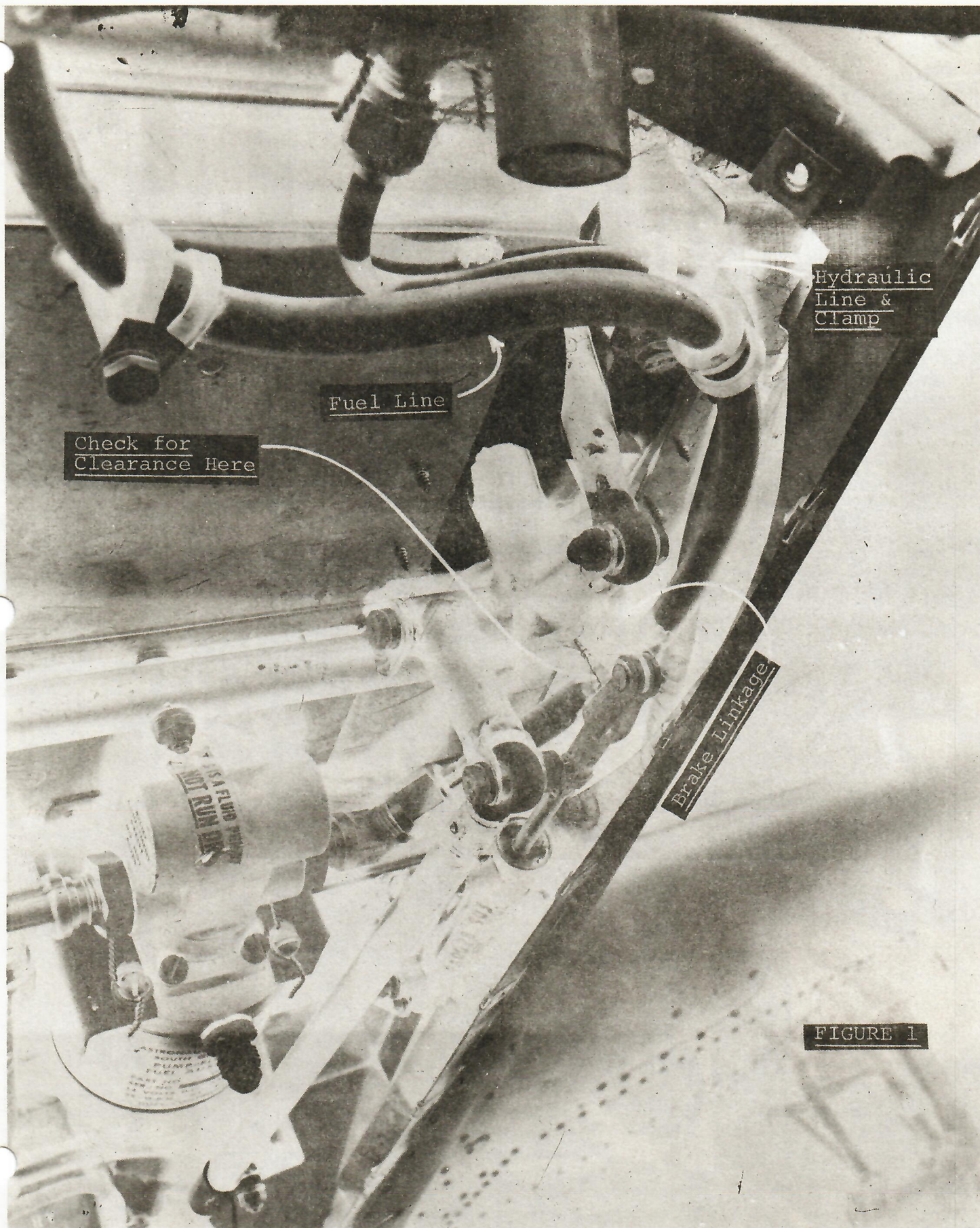


FIGURE 1



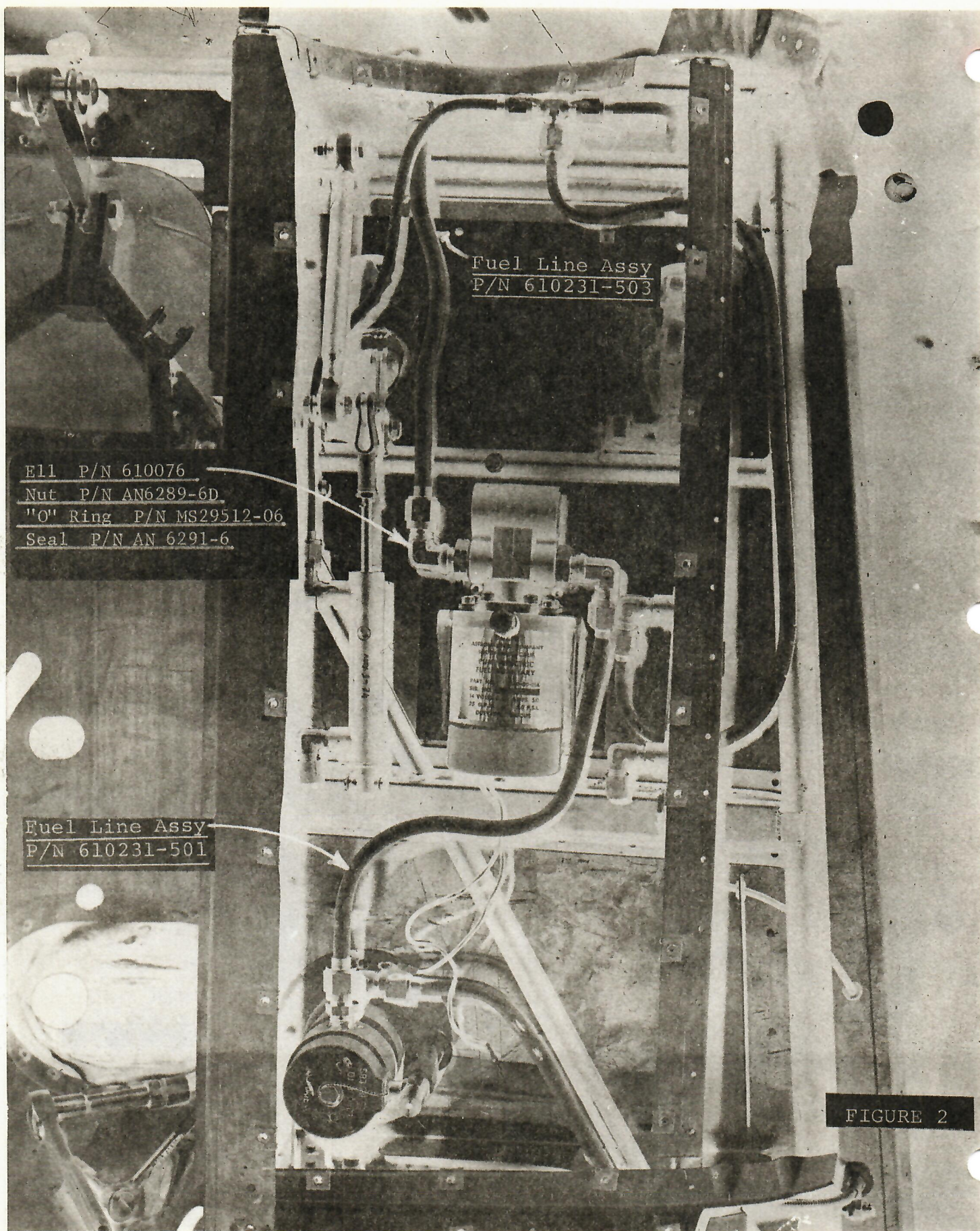


FIGURE 2