



THIS SERVICE BULLETIN SUPERSEDES REV. A

SUBJECT: Replacement of Dukes Astronautics Fuel Pumps, Part No. 4140-00-19, 4140-00-19A, 4140-00-21, and 4140-00-21A

MODELS AFFECTED: M20E (Super 21), Serial No. 101 thru 850
M20C (Mark 21), Serial No. 2623 thru 2737, 2739 thru 3198
M20D (Master), Serial No. 201 thru 260

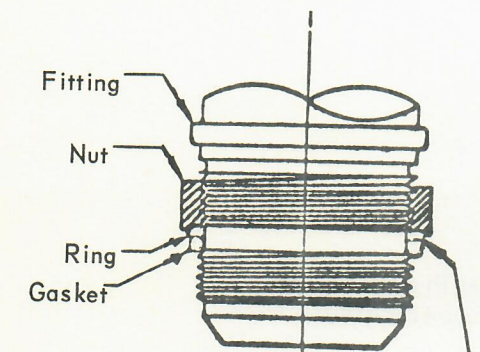
| TIME OF COMPLIANCE: | Mooney Model | Dukes Fuel Pump P/N | Dukes Fuel Pump S/N | Time of Compliance |
|---------------------|--------------|---------------------|-----------------------------|--|
| | M20E | 4140-00-19 | 101, 102, 103, 150 thru 312 | Within next 25 hours in service after 4-12-65 |
| | M20E | 4140-00-19 | 313 thru 613 | Within next 100 hours in service after 4-12-65 |
| | M20E | 4140-00-19A | 614 thru 1550 | Within next 100 hours in service after effective date of this Service Bulletin |
| | M20C & M20D | 4140-00-21 | 100, 102, 103 150 thru 244 | Within next 25 hours in service after 4-12-65 |
| | M20C & M20D | 4140-00-21 | 245 thru 409 | Within next 100 hours in service after 4-12-65 |
| | M20C & M20D | 4140-00-21A | 410 thru 1158 | Within next 100 hours in service after effective date of this Service Bulletin |

INTRODUCTION: Dukes Astronautics has incorporated design features in their pumps, Part No. 4140-00-19, 4140-00-19A, 4140-00-21, and 4140-00-21A, which will extend their service life. Service life of these pumps requires replacement as indicated above in the Time of Compliance section of this Service Bulletin. The replacement pumps can be identified by an 'A' after the last digit of the part number (i.e., 4140-00-19A and 4140-00-21A), and by serial numbers above serial number 1159 for 4140-00-21A and serial numbers above serial number 1551 for 4140-00-19A pumps.

Log book entries should be made to show compliance with this Service Bulletin.

- INSTRUCTIONS:**
1. Remove the Dukes fuel pump now installed on either the lower left hand side of the firewall or in the left hand exhaust cavity.

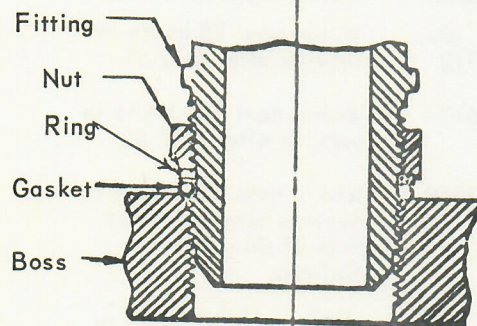
PROCEDURE FOR RECONNECTING FUEL OUTLET FITTING



STEP 1

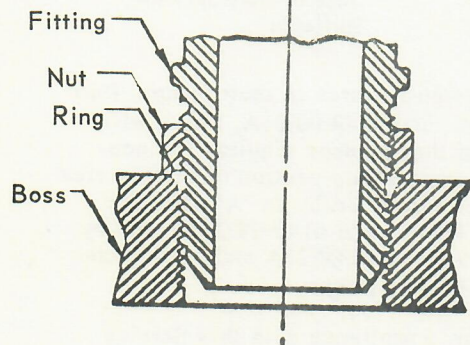
Coat male threads of fitting, ring and gasket, sparingly with petrolatum, Spec. AN-P-51 (vaseline), or hydraulic fluid and assemble as shown. Work the ring into the counterbore of the nut; then turn the nut down until the gasket is pushed firmly against the lower threaded section of the fitting.

Install ring with smooth (hair) side toward the O ring



STEP 2

Install the fitting into the boss and, at the same time, keep the nut turning with the fitting until the gasket contacts the boss. This point can be determined by a sudden increase in torque. With the fitting in this position, put a wrench on the nut to prevent its turning and, at the same time, turn the fitting in $1\frac{1}{2}$ turns. Position fitting by turning in not more than one additional turn.



STEP 3

Hold the fitting and turn the nut down tightly against the boss. Slight extrusion of the ring is not detrimental.

FIGURE 1

2. Remove the fittings from this old pump and install them in the new pump as shown in Figure 1.
3. Re-install new pump.

NOTE: If fuel pump installation has not been reworked per Mooney Service Letter 20-120, this rework must be accomplished upon installation of the new pump.

PARTS LIST:

1. Service Bulletin Kit No. M20-121-1 (for M20E)

| <u>No. Req'd</u> | <u>Item</u> |
|------------------|---|
| 1 | Pump, Dukes Part No. 4140-00-19A (with Serial No. above 1551) |
| 2 | O-Ring, MS29512-6 |
| 2 | Ring Back-Up, AN6291-6 |

2. Service Bulletin Kit No. M20-121-2 (for M20C and M20D)

| <u>No. Req'd</u> | <u>Item</u> |
|------------------|---|
| 1 | Pump, Dukes Part No. 4140-00-21A (with Serial No. above 1159) |
| 2 | O-Ring, MS29512-6 |
| 2 | Ring Back-Up, AN6291-6 |

COMPLIANCE:

This kit is available upon request from your local Mooney distributor.