

SUBJECT: MOONEY PFM, INSPECTION OF EXHAUST MUFFLER, MOONEY P/N 630024-001

MODEL/S/N
AFFECTED: MOONEY M20L, S/N 26-0001 THRU 26-0041

TIME OF
COMPLIANCE: WITHIN THE NEXT 25 FLIGHT HOURS

INTRODUCTION:

There is a possibility that certain early production units of the above listed muffler may develop exhaust leaks. This could lead to a condition which would allow exhaust fumes to enter the cabin. These mufflers can be identified by the presence of a welded-on data plate or excessive grinding in the area of the data plate on the muffler shell. Mufflers with the data engraved on the muffler shell and which do not have excessive grinding on the shell are not included in the production run of suspect mufflers and may be returned to service.

INSTRUCTIONS:

1. Remove both upper and lower cowling per M20L Service and Maintenance Manual (S & M) Section 71-10-00.
2. Visually inspect muffler assembly for presence of welded-on data plate (location can vary, ie. bottom of muffler shell, approximately C/L of engine case or on end cap opposite exhaust pipe end) (See Fig. M20-243-1), or for signs of excessive grinding near data plate area as well as other areas of muffler shell. If data plate is not on end cap, Step 3. will be necessary.
3. Remove 9 nuts, washers and bolts on cabin heat muffler shroud, P/N 630025-501, (front side only) to allow visual access to bottom of muffler. Retain the bolts, washers and nuts.
4. If welded-on data plate, signs of excessive grinding on muffler shell, or evidence of any exhaust leaks are present, the muffler **MUST BE REPLACED** with a new muffler which has the data etched on the shell.

The following must be accomplished [Steps, 4, (A) through (I)][Refer to M20L Parts Catalog, Figure 56, page 198]:

- A. Remove air ducts, inlet and outlet, for cabin heat muffler shroud.
- B. Remove and discard bolt, washer and nut (Index No. 3), clamp and seal (Index No. 2) that connects exhaust collector manifold to muffler.

CAUTION: - Support the muffler/shroud assembly to keep from falling at this time.

- C. Remove two bolts and hardware, both sides, attaching muffler hanger brackets to hanger assemblies at Index No. 6 location.
 - D. Carefully lower muffler/shroud assembly clear of aircraft.
 - E. Remove the aft row of bolts, washers and nuts from cabin heat muffler shroud and remove shroud from old muffler assembly. Retain all hardware.
 - F. Install shroud on new muffler assembly using existing hardware.
 - G. Install new muffler/shroud assembly to the hanger assemblies (Index No. 5) at Index No. 6 location using existing hardware. Leave bolts/nuts loose until exhaust flanges are secured, Step H. below. Check studs that hold hanger assemblies to engine case for security. Use locktight on studs if loose.
 - H. Use new clamp, seal and bolt, washer and nut to install new muffler to exhaust collector manifold. Use antiseize compound on bolt and nut. Torque muffler clamp bolt/nut to 200 In. lbs. Tighten hanger bracket's bolts and nuts.
 - I. Reconnect cabin heat muffler shroud air ducts, inlet and outlet, using existing hardware.
5. If it is determined that the installed muffler is a good configuration unit, inspect entire muffler for signs of exhaust leaks, especially around welded seams and inlet and outlet pipes. This step will require complete removal of the cabin heat muffler shroud (See Steps 4., A. through E) unless the **OPTIONAL** method described below is used.
OPTIONAL - pressurize original good configuration muffler with 0.5 PSI air for leak check, if desired.
 6. If there is no welded-on data plate, no sign of excessive grinding nor signs of any exhaust leaks, it is not necessary to replace the muffler and it may be returned to service. Etched data **MUST** appear on muffler shell.
 7. Re-install the lower and upper cowling per M20L S & M manual, Section 71-10-00.
 8. Record compliance action in Aircraft Log book and return aircraft to service.

NOTE: Mufflers with no data plate, no grind marks nor etched data on shell may be left on the aircraft. However the engine S/N and the total flight time must be recorded and this information sent to Mooney Service Parts Department for submittal to Porsche.

SERVICE BULLETIN M20-243

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WARRANTY: Mooney Aircraft Corporation will allow up to 1.0 hour labor to accomplish the inspection portion of this bulletin. If the muffler must be replaced an additional 1.0 hour of labor will be allowed. The parts kit will be charged to the Mooney Service Center's account and upon receipt of proper paperwork by the Service Parts Department that amount, plus labor allowance, will be credited to the Service Center's account. This SB must be complied with within 90 days of issue date to receive warranty credit.

REFERENCE DATA: NONE

PARTS LIST: KIT P/N - M20-243-1

ITEM	P/N	DESCRIPTION	QTY
1.	630024-001	MUFFLER	1
2.	933.111.127.00	SEAL	1
3.	933.111.129.00	CLAMP	1
4.	900.074.309.PO (NAS1305-27)	BOLT	1
5.	900.031.030.PO (AN960-516)	WASHER	1
6.	900.084.079.PO (MS21042L5)	NUT	1

FIGURES/
TABLES: SEE BELOW

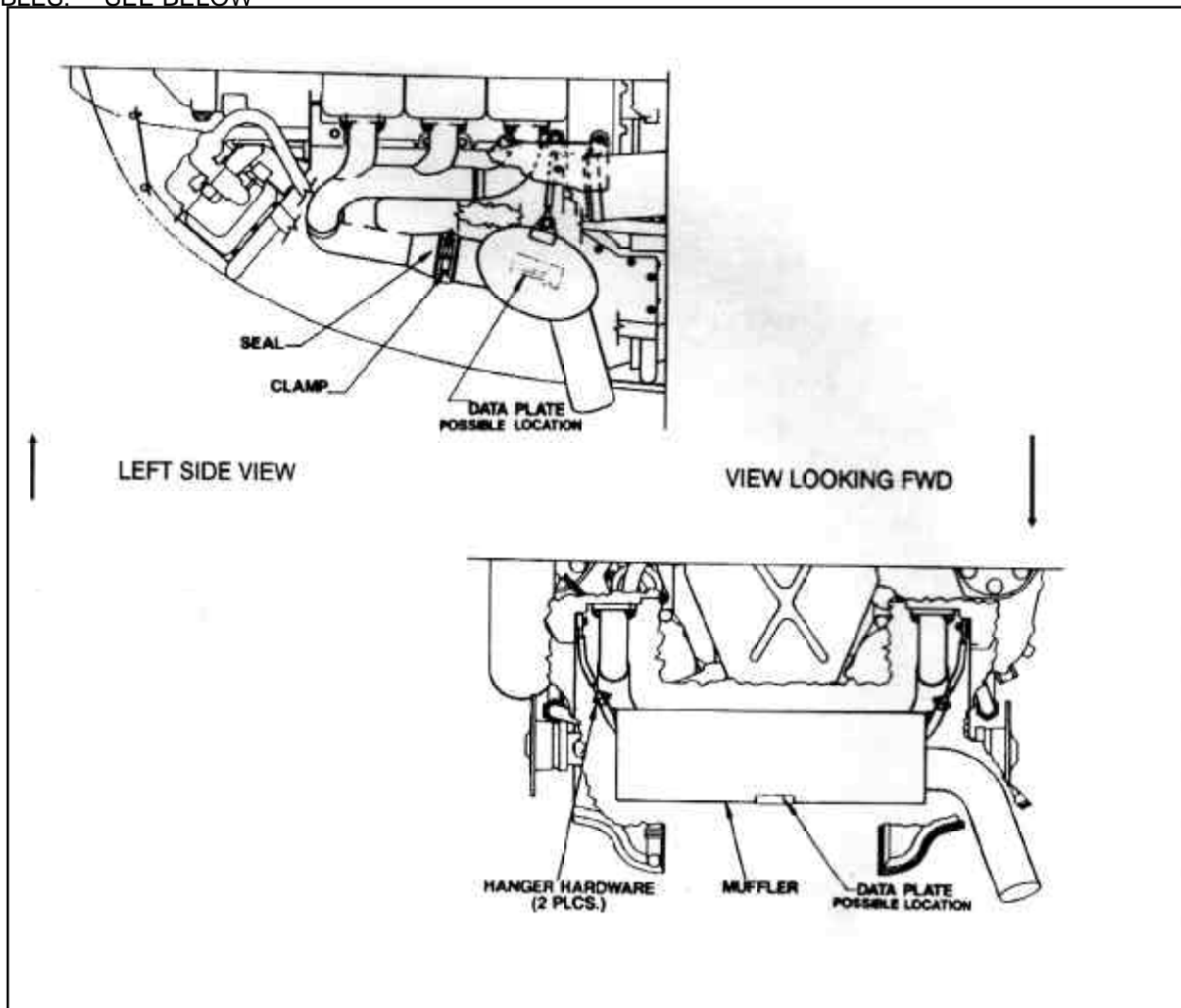


FIGURE M20-243-1