

SUBJECT: Mooney PFM, M20L, Oil Cooler Inspection/Oil Cooler Bracket Retrofit.
MODEL: MOONEY M20L, S/N 26-0001 THRU 26-0041
TIME OF COMPLIANCE: WITH IN THE NEXT 50 FLIGHT HOURS or AT NEXT SCHEDULED MAINTENANCE

“THIS SERVICE INSTRUCTION IS CONSIDERED MANDATORY”

INTRODUCTION: There has been reports of oil cooler mounting flanges cracking after approximately 250 flight hours. The bracket used to mount the oil cooler to the baffle and assist in supporting the oil cooler air inlet duct has been redesigned to alleviate loads on the oil cooler mounting flanges.

INSTRUCTIONS:

1. Remove upper and lower cowling per Service and Maintenance Manual # 140, Section 71-10-00.
2. Loosen oil lines (in and out), left side of cooler, from oil cooler and move out of the way. Loosen hard line at nut on side of engine baffle to allow clearance, if needed.

CAUTION: Catch the oil that will come from both lines and the cooler. Cap both lines.

3. Remove cabin heat inlet air duct from right side of oil cooler inlet air duct.
4. Remove the 9 bolts, nuts and washers holding existing bracket and oil cooler to lower front engine baffle.
5. Carefully lower oil cooler and air inlet duct from the bracket.
6. Remove the two metric bolts (M10 x 25mm GR 8.8) holding the bracket to the propeller gear box mounting flange.
7. Bracket should be free at this time. Remove bracket from baffle.
8. Remove oil cooler inlet air duct from existing oil cooler.
9. Position new oil cooler bracket (620041-503) in place, on baffle, and mark the mounting holes, left and right side of bracket, on lower front baffle. Use a pin router or round file to elongate these holes (6 plcs) to match the new bracket holes.
10. Position bracket in place and secure top mounting metric bolts (M10 x 25mm GR 8.8)(2 plcs) to the propeller gear box mounting flanges.
11. Position new oil cooler assembly and doublers, 620041-507 (2 plcs), -509 (1 plc) on bracket. Start bolts/washers AN3-5A/AN960-10L (9 plcs) through baffle, bracket, oil cooler flange and into doubler plate nuts. Leave loose.
12. Position both oil cooler lines (in and out) on oil cooler and secure all connections.
13. Tighten the 9 bolts attaching oil cooler and bracket to baffle.
14. Position and secure existing inlet air duct to oil cooler using -507 doubler (2 plcs), AN3-5A bolts and AN960-10L washers (6 plcs). Re-connect cabin heat air duct to oil cooler inlet air duct.
15. Assemble 620041-013 aluminum angle to right side of 620041-503 bracket assembly with AN3-5A bolts and AN960-10L washers (2 plcs).

NOTE: Use AN960-10 washers (approximately 3 on lower bolt) between 620041-013 angle and 620041-503 bracket to prevent contact of angle with oil cooler wall.

16. Leak check oil cooler line connections.
17. Add oil to engine oil tank if necessary to bring up to flight minimums.
18. Re-install lower and upper engine cowling per S & M Section 71-10-00.
19. Enter compliance note in aircraft log book and return aircraft to service.
20. Package removed oil cooler and bracket for shipment to Service Parts Department, Mooney Aircraft Corporation.

WARRANTY: Mooney aircraft corporation will allow 1.5 hours labor to accomplish this retrofit action. SIM20-85-1 kit will be charged to the Mooney Service Center at the time of shipment. Credit will be given when the removed parts and properly completed paperwork are received by the Service Parts Department. Labor allowance and credit for the kit will be issued only if the retrofit action is completed within 180 days from the issue date of this Service Instruction.

REFERENCE DATA: N/A

PARTS LIST: KIT PART NUMBER — SIM20-85-1

ITEM	P/N	DESCRIPTION	QTY
1.	620041-503	BRACKET ASSY	1
2.	620041-013	ANGLE	1
3.	620041-507	DOUBLER ASSY	4
4.	620041-509	DOUBLER ASSY	1
5.	620058-001	OIL COOLER ASSY	1
6.	AN3-5A	BOLT	17
7.	AN960-10L	WASHER	17
8.	AN960-10	WASHER	6

FIGURES/TABLES: N/A