

Maule Aircraft Corporation

6780 BROOKLYN ROAD

JACKSON, MICHIGAN - 49201

PHONE KE 6-8642
AREA CODE 517

June 15, 1965

Service Letter No. 7
Model effected: M-4-210
Serial Numbers effected 1001 thru 1035

Dear Customer:

We have received reports of fuel starvation during various flight attitudes. Several investigations have been completed which indicate some changes should be made to the Model M-4-210 fuel system.

These changes consist of:

- I. Installing a 3/8 inch vent line between the header and main fuel supply tank. (See Sketch No. 1).
- II. Installation of a lower pressure check valve in the vapor return line (engine to header tank).
- III. Reroute both the main supply line and ~~the vapor return line~~ vapor return line between the engine driven fuel pump and aircraft firewall. (See Sketch No. 2)
- IV. Provide additional cooling air on the engine driven fuel injector pump.

The parts and instructions shown on the attached instruction sheet should be used.

Please return the enclosed post card showing all work has been completed.

Very truly yours,
MAULE AIRCRAFT CORPORATION

Daniel Yother
Project Engineer

NOTE: Service Letter #31 must be complied with also.

I. 3/8 Vent Line

1. Install a 3/8 inch vent line between header and main fuel supply tank as follows: (SEE Sketch No. 1)
2. Remove fairing at wing root and front left door post.
3. Drain fuel from fuel tanks. Remove 1/4 inch vent line between header tank and hose fitting at main fuel tank.
4. Install a 1/8 to 1/4 inch pipe adapter and 90° elbow AN822-6D at top rear opening in header tank.
5. Route the 3/8 inch vent line from header tank to wing root. Make sure the vent line has a smooth, gradual slope from header tank to door post.
6. Connect vent line to fuel tank at the 1/4 inch vent tube using hoses and clamps as shown on sketch No. 1.

Parts required for Step I :

| Item | Description | Required |
|------|----------------------------------|-----------|
| 1. | 1/8 to 1/4 pipe adapter | 1 |
| 2. | Elbow 90° An822-6D | 1 |
| 3. | Nut An 818-6D | 1 |
| 4. | Sleeve AN819-6D | 1 |
| 5. | 3/8 x .035 vent line | 44 inches |
| 6. | 3/8 I.D. hose | 2 inches |
| 7. | 1/4 I.D. x 3/8 O.D. hose | 1 inch |
| 8. | Hose clamps (Aeroseal QS100-M8S) | 2 |
| 9. | Instruction Sheet | 1 |
| 10. | Dukes 366-00 Valve | 1 |
| 11. | Nut An818-4D | 1 |
| 12. | Sleeve AN819-4D | 1 |

II. New Valve

1. Installation of a lower pressure check valve in the vapor return line as follows: (See Sketch No. 1)
2. Disconnect vapor return line and remove the check valve installed between the header fuel tank and engine vapor return line.
3. Install new check valve Dukes P/N 366-00 in the header vapor return line as shown. Cut the forward line down to fit and connect to the valve.

II. New Valve Con't

Parts required for Step II:

| Item | Description | Required |
|------|--|----------|
| 1. | Dukes 366-00 Valve | 1 |
| 2. | Connecting line with fittings (p/n 5182X-20) | 1 |

Note: Service Letter #31 must be complied with also.

III & IV. Reroute Fuel Line on Engine & Add Cooling for Pump.

1. Reroute both the main supply line and vapor return line between engine driven fuel pump and aircraft firewall as follows: (See Sketch No. 2)
2. Remove spinner propeller and cowling.
3. Disconnect vapor return line and main fuel supply line at engine driven fuel pump and firewall.
4. Turn fittings at the engine driven fuel pump and firewall upward as shown on sketch.
5. Cut 1 7/8 D holes in the rear engine baffle as shown on sketch No. 2 detail "B".
6. Install the grommets in these holes.
7. Reroute the fuel lines over the top of the engine as shown on the sketch.
8. Attach lines at ends and clamp and tie in place as shown.
9. Remove lines at engine pump and reinstall the engine cowling.
10. Locate the holes as per sketch No. 2 page 1 and cut them into the cowling.
11. Reattach the lines to the engine pump and check for a $\frac{1}{4}$ inch clearance all around the fitting. Adjust clearance by turning fittings or cutting hole out.
12. Check for line clearance at engine cowling, engine and engine mount. Adjust as needed.

Instruction Sheet
Service letter No. 7

Page 3 *fb*

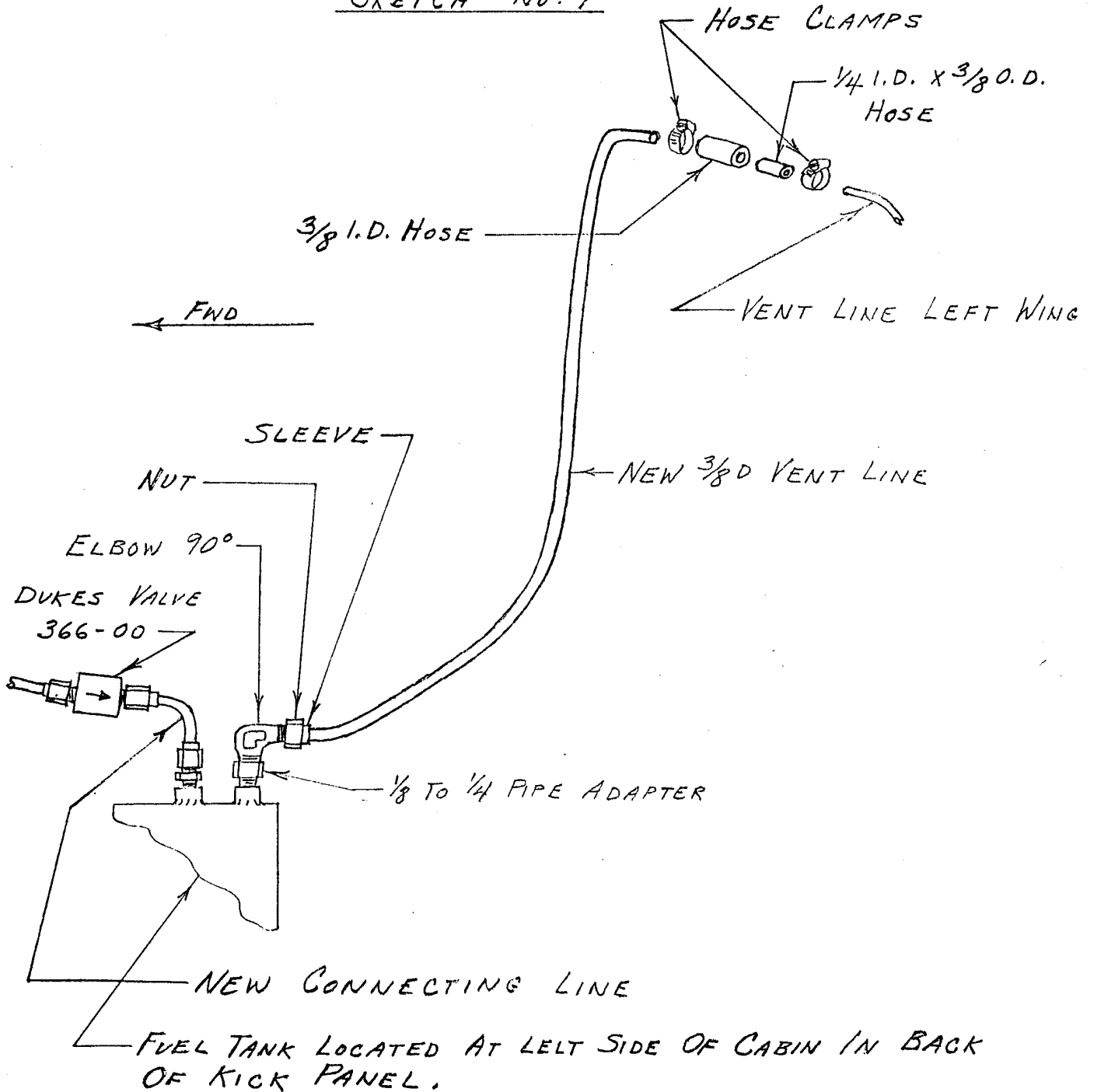
III & IV Con't

Parts required for Step III

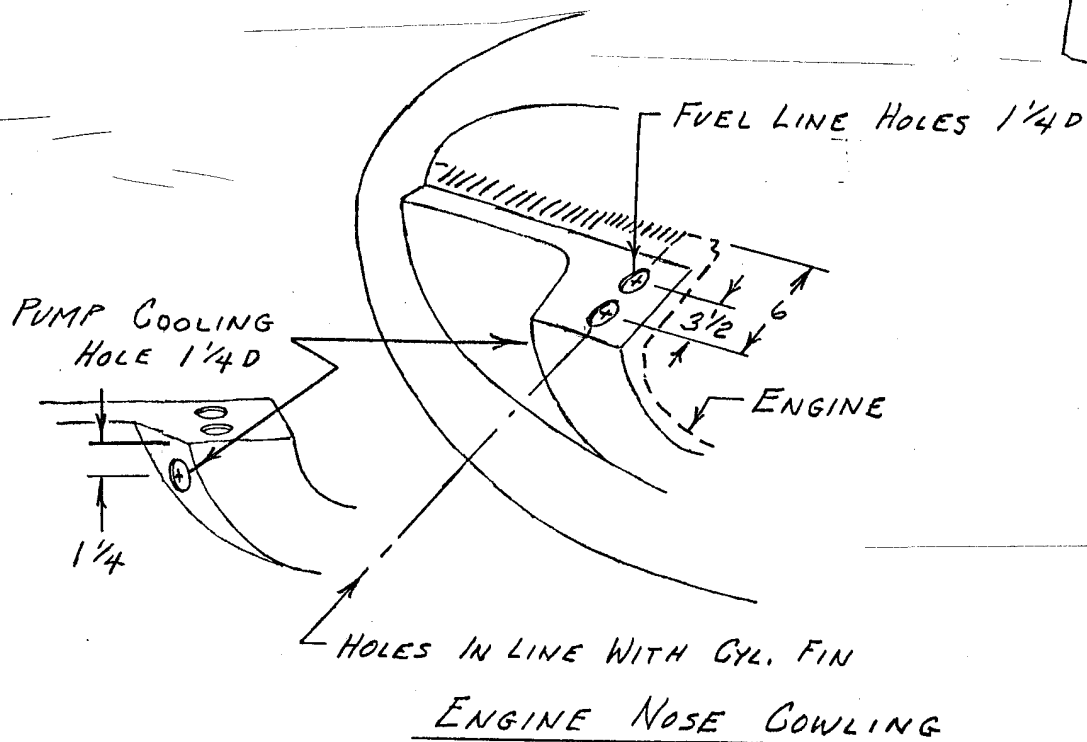
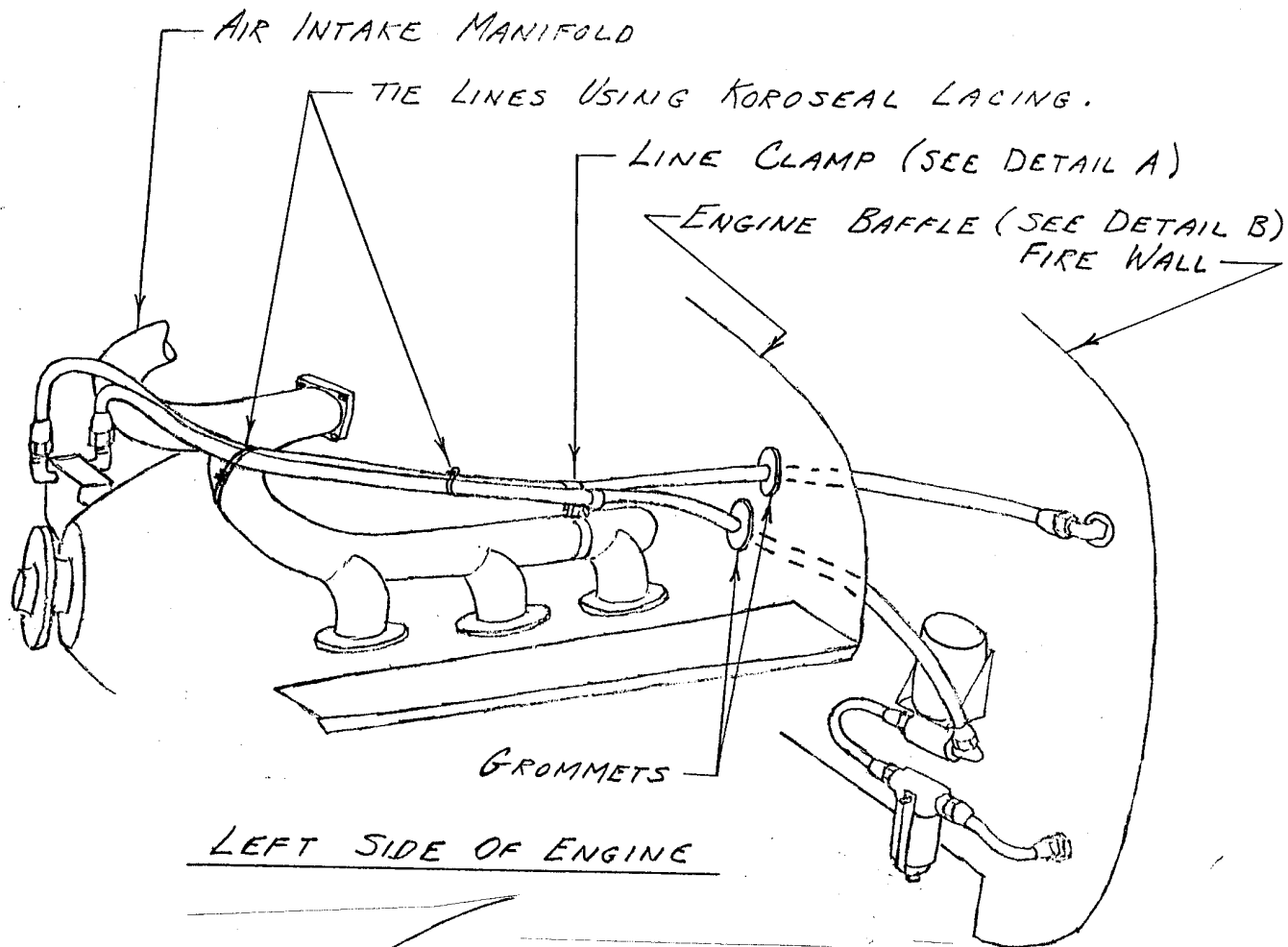
| Item | Description | Required |
|------|------------------------|----------|
| 1. | Koroseal lacing (1/8D) | 3 ft. |
| 2. | Manifold Clamp | 1 |
| 3. | Adel clamps 755-12-2-8 | 2 |
| 4. | Grommets AN931-16-30 | 2 |
| 5. | Screw AN520-10-16 | 1 |
| 6. | Washer AN960-10 | 1 |
| 7. | Nut AN365-1032 | 1 |

INSTRUCTION SHEET
SERVICE LETTER NO. 7

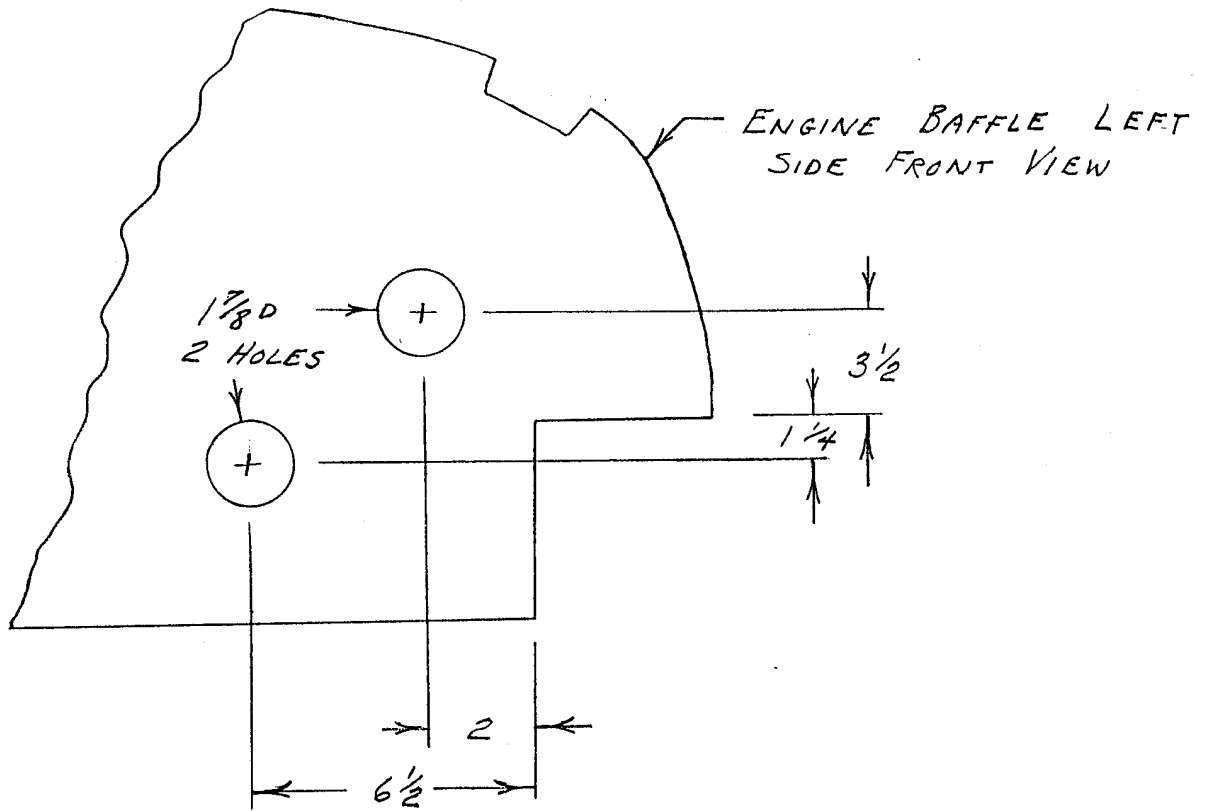
SKETCH No. 1



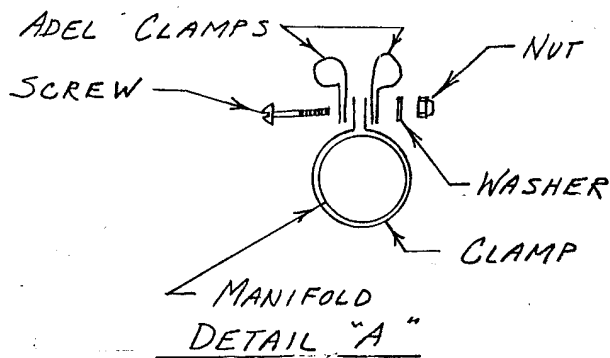
SKETCH No. 2



INSTRUCTION SHEET
SERVICE LETTER No. 7
SKETCH No. 2



DETAIL "B"



MAULE AEROSPACE TECHNOLOGY, INC.

SERVICE LETTER #7 - COMPLIANCE RECORD

Airplane Serial Number _____

Airplane Registration Number _____

The following action was taken with respect to this Service Letter:



Service Letter #7 completed

Certified by _____

(Signature)

(Printed name)

Title _____

(Owner, A&P, IA, etc.)

Date performed _____

In an effort to keep our mailing list current for sending Service Letters, Service Bulletins, etc., please fill in the following:

Owner's name _____

Owner's address _____

Mail this Compliance Record to: Maule Aerospace Technology, Inc.
Engineering Records
Spence Field
Moultrie, GA 31768