

Rockwell service letter No. SL-AG-92

International

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Service Letter No. SL-AG-92
6 May, 1977

CARBURETOR AIR TEMPERATURE INDICATOR AND IMPROVED EXHAUST SYSTEM INSTALLATION

MODELS AFFECTED: S-2R, S/N 5000 thru 5083.

REASON FOR PUBLICATION: To improve exhaust system reliability and provide indicator for carburetor air temperature.

COMPLIANCE: At owners discretion.

NOTE

If any problems are encountered while complying with this service letter, contract your nearest Thrush Commander dealer or your Thrush Commander regional service manager.

BY WHOM WORK WILL BE ACCOMPLISHED: A & P Mechanic or equivalent

APPROVAL: FAA DER Approved

ESTIMATED MAN HOURS: Sixteen (16) Hours

PARTS DATA: Parts required to comply with this Service Letter may be purchased thru your nearest Thrush Commander Dealer for \$945.00 net. Reference this Service Letter, aircraft model and factory serial number when ordering Service Letter No. SL-AG-92 kit consisting of the following:

Price subject to change without notice.

<u>QTY</u>	<u>Part No.</u>	<u>Description</u>
1 ea	50175-563	Placard
1 ea	60743-1	Exhaust Manifold Assy
1 ea	60749-3	Muff Assy
1 ea	60749-17	Cover

1 ea	60749-23	Placard
1 ea	60749-25	Boss
1 ea	60749-27	Spacer
1 ea	90176-247	Wire
1 ea	90176-248	Wire
1 ea	90176-249	Wire
1 ea	90176-250	Wire
36 ea	AN3-3A	Bolt
4 ea	AN3-5A	Bolt
40 ea	AN960-10L	Washer
28 ea	AN960C516	Washer
28 ea	MS20500-524	Nut
15 ea	MS21045L3	Nut
25 ea	MS21069L3	Nutplate
1 ea	MS25036-103	Terminal
1 ea	MS28034-1	Temperature Probe
1 ea	MS28042-3A	Clamp
1 ea	MS3057-6A	Cable Clamp
1 ea	MS3106B14S-2S	Connector
1 ea	MS3108E12S-3S	Connector
1 ea	0201-009	Carb. Air Temp. Indicator
1 ea	20-0304-B-24	Post Light
1 ea	Service Letter SL-AG-92	Instructions

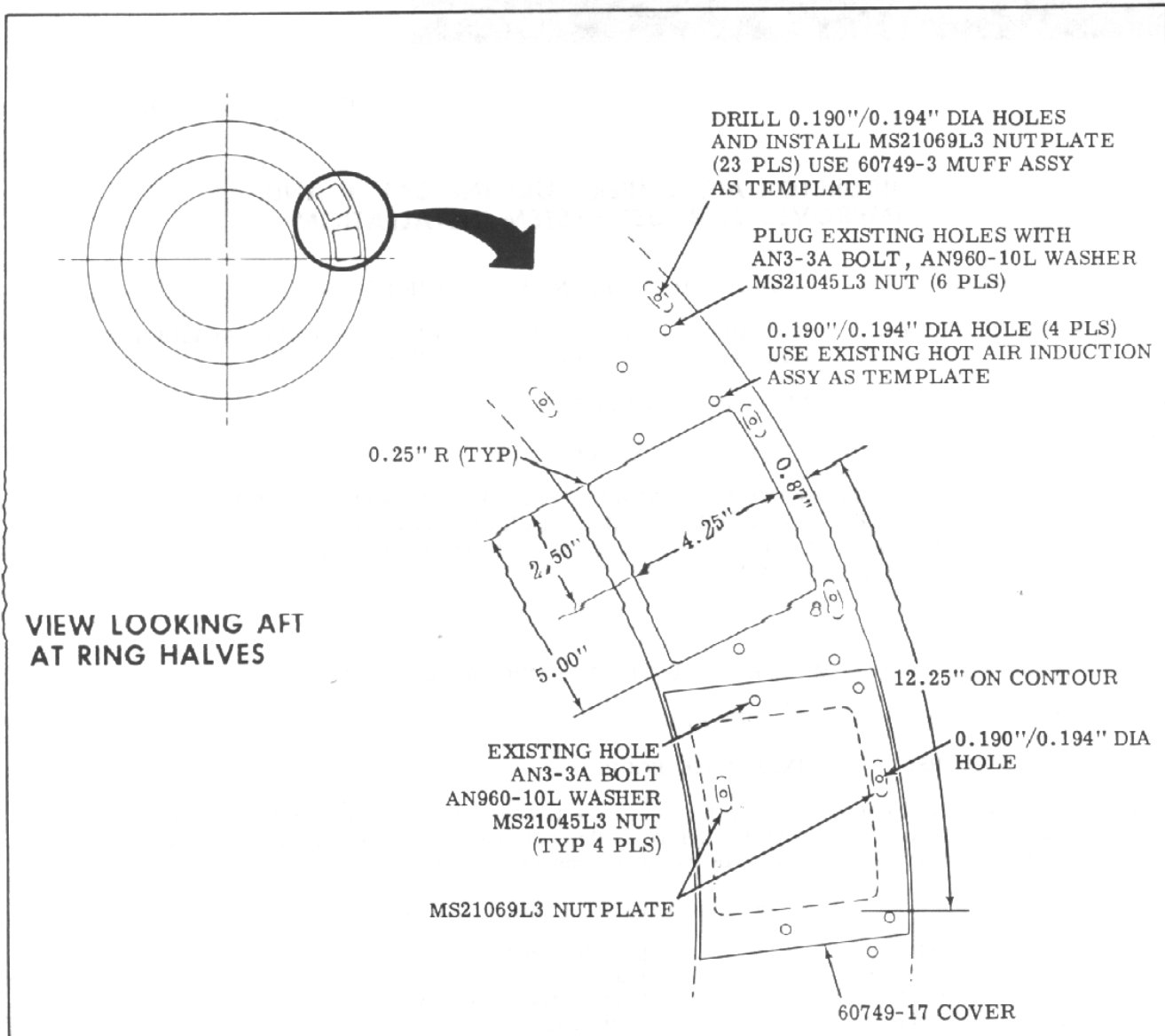


Figure 1.

SPECIAL TOOLS:

None

ACCOMPLISHMENT INSTRUCTIONS:

- 1 Assure that the throttle control is in the closed position.
- 2 Close fuel shutoff valve and assure that ignition and battery switches are OFF.
- 3 Remove all engine accessory cowling.
- 4 Remove existing heat muff assembly.

- 5 Remove existing engine exhaust stack segments, clamps and flange assemblies.
- 6 Disconnect controls and flex ducts from carburetor air selector valve assembly.
- 7 Remove top from carburetor air selector valve assembly.
- 8 Remove carburetor air selector valve assembly and hot air induction assembly.

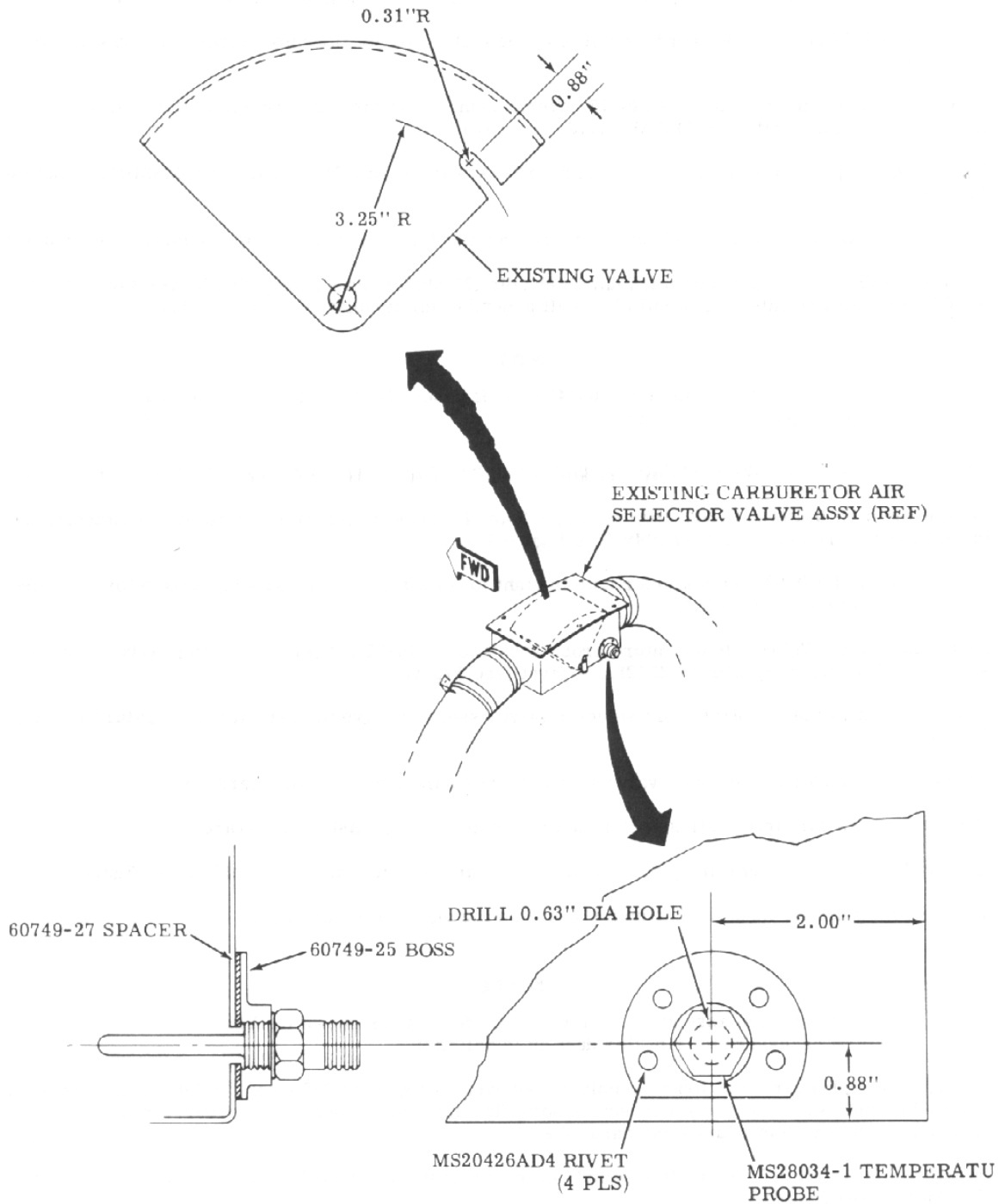


Figure 2

NOTE

Cover carburetor to prevent foreign material from entering into carburetor.

9. Drill and install MS21069L3 nutplate on 60749-17 cover with MS20426AD3 rivet (see Figure 1).
10. Install 60749-17 cover on forward side of left ring half over existing cutout picking up existing holes (see Figure 1).
11. Drill through remaining hole in 60749-17 cover assembly and through ring half and install MS21069L3 nutplate on ring half with MS20426AD3 rivet (see Figure 1).
12. Plug existing open holes on ring halves with AN3-3A bolt, AN960-10L washer and MS21045L3 nut (see Figure 1).
13. Locate and make a 4.25" x 5.00" cutout in left ring half for hot air induction assembly (see Figure 1).
14. Locate and drill 0.192 (\pm 0.002) inch diameter hole (23 places) on existing ring halves for installation of 60749-3 muff assembly. Use 60749-3 muff assembly for template (see Figure 1).

NOTE

Trim upper and lower angles of 60749-3 muff assembly, as necessary, to clear bolt heads installed in step 12.

15. Drill and install MS21069L3 nutplate (23 places) on ring halves with MS20426AD3 rivets (see Figure 1).
16. Locate and drill 0.192 (\pm 0.002) inch diameter hole (4 places) in left ring to match attached holes in existing hot air induction assembly (see Figure 1).
17. Locate and drill a 0.63 inch diameter hole in right lower aft corner of existing carburetor air selector valve assembly (see Figure 2).
18. Drill and install 60749-25 temperature probe boss and 60749-27 spacer on existing carburetor air selector valve assembly with MS20426AD4 rivet (see Figure 2).
19. Make a cutout in the carburetor air selector valve assembly valve to clear air temperature probe (see Figure 2).
20. Reinstall carburetor air selector valve assembly on engine using existing hardware.
21. Reinstall top on carburetor air selector valve assembly using existing hardware.
22. Install MS28034-1 temperature probe on carburetor air selector valve assembly (see Figure 2).

23. Trim existing hot air induction assembly and bead the end (see Figure 3).

NOTE

If hot air induction assembly is shorter than dimensions shown in Figure 3, it will be necessary to trim flex duct on installation.

24. Install existing hot air induction assembly on left ring half with AN3-5A bolt, AN960-10L washer and MS21045L3 nut (4 places) and reconnect existing flex ducts and controls on carburetor air selector valve assembly using existing clamps and hardware.
25. Install lower half of 60749-3 muff assembly on ring halves with AN3-3A bolt and AN960-10L washer (12 places) (see Figure 4).
26. Install heat muff upper angle assembly on ring halves with AN3-3A bolt and AN960-10L washer (14 places) (see Figure 4).
27. Install 60743-1 exhaust manifold assembly on engine with MS20500-524 nut and AN960C516 washer (28 places)(see Figure 4).

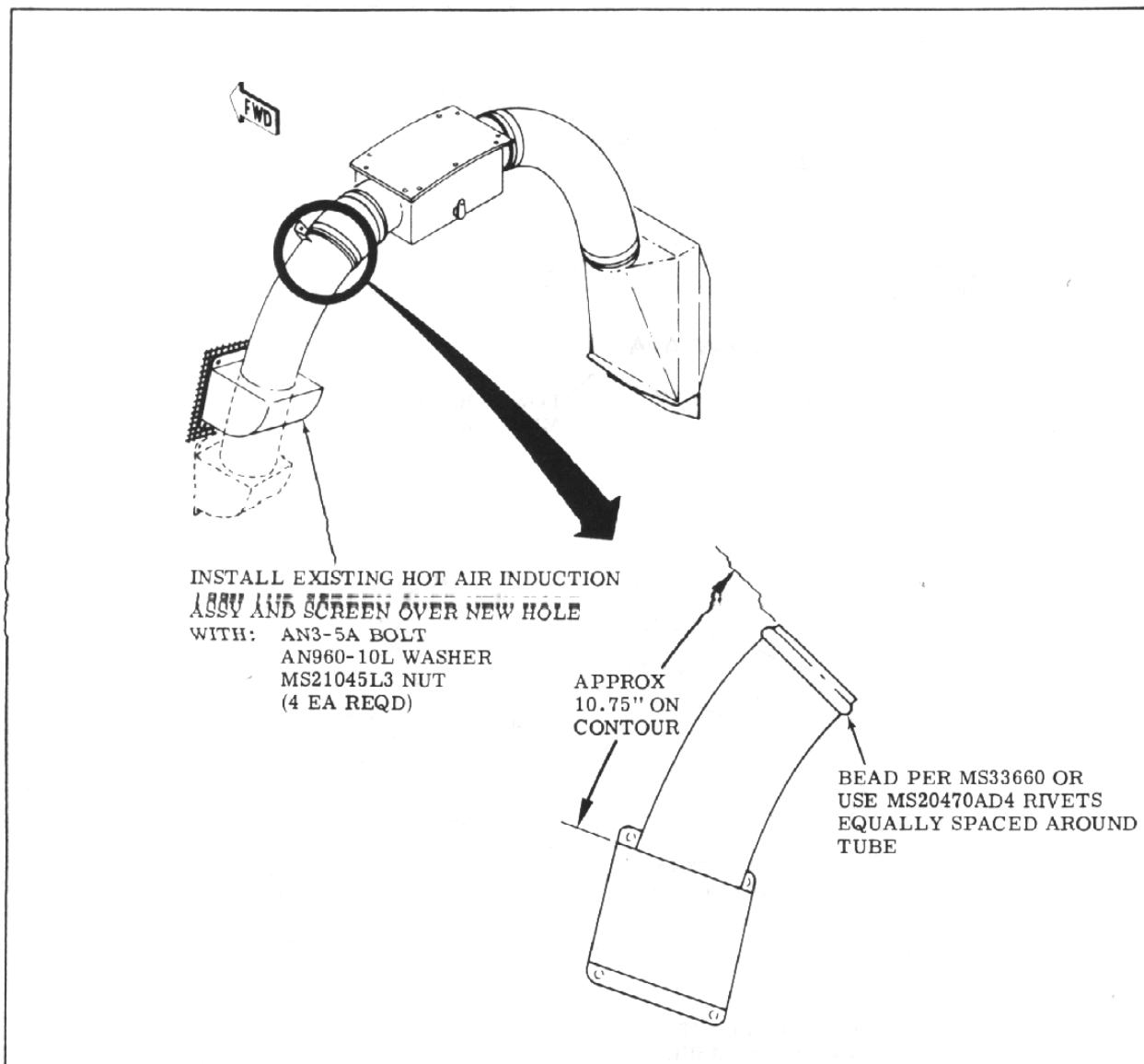


Figure 3.

NOTE

Inspect cylinder exhaust port studs and replace are required.

28. Install upper half of muff assembly using hardware furnished with muss assembly (see Figure 4).
29. Locate and make cutouts in left instrument panel for 0201-009 carburetor air temperature indicator and 20-0304-B-24 post light (see Figure 5).
30. Install 0201-009 carburetor air temperature indicator on left instrument panel with MS28042-3A clamp (see Figure 5).
31. Install 20-0304-B-24 post light on left instrument panel (see Figure 5).

32. Connect carburetor air temperature system to airplane electrical system with 90176-247, -248, -249 and -250 wires, MS3108E12S-3S connector (on temperature probe), MS3057-6A cable clamp and MS3106B14S2S connector (on carburetor air temperature indicator) (see Figure 6).

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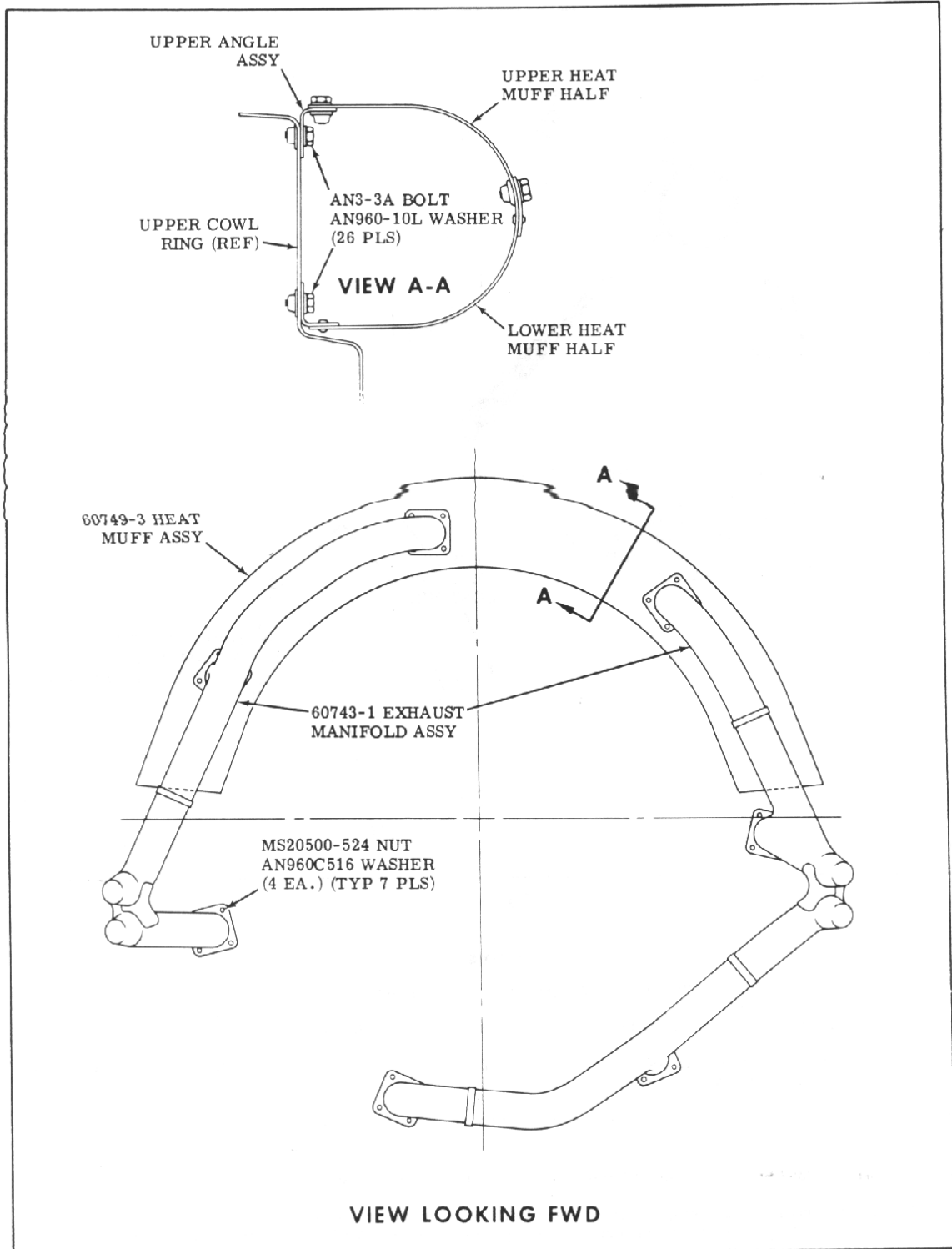


Figure 4.

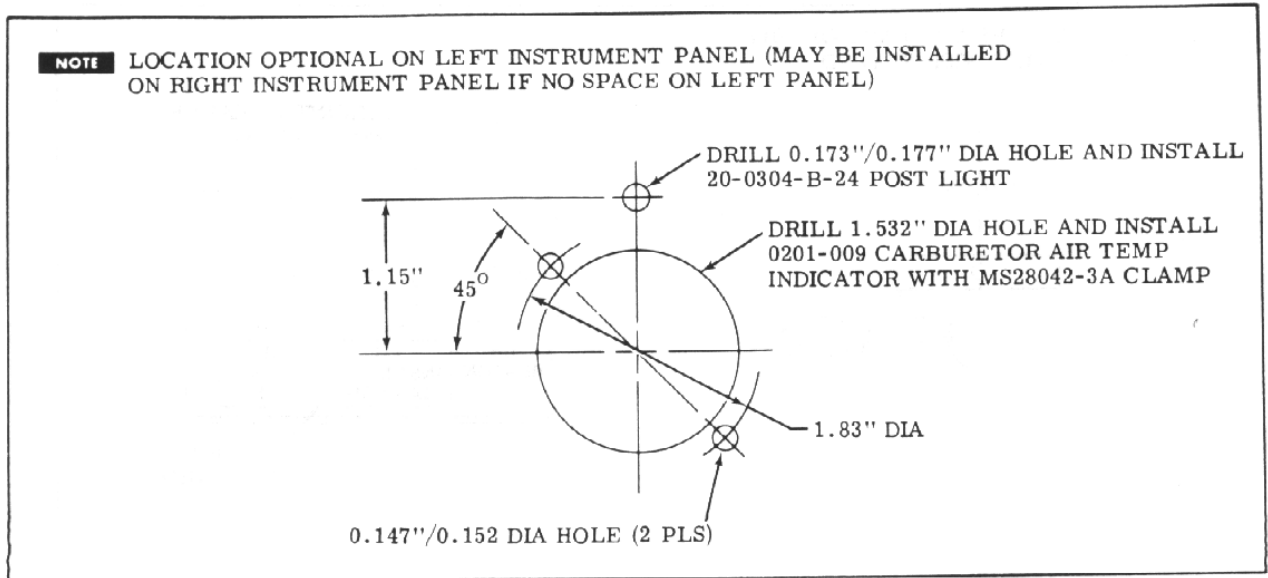


Figure 5.

33. Install 60749-23 placard on circuit breaker panel (see Figure 6).
34. Remove left forward fuselage side from airplane.
35. Remove left forward bottom fuselage skin from airplane.
36. Remove scoop from left forward fuselage side skin. Retain scoop for later reinstallation.

NOTE

Care should be taken so as not to damage scoop.

37. Fabricate two (2) patches (6.00 inch x 9.00 inch and 4.00 inch x 7.00 inch) from 0.032, 2024-T3 aluminum clad sheet (see Figure 7).
38. Install patches, fabricated in step 37., on left forward fuselage side skin (see Figure 7).
39. Locate and make a 4.00 inch x 7.00 inch cutout in left forward bottom fuselage skin (see Figure 8).
40. Using existing scoop removed in step 36 as a template, locate and drill attaching holes in left forward bottom fuselage skin and install scoop with MS20470AD4-4 rivet (17 places)(see Figure 8).
41. Install modified fuselage skins on airplane.
42. Reinstall all engine accessory cowling.
43. Install 50175-563 placard on instrument panel near carburetor air temperature indicator.

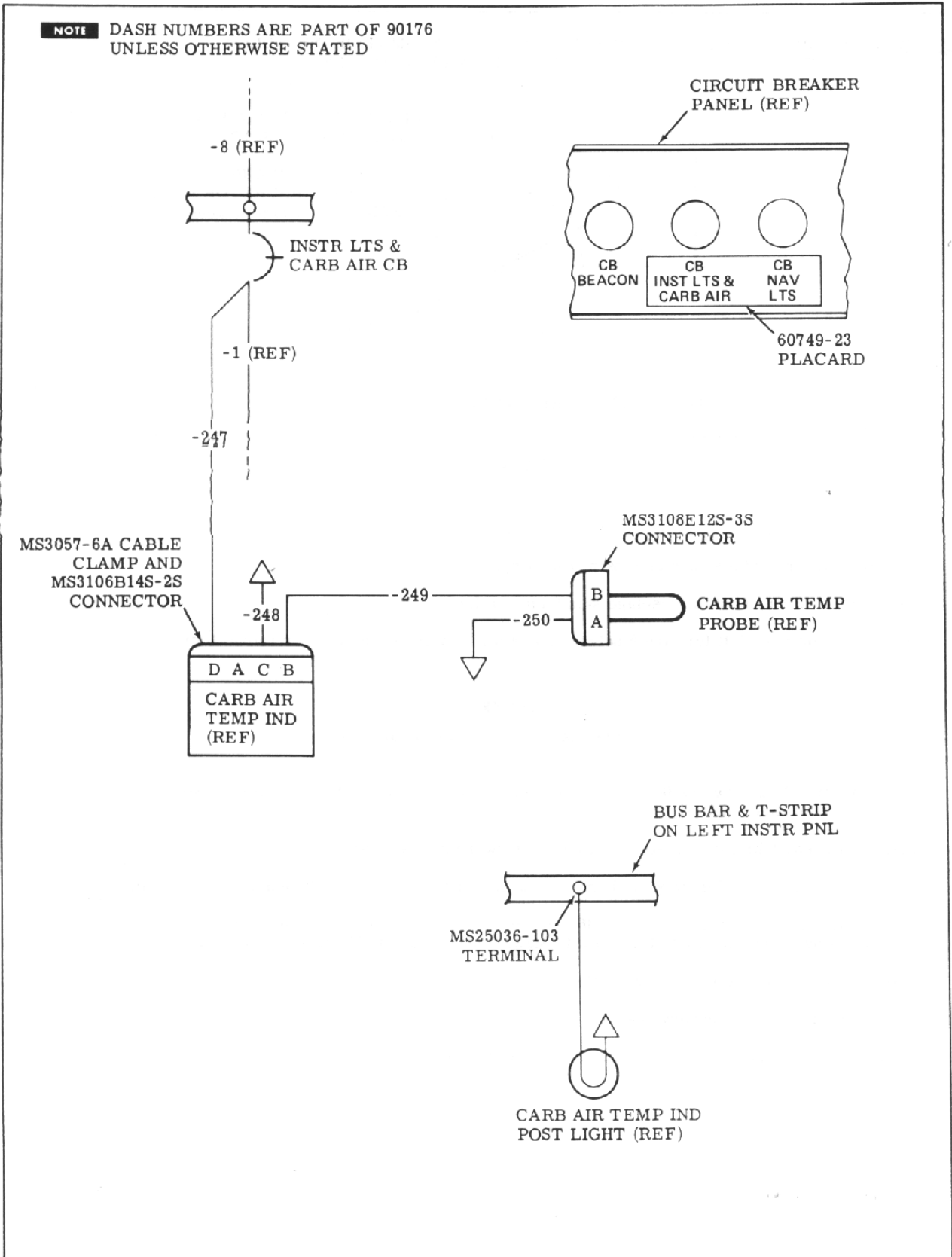


Figure 6.

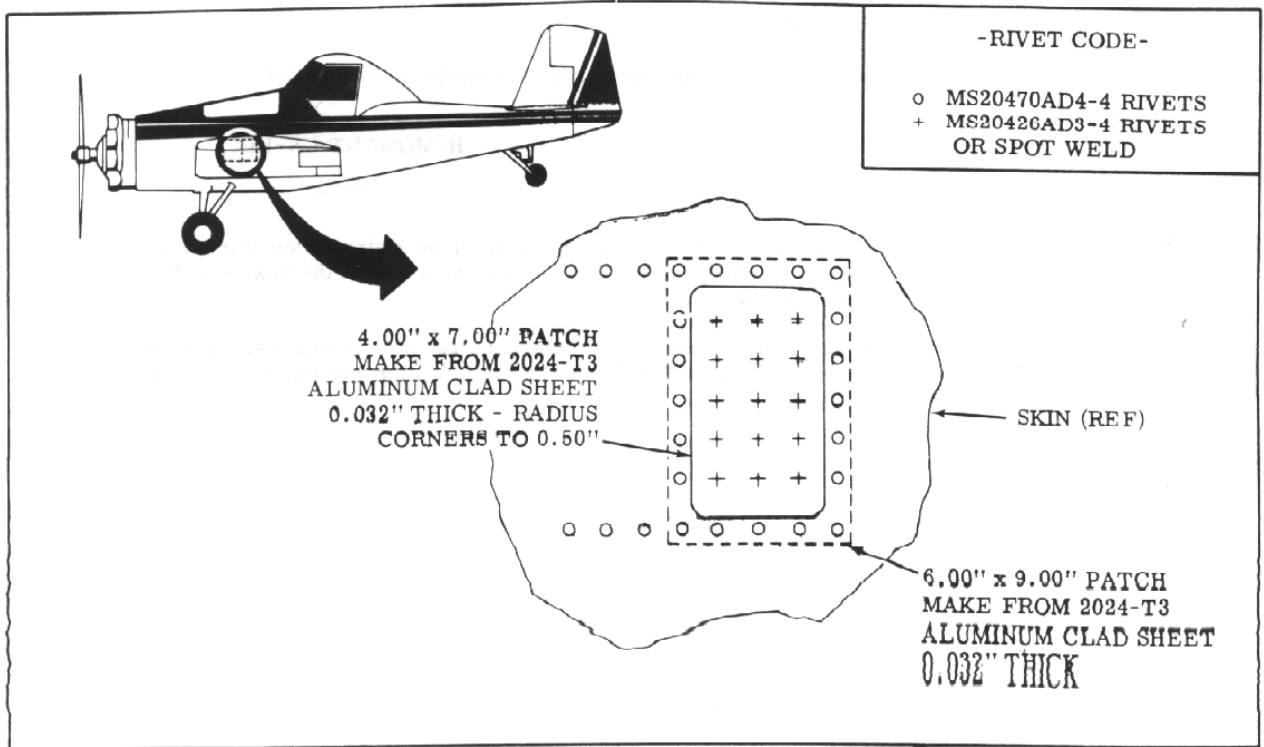


Figure 7.

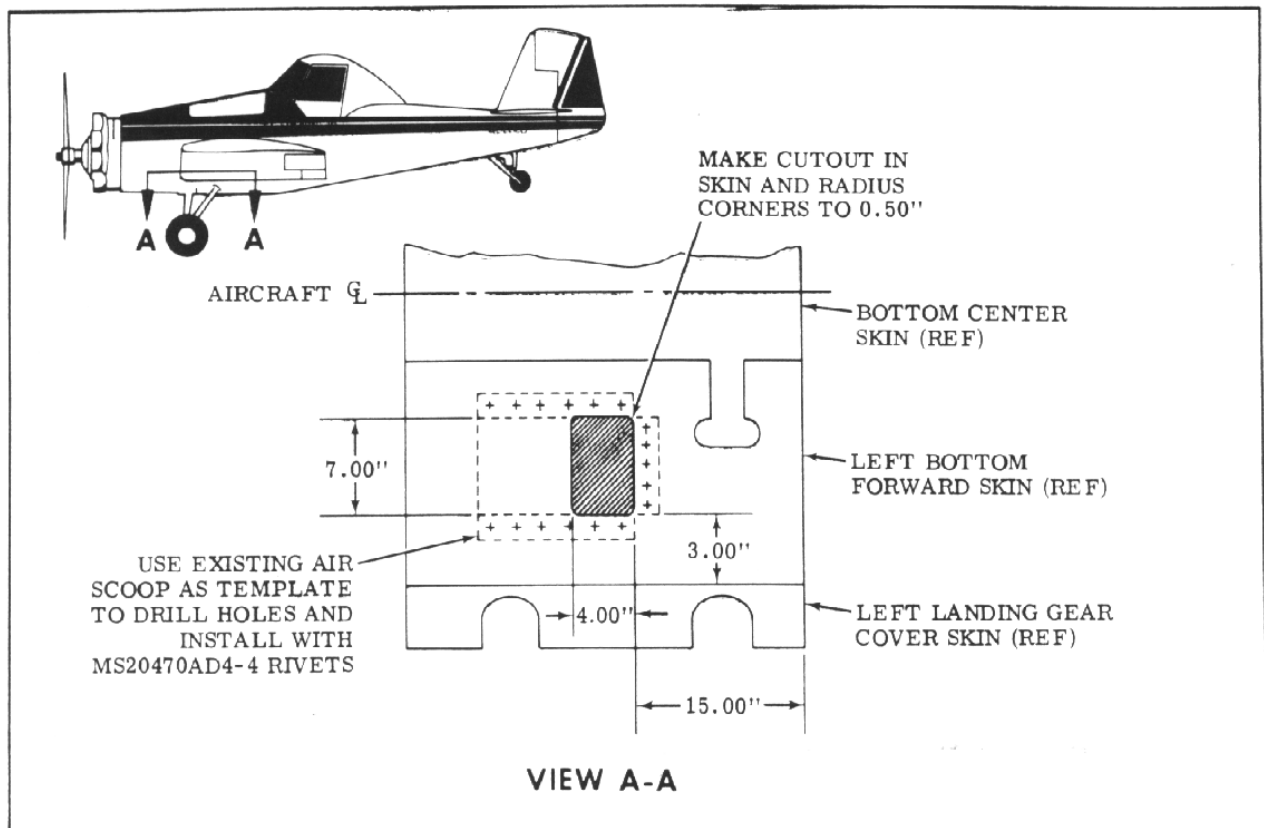


Figure 8.

ELECTRICAL LOAD: Negligible

Weight and Balance: The weight and balance change required by installation of this Service Letter is follows:

Weight (LBS)	H-ARM (inches)	H-MOMENT (IN-LBS)
-13.5	-33.0	-445.5

PUBLICATIONS AFFECTED: The Illustrated Parts Catalog and Airplane Maintenance Manual changes required by this document will be incorporated at the next scheduled change/revision.

RECORD COMPLIANCE: Make appropriate entry in airplane permanent records as follows:

Service Letter No. SL-AG-92 dated 6 May 1977, entitled "Carburetor Air Temperature Indicator and Improved Exhaust System Installation", accomplished (date)_____.