

Date: 3-26-65



SERVICE BULLETIN

NO. SB-1

Model: A2

Serials: A-2 thru A-13

Subject: C-90-16F Continental Engine Breather Fitting

To reduce the amount of oil passing through the breather tube and exhausting on the under-side of the aircraft, Continental Motors Corporation has a newly designed engine fitting which extends further into the engine case. The extension places the opening away from the splashing caused by the vacuum pump drive.

This fitting is very easily installed at a time when the nose and top cowling is off for other reasons, or the old fitting may be removed and the new fitting installed, without removing either cowling, by removing the top portion of the fuel pump. This allows ample space for rotation of the fitting into the threaded portion of the engine case.

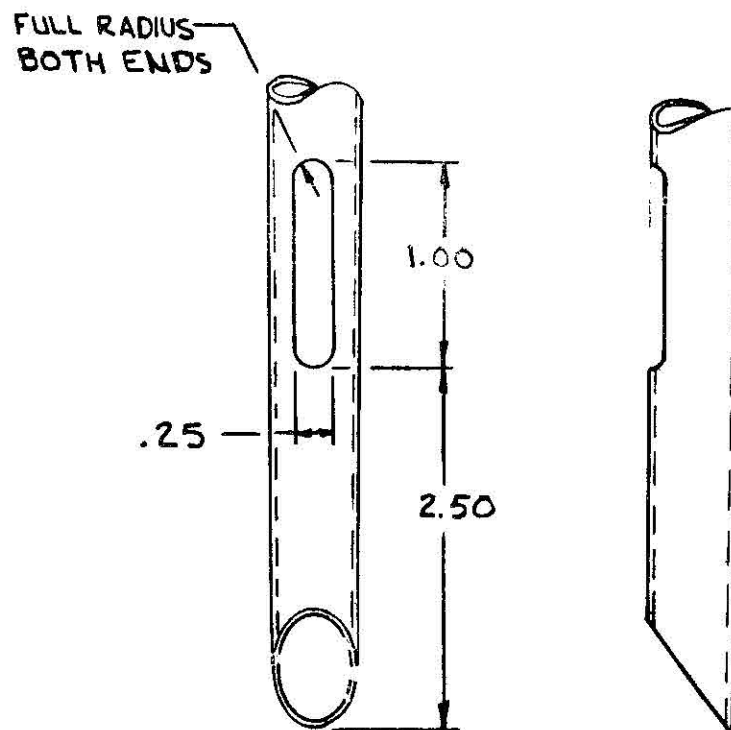
This fitting will be shipped, prepaid, as soon as they become available from Continental Motors Corporation.

Model: A2

Serials: A-2 thru A-8

Subject: Alternate Air Source for A 48220 Breather Tube

In order to supply an alternate source of breather air to eliminate the possibility of pressurizing the engine case in the event that icing occurs at the breather tube end, a slot has been added to the lower portion of the breather tube, per the sketch below.



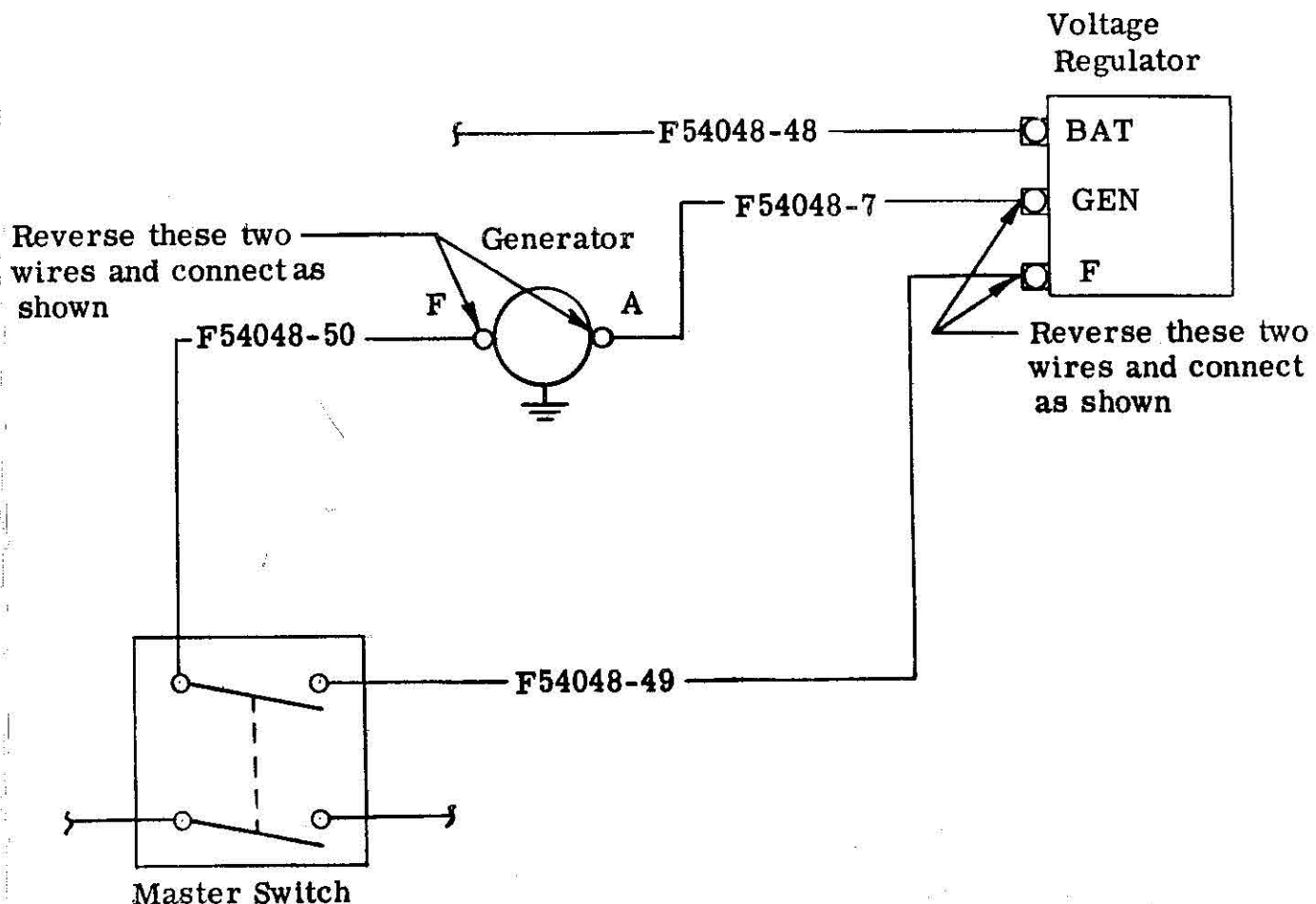
Model: A2

Serials: A-2 thru A-8

Subject: Wire Change in Generator to Regulator Wiring

A correction in the wiring on current models coming off the line has been incorporated to completely eliminate the remote possibility of overheating the generator if for some reason the master switch is turned off in flight for a prolonged period of time. The change consists of merely reversing the two wire connections on the generator and two of the wires on the voltage regulator. The final configuration should be as shown below.

NOTE: The final dash number of the wire part number will be found on the wires in the airplane to aid in tracing connections.



Date: 3-26-65

ALON 

SERVICE BULLETIN

NO. SB-4

Model: A2

Serials: A-2 and A-3

Subject: Identification Plate Fastening

To meet the F.F.A. requirements in part 45:13. It will be necessary for you to replace the four (4) sheet metal screws attaching your aircraft identification plate on with rivets or blind rivets.

Date: 4-1-65

ALON 

SERVICE BULLETIN

NO. SB-5

Model: A2

Serials: A-2 thru A-8

Subject: STAPLING OF ENGINE BAFFLES

To ensure that the rubber strips on the top of the rear engine baffles remain in place, it is necessary to staple them in six places. The places are wherever the rubber strips are separated across the top baffle and the two vertical strips on either side are to be stapled to the rear of the horizontal strips, across the cylinder heads.

Before stapling, the strips must be overlapped in such a manner as to allow the rubber to point directly forward at an approximate 90° angle. This will retain the rubber strips in place whenever the top cowling is removed and re-installed.

Model: A2

Serials: *

Subject: Prevention of Foreign Matter Contaminating Wheel Bearings

To keep foreign particles out of the wheel bearings on the main landing gear, perform the following steps to accomplish the inserting of a cork into each hollow main landing gear axle:

1. Remove the decorative hub cap retained by one (1) screw.
2. Remove the dust cap retained by three (3) screws.
3. Remove the two (2) cotter pins which secure the axle nut.
4. Lightly lubricate with grease and insert a #19 cork into the hollow axle, slipping inward to form a press fit, until the cork bottoms out against the axle retaining bolt.
5. Replace the hardware removed in steps 1, 2, and 3 above, using new cotter pins.

Note: Optional for #19 cork is Capplug #WW16 with the flange cut off, or a non-porous rubber ball which will compress approximately 10% for press fit into the hollow axle.

* A-2 thru A-67, A-69, A-71 thru A-77, A-79 thru A-86, A-88 thru A-93, A-95, A-96, A-98 thru A-100, A-102, A-106, and A-107

ALON **SERVICE BULLETIN**

NO. SB-7

Model: A2**Serials:** A-2 through A-84**Subject:** Eliminate possible cracking of skin around Camloc fasteners and reinforcement on engine cowling door.

To preclude the possibility of skin cracking around the Camloc fasteners and reinforcement on the engine cowling doors, Alon recommends the following stiffener and reinforcement be added on each door:

1. Remove the four (4) Camloc fasteners on each door.
2. Drill out the two (2) rivets which secure the 40245 reinforcement to each door, and remove the reinforcement.
3. Install the 40245-1 reinforcement in same location and secure with two (2) MS20470AD3-4 rivets.
4. Install 40559-28 stiffener on the LH door, and 40559-29 stiffener on the RH door, aligning Camloc fastener holes in each stiffener with the holes in the door.
5. Per figure 1, drill fourteen (14) No. 40 (.098) holes through door and stiffener and secure each stiffener with MS20470AD3-4 rivets.
6. Reinstall the four (4) Camloc fasteners on each door.
7. Trim stiffeners, as required, to achieve a flush fit. Note: Do not crimp 40559-28 and -29 over the 40245-1 reinforcements.

The stiffeners and reinforcements will be shipped, prepaid, upon request.

Model: A2

Serials: A-2 through A-84

Subject: Eliminate possible cracking of skin around Camloc fasteners and reinforcement on engine cowling door.

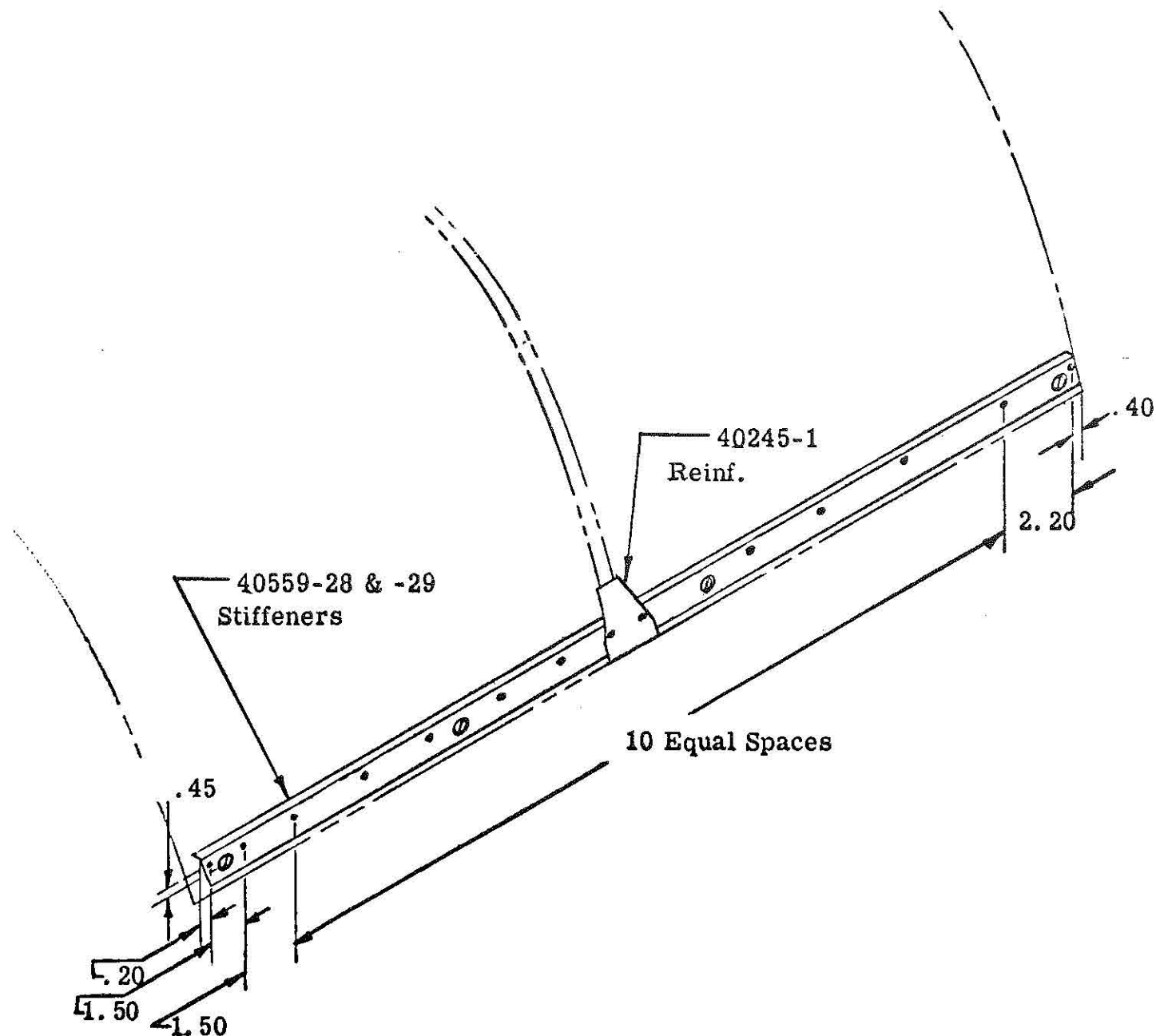


Figure 1

Model: A2

Serials: A-2 through A-144

Subject: Wing Fuel Tank Filler Cap Rework

The following rework may be accomplished to eliminate the possibility of fuel overflow and in-flight siphoning:
(Refer to Figure 1)

- (1) Drill # 30 (.128) diameter hole through center of filler cap.
- (2) Install AN380C3-8 cotter pin downward through hole in filler cap.
- (3) Install 224 tube cap with open end against filler cap and cotter pin extended through the hole in the opposite end.
- (4) Install AN960C6 washer and bend tabs of the cotter pin flatly against washer and bottom of cap.

The above parts (1 each 224 tube cap, AN380C3-8 cotter pin, and AN960C6 washer) will be shipped, prepaid, upon request.

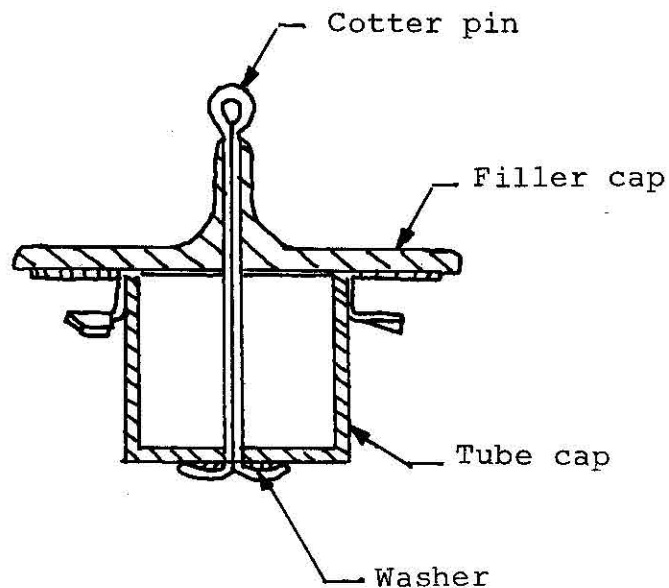


Figure 1.

Model: A2**Serials:** A-90 through A-159**Subject:** Provide vertical support for exhaust stacks by adding an exhaust stack support spring.

To provide a vertical support which will function in conjunction with the F-40400-86 horizontal support angle, install A40712-1 support spring as shown in Figure 1. Attach one end of the spring to the aft lip of the 415-31906 gusset portion of the mount assembly, and the other end of the spring under the lower flange of the F-40400-86 support.

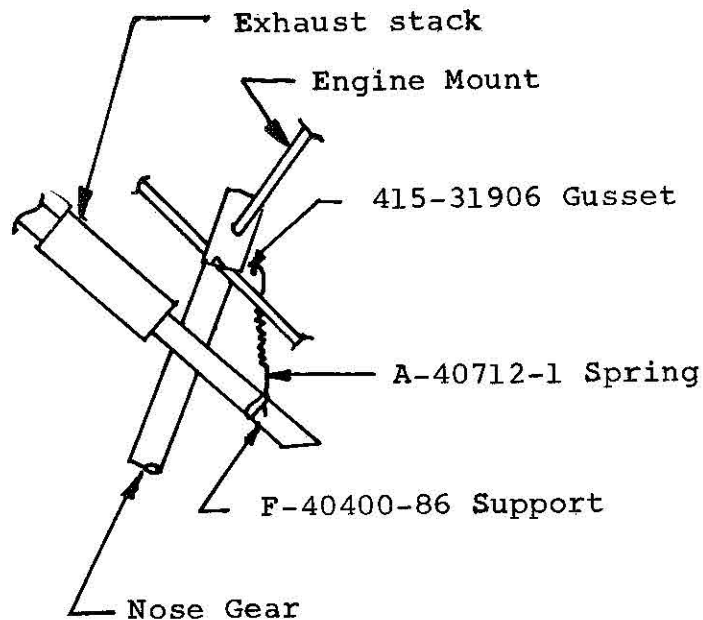


Figure I

Date 5/3/66

ALON 

SERVICE BULLETIN

NO. SB-10

Model: A2

Serials: A-2 and on

Subject: More frequent inspection of fuselage fuel tank.

From the interior of the aircraft, frequently check for leakage or seepage of the fuselage fuel tank. Check all plumbing connections for proper tightness and weld seams of the tank for possible cracks. Presence of red staining will indicate a leak or seepage exists and will indicate its point of origin.

Over-filling of the tank may also cause red staining. A thorough check should be made to determine the origin of a leak or seepage.

Any leak should be corrected before operating the aircraft.

Model: A2**Serials:** A-2 on**Subject:** Prevention of Control Surface Hinge Pin Loss

Inspect all control surface hinges for evidence of loose or working hinge pins at a frequency of not less than at time of each periodic. If looseness or working of hinge pins is evident, they may be retained in the following manner:

1. Loose aileron and rudder hinge pins to be withdrawn approximately .10 and then securely welded to end of hinge.
2. Loose elevator hinge pins to be retained by welding shut of the open end of hinge.

Model: A2

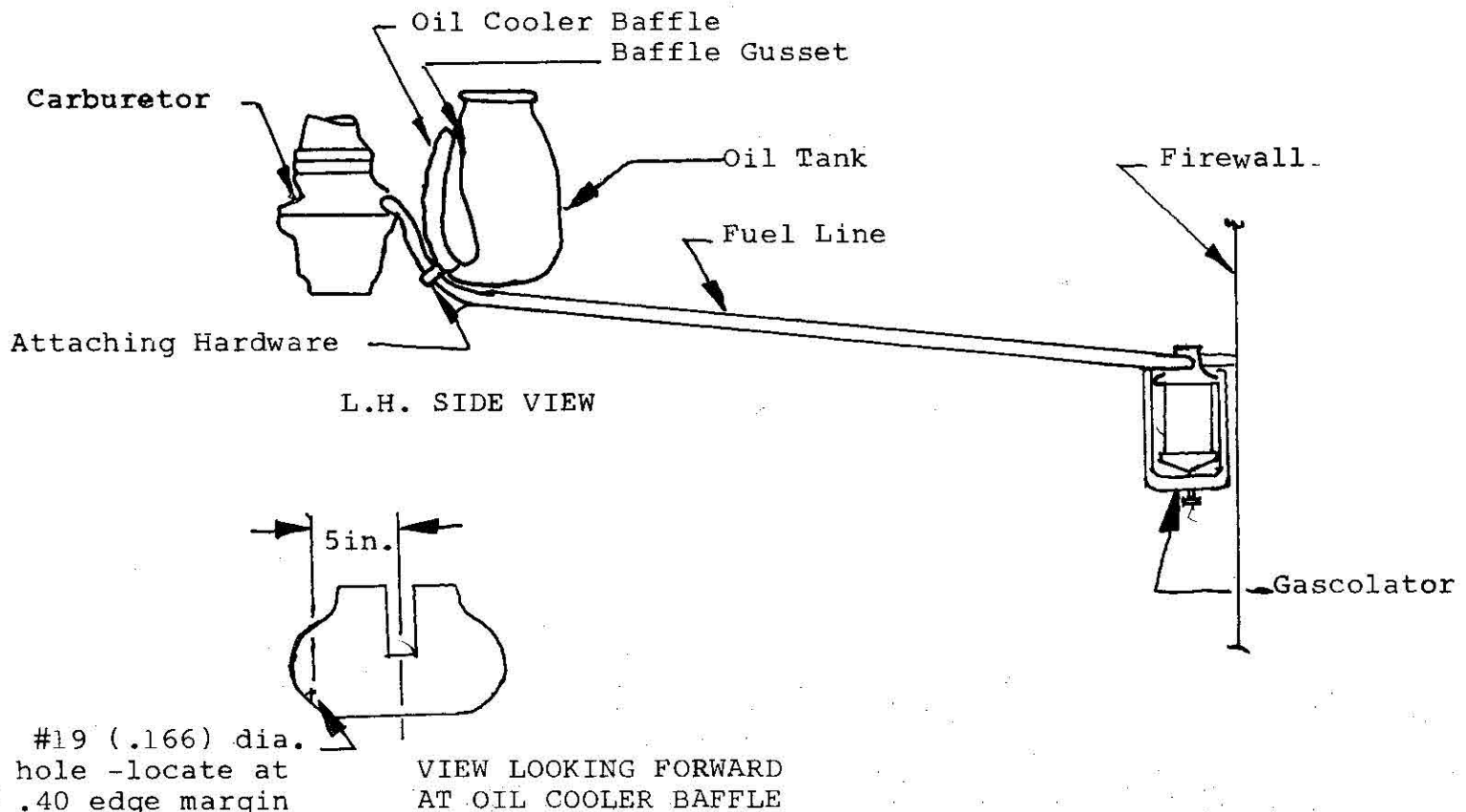
Serials: A-2 through A-204

Subject: Fuel Line Re-routing

The following rework is to be accomplished by not later than the next periodic inspection to eliminate the possibility of a fuel line vapor lock occurring:

1. Drill a #19 (.166) diameter hole in the Oil Cooler Baffle Assembly as shown.
2. Reposition the 45 degree elbow in the Gascolator Outlet Port so as to point forward.
3. Remove clamps which previously secured Fuel Line to Engine Mount. These clamps will no longer be required.
4. Shorten the Fuel Line approximately three (3) inches and re-route down under the L.H. corner of the Oil Cooler Baffle Assembly. Attach Fuel Line to this Baffle using hardware which previously secured Fuel Line to the Baffle Gusset in hole added per item #1 above.

NOTE: Routing of this Fuel Line to be such that an "up-hill" path exists from Gascolator to Carburetor. Insure that no high or low spots in line are present.



Model: A2

Serials: A-2 and on
(as applicable)**Subject:** Main Gear Toe-In/Toe-Out Alignment
(Single Spring Leaf Type)

To eliminate the possibilities of main gear tire wear due to misalignment, the following methods may be used for checking and correction*:

1. As shown in Figure 1, check alignment by placing a straight edge across the front of both main gear tires at axel height (both tire air pressures to be equal). See "Note" on page 2.
2. Hold a square against this straight edge and against the inboard end of the axel, measure the distance between the square and the inboard surface of the brake disc at (2) places (the extreme forward and aft edges) on both gear.
3. Subtract the smaller measured distance from the larger to determine the net misalignment dimension.
4. Locate this value on Line "C" of the chart (Figure II) and find its intersection with Line "A", drop straight down to Line "B" and at its intersection read the value on Line "C". This will establish the taper or amount to be added to the .003 to .010 basic thickness of the tapered shim at its thickest edge.

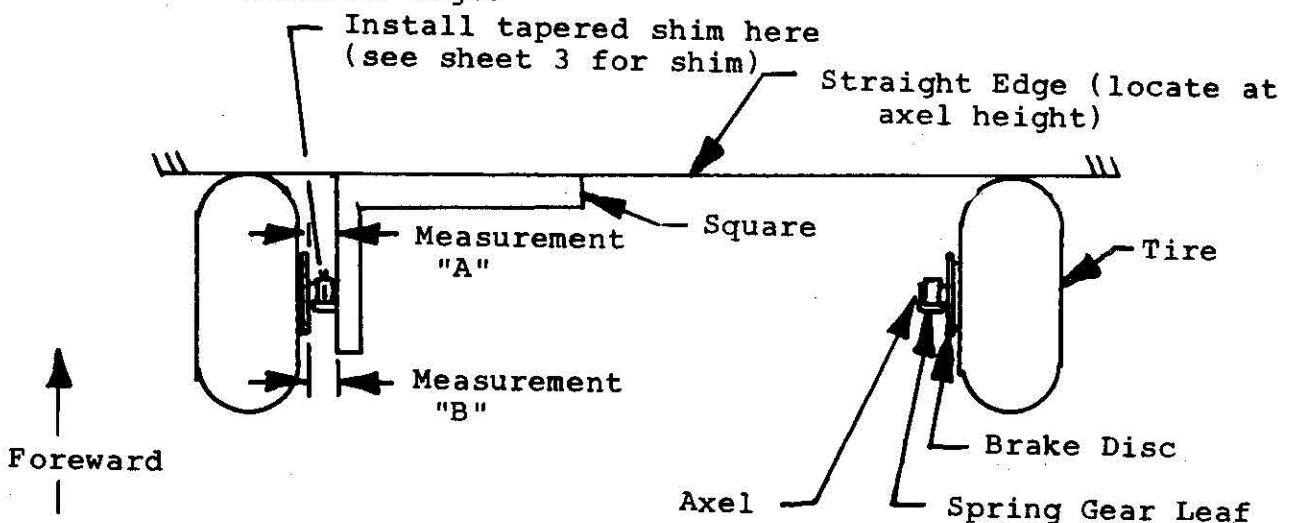


Figure 1 VIEW LOOKING DOWN

Measurement "A" - "B" or "B" - "A" = Net Misalignment Dimension

*Correct alignment to: straight ahead to .030 toe-in as measured per item #2 above.

Model: A2

Serials: A-2 and on
(as applicable)

Subject: Main Gear Toe-in/Toe-out Alignment (Single Spring Leaf Type)

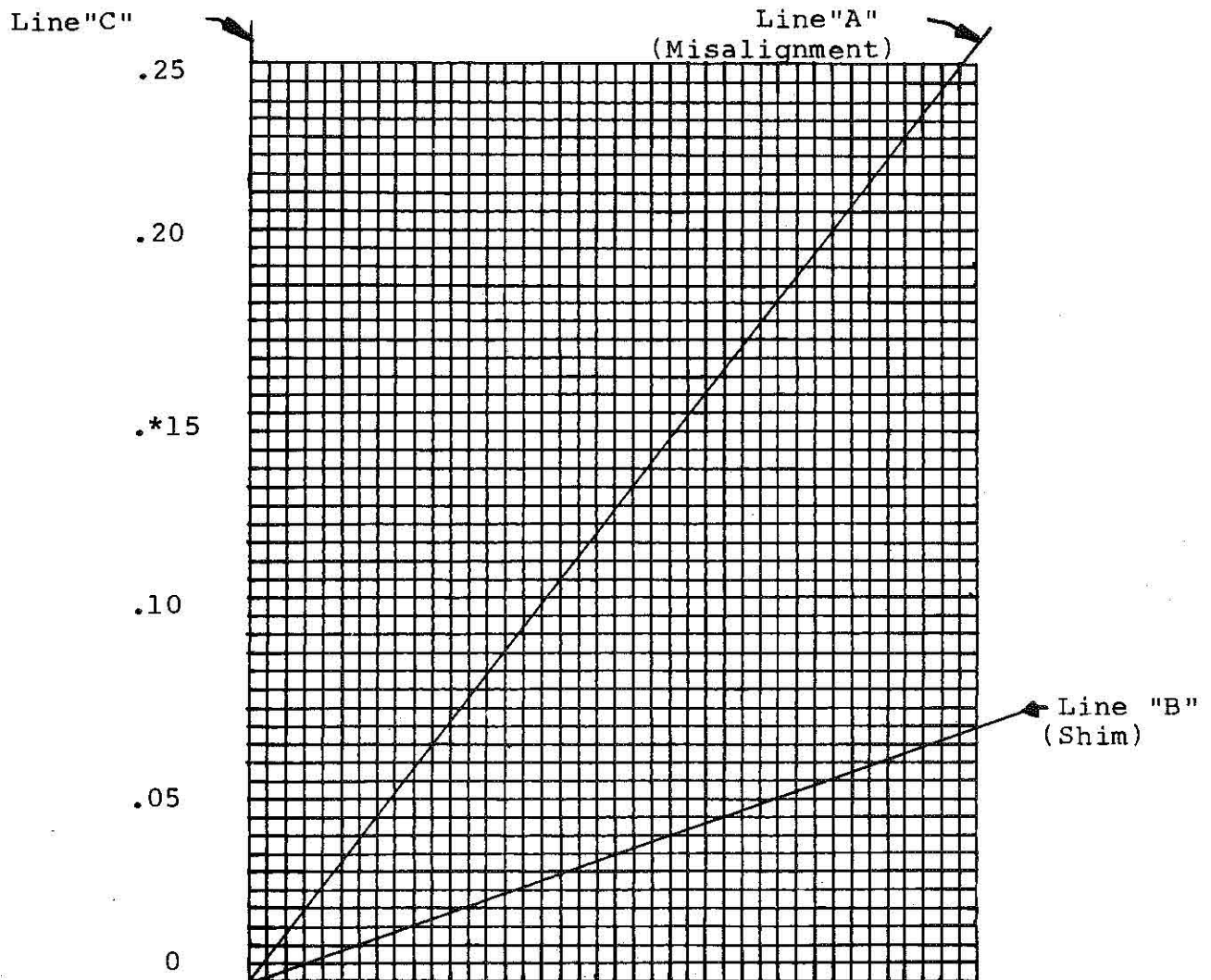


Figure II

*If the misalignment net dimension is .15 or over, the (6) holes in the spring gear leaf must be line reamed (.375 dia.) to permit all surfaces to lie flush.

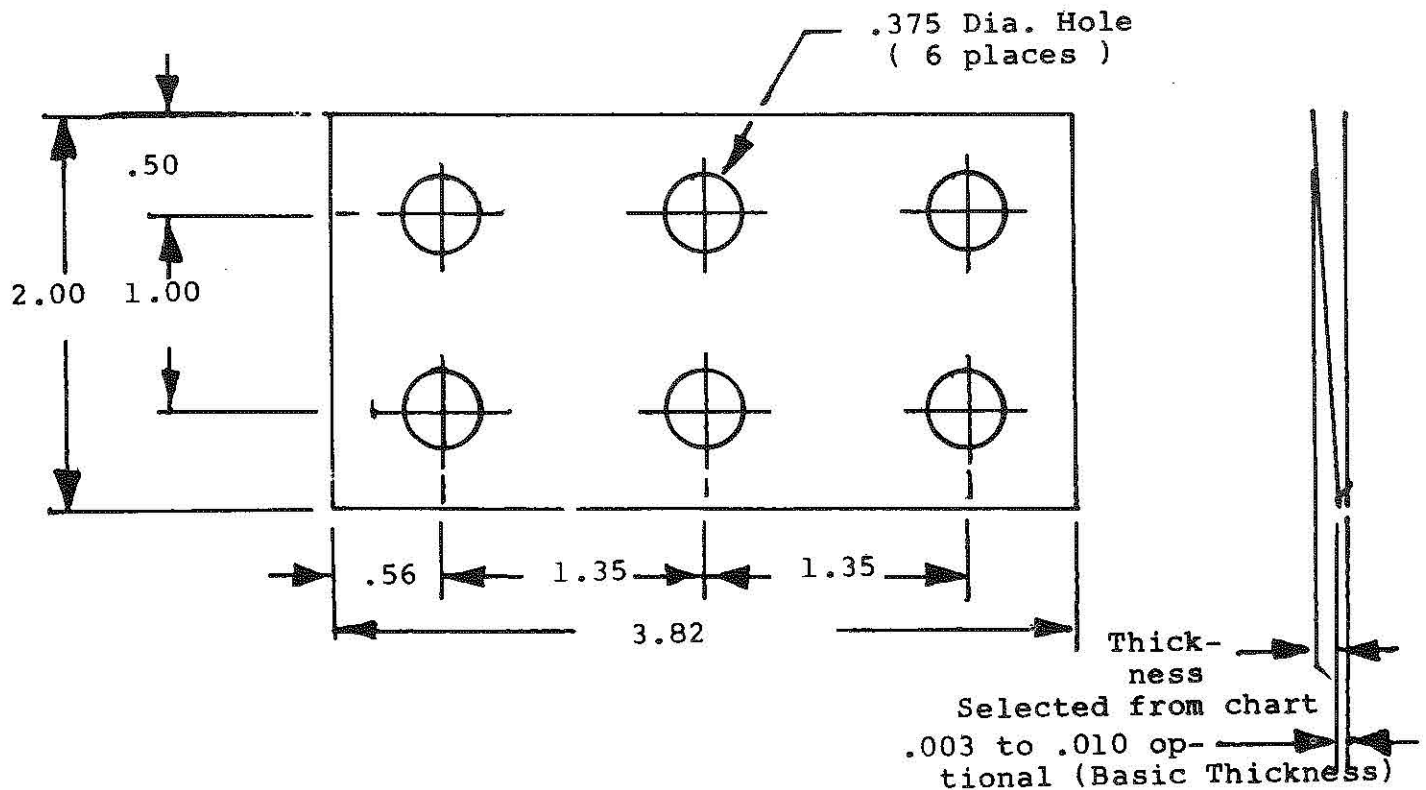
NOTE: Place each main gear tire on greased plates to insure correct alignment check.

Model: A2

Serials: A-2 and on
(as applicable)

Subject: Main Gear Toe-in/Toe-out Alignment (Single Spring Leaf Type)

A33300-30 shims may be used or tapered shims may be fabricated of either 2024-T3 Aluminum Sheet, ground to a taper or of laminated shim stock* to shape defined below:



*A33300-30 shims are .030 thick, consisting of .003 laminations which are to be peeled, creating a "step effect" to varying thicknesses to obtain the desired taper.

Model: 415-C, 415-D, E, G and F-1**Serials:** 1 through 5714 inclusive**Subject:** Rudder Bellcrank Seizures

Parts List:	Quantity	Part No.	Nomenclature
	2	8L12-FK	Bearing (Nylon)
	and 1	SB-14-1	Bushing (Aluminum)
	or 1	F52425	Bellcrank Casting

The purpose of this bulletin is to eliminate the possibilities of a rudder bellcrank seizure caused by the bakelite bushing that has expanded due to moisture within the bushing.

The above may be accomplished by replacing the bakelite bushing with the nylon bearings and by either installing the SB-14-1 bushing in the existing bellcrank casting or by replacement of the existing bellcrank casting with a new part which will eliminate the requirement for the SB-14-1 bushing.

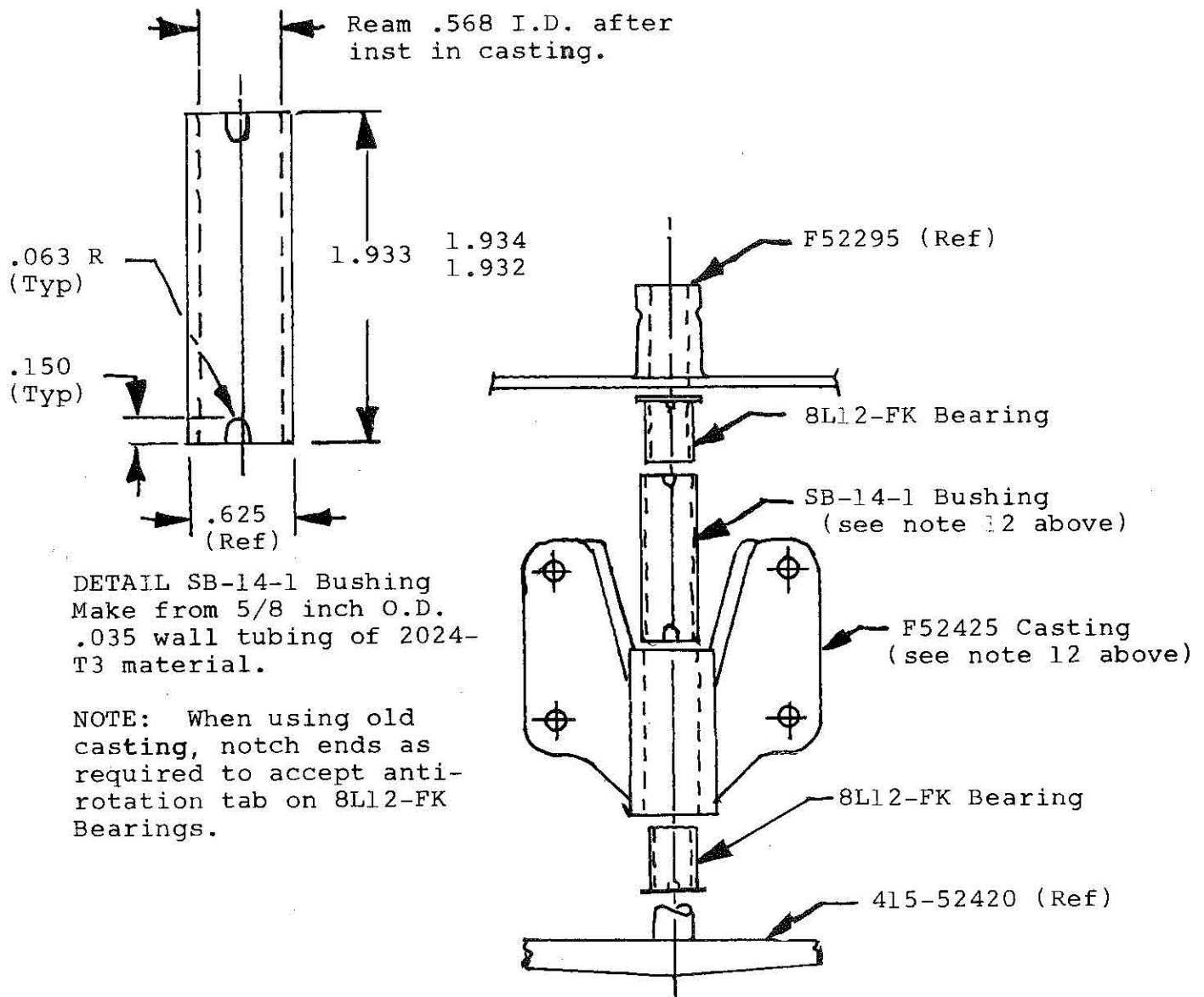
Please refer to the following detailed modification instructions:

1. Remove fairing at stabilizer leading edge to tail cone.
2. As required, loosen the trim tab conduit at the leading edge of the elevator and where it enters the tail cone.
3. Remove the tip of the tail cone (stinger) from the tail cone assembly.
4. Disconnect the elevator push rod from the elevator bellcrank.
5. Lift the elevator up and remove the four bolts that attach the stabilizer to the tail cone.
6. Lift the stabilizer, rudder and elevator as a unit - a few inches above the tail cone.
7. Remove the rudder control cables from the bellcrank arms.
8. Position the stabilizer in a suitable manner for the modification work. See "CAUTION" note on page 2 of this Service Bulletin.
9. Disconnect the rudder push rods from the rudder bellcrank arms.
10. Remove the four bolts that attach the bellcrank bracket to the stabilizer rear spar. The bellcrank assembly can now be removed.

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February 3, 1967
Page Two

11. Dismantle the bellcrank assembly and re-assemble using:
 - (a) the new nylon bearings with a new bellcrank casting, or
 - (b) the new nylon bearings with the SB-14-1 bushing and the existing bellcrank casting.
12. Having re-assembled the bellcrank, install it in the reverse order of the preceding instructions. When re-rigging, cable tension to be 60 to 70 inch-pounds by tensiometer.

CAUTION: Use care in handling of the stabilizer when detached from airframe to avoid bending or kinking of the elevator trim tab control housing and/or inner wire.



Model: Alon Model A2**Serials:** A-2 through A-226**Subject:** RH Exhaust Stack Failures

A few reports have been received of exhaust stack breakage or cracks having developed in the RH exhaust stack (P/N A40703). In most cases routine inspections have revealed these cracks, however, the possibility exists that these cracks can go undetected unless the heat muff is removed for a more complete inspection.

It is recommended that within the next twenty-five (25) hours the heat muff be removed and the welded areas around the stack junctions and at the cylinder attach flange be closely inspected.

If the above inspections have revealed no breakage or cracks, then it is recommended that subsequent inspections be conducted at a minimum of one hundred (100) hour intervals.

A new design RH exhaust stack and heat muff* (P/N A40713-5 and A40713-7) has been developed that eliminates the problems associated with the original exhaust stack and is interchangeable. In conjunction with the new stack, a flexible engine mount to exhaust stack clamp (P/N F40400-89) is utilized on both the RH and the LH exhaust stacks. These clamps replace the spreader bar (P/N F40400-86) and the tension spring may be used with the original exhaust stack.

It is recommended that the spreader bar and the tension spring or any other rigid means of support for the lower ends of the exhaust stack be removed and replaced with the flexible clamp assemblies in order to extend the service life of the exhaust stack.

The following parts, as mentioned above, may be obtained from the Alon Parts Department:

A40713-5	"New" RH Exhaust Stack
A40713-7	Carburetor Heat Muff Assembly
F40400-89	Flexible Clamp Assembly with attaching Hardware (2)
E.O. 6116A*	Carburetor Heat Muff Rework Instructions

*The existing carburetor heat muff assembly (P/N A40708) may be reworked per E.O. 6116A in order to fit the "New" RH exhaust stack.

SUBJECT: FUEL SYSTEM MODIFICATIONS

MODELS THIS BULLETIN OBSOLETE ALON S.B. NO. 8

AFFECTED: Forney Model F1-A, S/N 5764 only
Alon Model A2, S/N A-2 thru A-245
Alon Model A2-A, S/N B-246 thru B-302

TIME OF COMPLIANCE: MANDATORY within next 25 hours.

INTRODUCTION: In some instances, fuel has been observed flowing during flight from the vented fuel-filler caps. To preclude this condition, accomplish Instruction I and II. Accomplish Instruction III to help prevent the possibility of fuel seeping into the air-frame during ground servicing.

INSTRUCTION I: Installation of fuel return and overboard vent assembly in fuselage fuel tank.

Step 1. Remove fuselage fuel tank.

- a. Remove instrument panels and control wheels with control wheel shafts.
- b. Disconnect clamps retaining engine controls to fuel tank.
- c. Drain fuselage fuel tank.
- d. Disconnect fuel lines at tank fittings.
- e. Remove filler cap.
- f. Remove screws securing tank.
- g. Place control column in full forward position.
- h. Lower tank and pull tank aft.
- i. Remove all fittings from tank.

Step 2. Purge tank of fuel and fumes by flowing steam or hot water into the tank, followed by blowing air into tank until dry. Rinse tank with two quarts of industrial alcohol.

Step 3. Modification of fuselage tank fuel return and overboard vent assembly.

- a. Install AN913-2 plug in overflow return line fitting from which T-fitting has been removed.
- b. Locate template on center line of aft side of fuselage tank using top of tank as locating reference (See Figure 1).

FIGURE 1

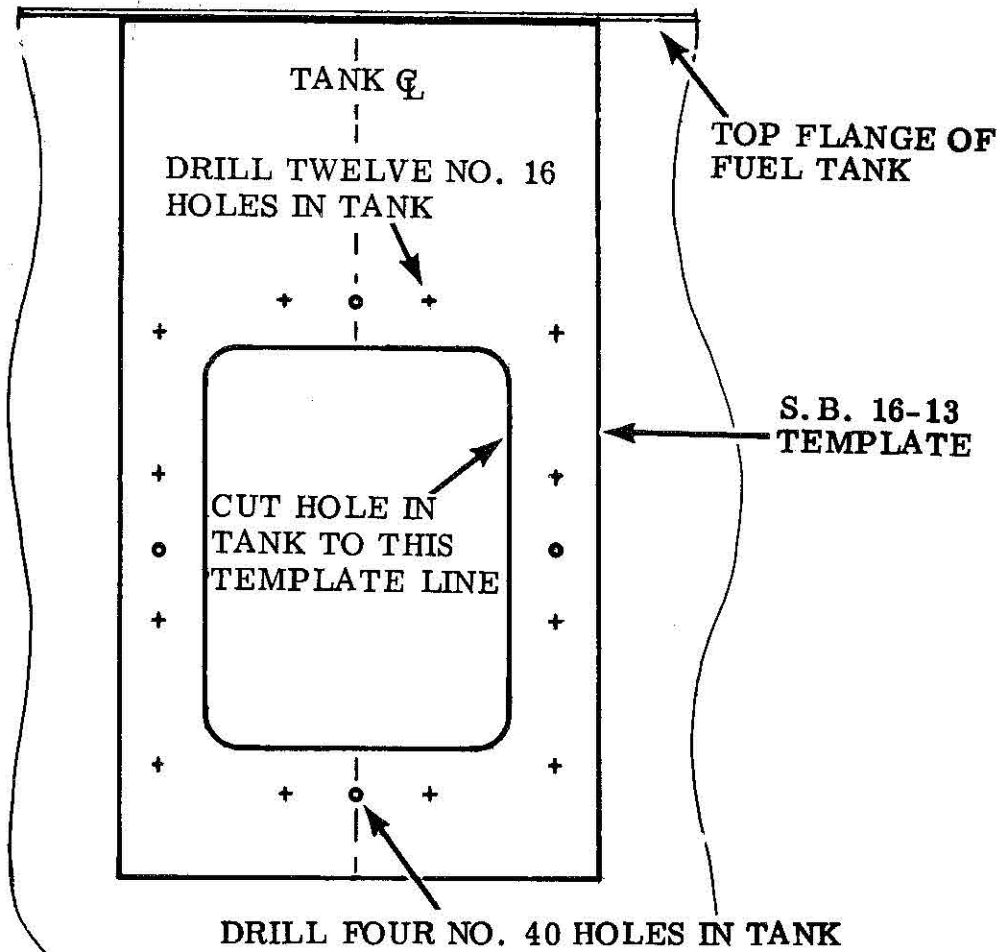
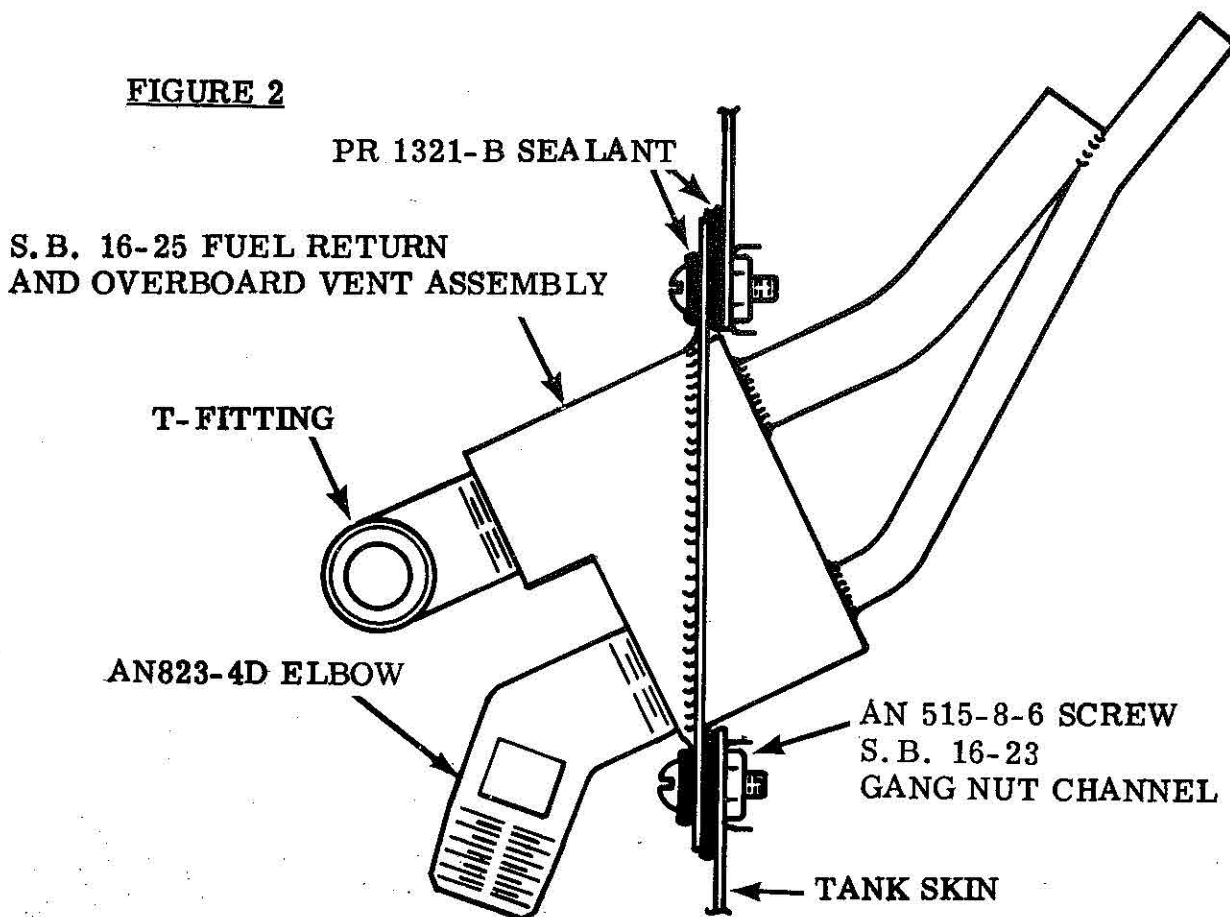


FIGURE 2



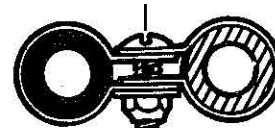
- c. Mark area to be cut, remove template, and cut hole in tank.
- d. Using template drill four #40 pilot holes through template and tank.
- e. Cleco template in place using pilot holes in template and tank.
- f. Drill twelve .166/.170 (NO. 16 drill) holes in tank using template as a guide.
- g. Remove template, locate gang channels under attaching holes, and drill #40 holes through pilot holes. Countersink holes through tank skin into gang channels 100° x .05 inch.
- h. Thoroughly clean tank, removing all traces of burrs and metal shavings. Also clean faying surfaces of tank exterior and S. B. 16-25 assembly with an oil-free solvent.
- i. Attach gang channels in place inside tank using four each AN507B-440R-4 screws and AN363-440 self locking nuts.
- j. Apply PR1321-B sealant to tank skin outer faying surfaces and to outer surface around attaching holes on S. B. 16-25 assembly (See Figure 2).
- k. Install S. B. 16-25 assembly with AN515-8-6 (12) screws through tank skin and gang channels (See Figure 2) making sure that tubes point to inside top of tank. Tighten screws and allow sealant to cure about 24 hours under normal conditions.
- l. Using pipe-dope to seal fittings, reinstall fittings previously removed. Install T-fitting in top opening of S. B. 16-25 overflow assembly and install AN823-4D elbow fitting in bottom opening.
- m. Cap fittings, and leak-check tank by submerging it in water with 1-1/2 PSI maximum air pressure applied to tank. Repair any leaks encountered.
- n. Remove fitting caps and reinstall tank in aircraft.
- o. Cut left fuel return line (approximately 5 IN.) to fit installation to T-fitting in S. B. 16-25 assembly.
- p. Place fitting nut and sleeve on fuel return line and flair cut end of tubing. Attach fuel return line to T-fitting.
- q. Install S. B. 16-27 fuel return line extension and AN815-6D union attaching right fuel line to T-fitting.
- r. Drill 7/16-inch diameter hole through belly skin on aircraft center line, at same fuselage station as fuel drain valve (about 13-1/2 inches aft of firewall), and install AN931-4-7 grommet in hole.

- s. Connect S. B. 16-35 overboard fuel vent line assembly to bottom fitting of S. B. 16-25 assembly. Route line next to fuselage tank drain line and through grommet in belly skin. Be sure beveled edge of overboard vent line faces forward and that drain lines protrude a minimum of 1-1/2 inches below belly skin.
- t. Secure overboard vent line to fuselage tank drain line by positioning two pair of MS21919 DG4 clamps, using AN526-10R-8 screw, AN960-10L washer, and AN363-1032 nut, as shown on Figure 3.
- u. Reinstall instrument panels, control wheels, and shafts in reverse sequence of removal.
- v. Reattach engine control retaining clamps to tank.
- w. Reinstall fuel lines on tank fittings and leak-check all connections after refueling tank.

FIGURE 3

MS21919 DG4 CLAMP
TYPICAL TWO PLACES

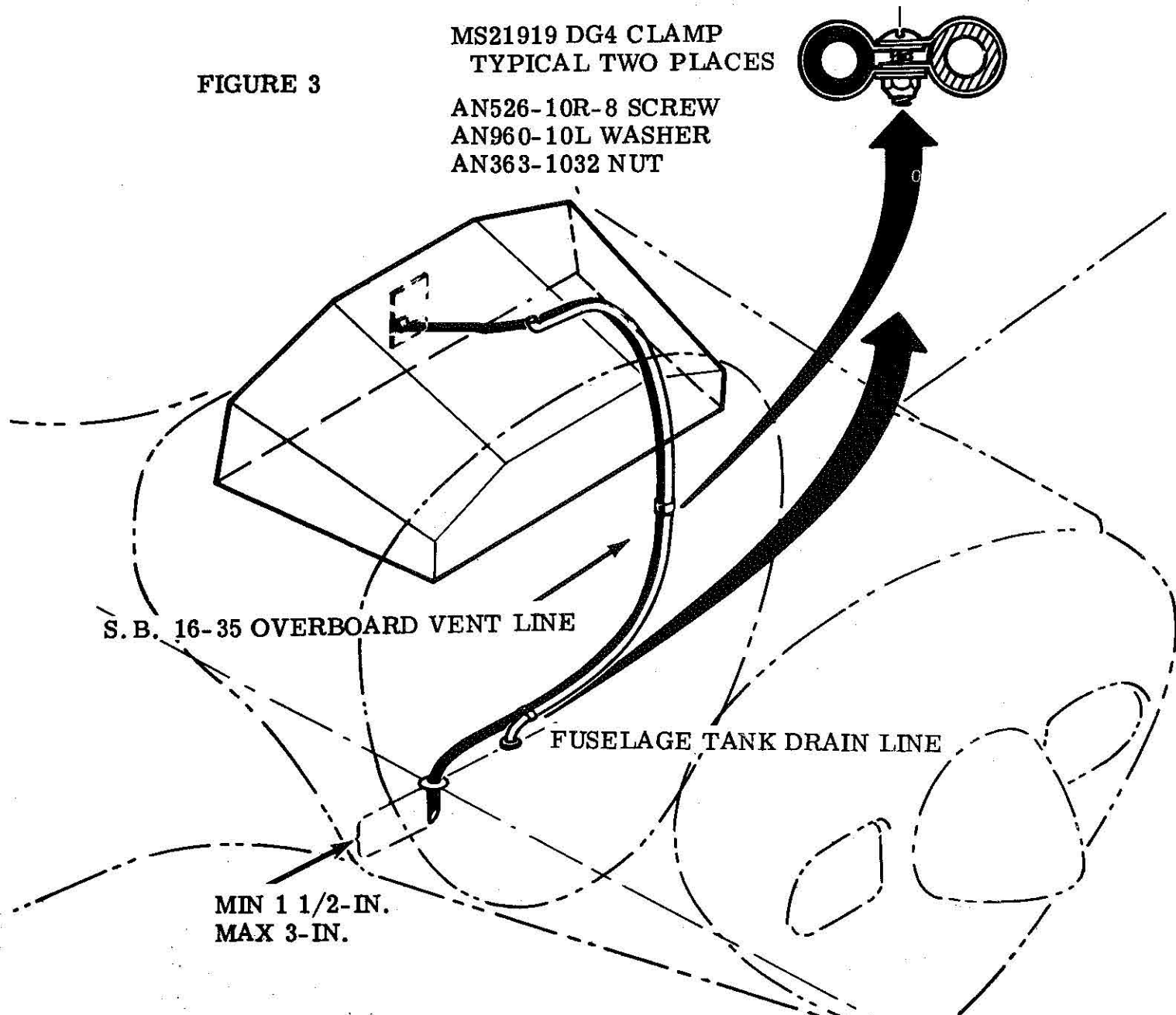
AN526-10R-8 SCREW
AN960-10L WASHER
AN363-1032 NUT



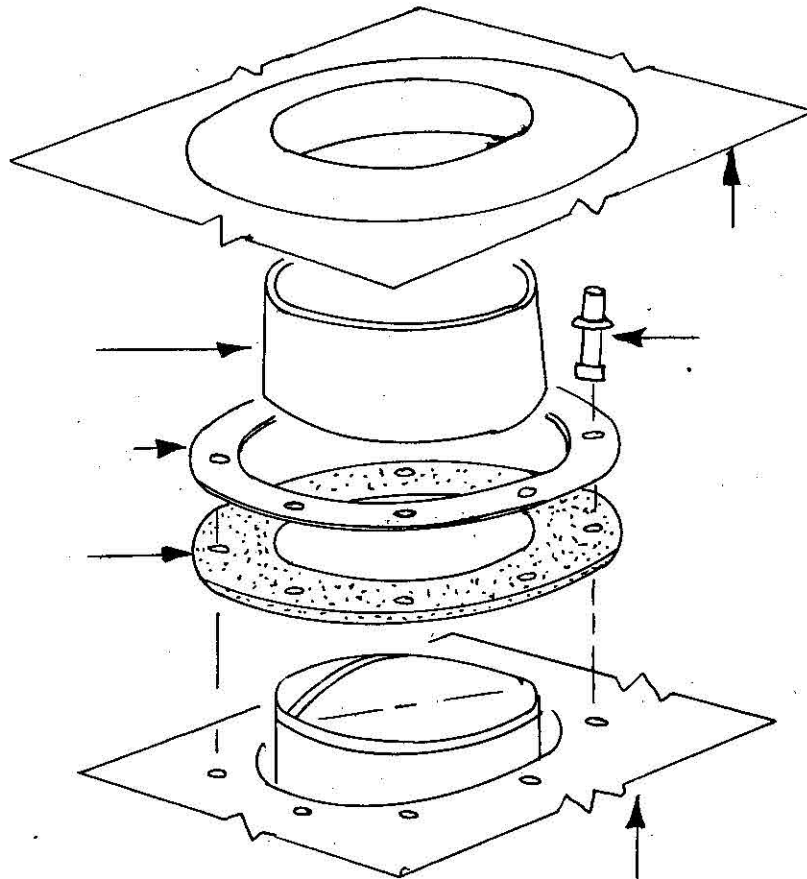
S. B. 16-35 OVERBOARD VENT LINE

FUSELAGE TANK DRAIN LINE

MIN 1 1/2-IN.
MAX 3-IN.



Step 4. Modify fuel-filler neck cutout in fuselage skin as shown in Figure 4.



- a. Remove top and side cowls.
- b. Assemble 610199 shield, 610204-3 seal, and 610204-5 doubler over fuel-filler neck with 610199 shield flush with top of neck.
- c. Use PR1321-B sealant to seal 610199 shield to fuel-filler neck. Allow sealant to cure about 24 hours prior to re-installing engine top cowling.
- d. Rivet 610204-5 doubler and 610204-3 seal to upper forward fuselage skin at fuel-filler neck cutout with eight (8) CR563-4-6 blind rivets. Pull rivets snug and cut stems with dykes.

NOTE: Use a drill stop (3/16-inch maximum penetration) when drilling rivet holes in fuselage skin.

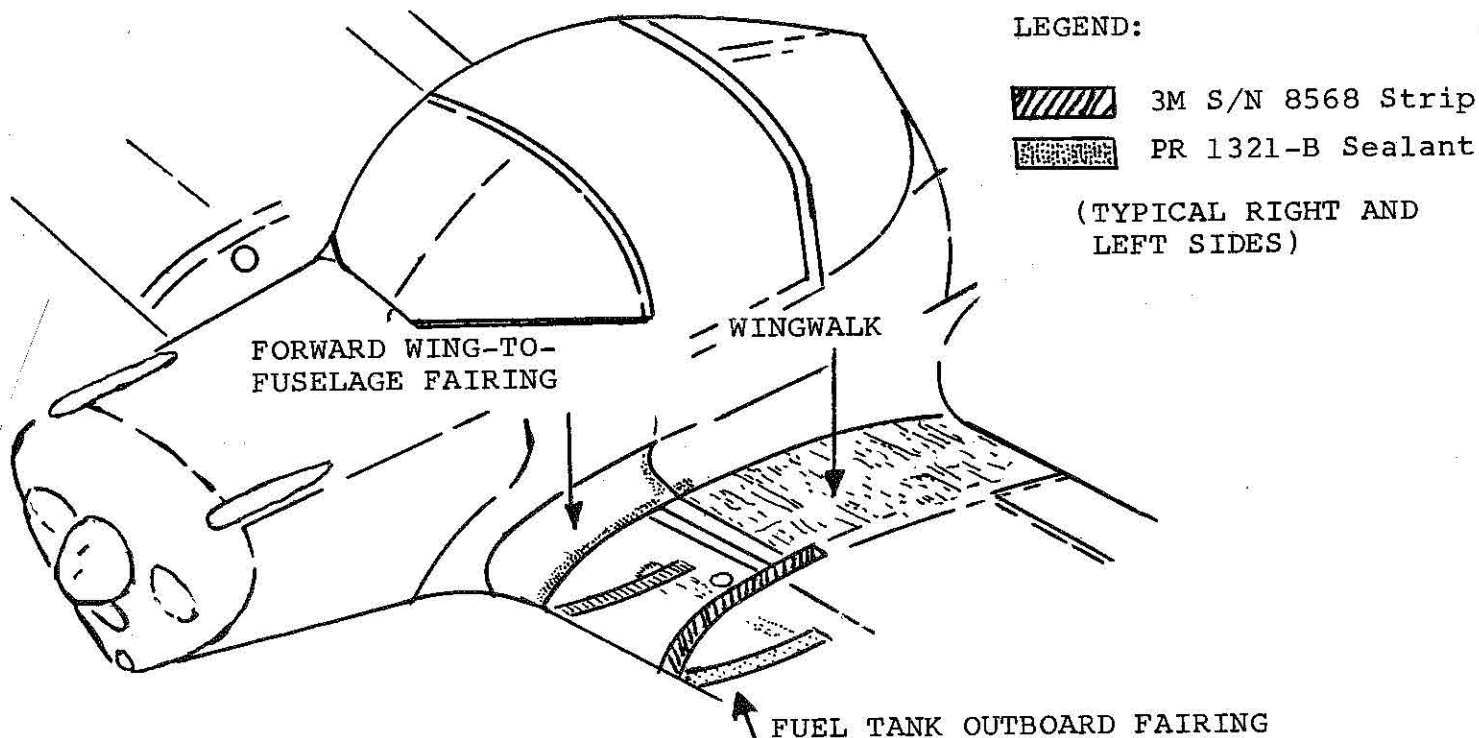
INSTRUCTION II: Replacement of fuselage fuel-filler gauge/cap gasket and wing fuel-filler caps (not illustrated).

- Step 1. Replace the fuselage tank fuel-filler gauge/cap gasket.
- a. Remove gasket from filler cap.
 - b. Install gasket (P/N 610179).
 - c. Install cap on fuselage tank.
- Step 2. Replace wing tank fuel-filler caps.
- a. Remove existing wing tank fuel-filler caps.
 - b. Install new wing tank fuel-filler caps P/N 610014-1.

INSTRUCTION III Airframe Sealing (See Figure 5).

- Step 1. Sealing area around wing tanks.
- a. Remove forward wing-to-fuselage fairing.
 - b. Remove wing fairings from fuel tank outboard edges.
 - c. Remove fuel lines and remove wing fuel tanks.
 - d. Remove interfering sealing tape or antiscuff material, and clean all sealing surfaces with an appropriate cleaning compound.

FIGURE 5



Step 2. Apply sealant as shown in preceding illustration.

- NOTES: Make certain there are no gaps that could make sealing difficult where fairings contact the wing. Apply sealant (approximately 1/16 inch thick layer) between fraying surfaces.
- Apply a coat of PR1321-B sealant (about .50 to .75 inch wide) to outboard edge of forward wing-to-fuselage fairing extending from wing leading edge back to four inches aft of the fairing rear edges on both top and bottom sections of the fairing.
 - Apply PR1321-B sealant to upper and lower aft edges of fuel tanks. Seal any gaps found in wing-walk skin joggle above spar.
 - Reinstall wing tanks and fuel lines.
 - Use strip calk (3M P/N 8568) to seal top and bottom inboard edges of wing fuel tank outboard fairings.

Allow sealant to cure about 24 hours under normal conditions after reinstallation of tanks and fairings.

Step 3. Install a G51H-A caterpillar grommet (approximately 4 inches long) in fuel tank drain skin-cutout (not illustrated).

INSTRUCTION IV: Fill out and mail accompanying Service Bulletin Compliance card.

SERVICE BULLETIN

KIT: No. (A2, A2-A) -16-1

S.B. 16-25 Fuel Return & Overboard Vent Assy. (1)	AN 823-4D Elbow Fitting (1)
S.B. 16-21 Gang Nut Channel "3" (2)	MS21919 DG4 Clamps.....(4)
S.B. 16-23 Gang Nut Channel 1-1/2"..... (2)	AN 526-10R8 Screws.....(2)
S.B. 16-13 Template... (1)	AN 960-10L Washer.....(2)
AN 515-8-6 Screw..... (12)	AN 363-1032 Nut.....(2)
AN 507B-440R-4 Screw.. (4)	P/N 8568 Strip Calk (Dum-Dum) 3M Co. 1/2 Box
AN 363-440 Nut..... (4)	610204-3 Seal.....(1)
AN 913-2 Plug..... (1)	610204-5 Doubler.....(1)
S.B. 16-27 Return Line Extension Assy..... (1)	CR 563-4-6 Rivet.....(8)
610199 Shield..... (1)	610179 Gasket.....(1)
AN 815-6D Union..... (1)	610014-1 Wing Tank Filler Cap.....(2)
S.B. 16-35 Overboard Vent Line Assy..... (1)	GS1H-A Grommet (8" long).(1)
AN 931-4-7 Grommet.... (1)	Service Bulletin Compliance Card.....(1)

Product Research 1321-B sealant--approximately two one-half pint cans.

NOTE: These kits may be purchased directly from your local Mooney distributor.

- SUBJECT:** MODIFICATION OF TAIL POSITION (WHITE) LIGHT INSTALLATION
- MODELS AFFECTED:** All ALON A2 and A2-A through S/N 291
- TIME OF COMPLIANCE:** At Owners Option
- INTRODUCTION:** To provide tail position light visibility for compliance with CAR 03.538.
- INSTRUCTIONS:**
1. Remove plastic taillight cover, bulb and socket.
 2. Cut electrical wire approximately 1 1/2 inches from taillight socket.
 3. Install knife disconnect (furnished with replacement socket) on existing taillight wires.
 4. Enlarge socket installation hole through plate to .75 inch diameter.
 5. Drill one #40 pilot hole through aft plate and ground taillight wire with sheet metal screw.
 6. Connect knife disconnects and cover with Ampsolite insulation.
 7. Position S.B. A17-3 royalite mount on tail structure and drill .140/.144 dia. holes (4) on royalite to match existing holes on structure.
 8. Install taillight socket and bulb on S.B. A17-3 royalite mount using enclosed AN515-6-8 screws (2).
 9. Install taillight assembly on tail structure using existing NAS-387-632-8 screws (4) and MK-1000-06 nuts (4).
 10. Test light for proper operation.
 11. Fill out and mail Service Instruction Compliance Card.

SERVICE BULLETIN KIT
NO. A-17-1:

One (1) Grimes tail position light assembly. (Consisting of 800300-117, -119, -121 wires; A 2064-1777 light with two attaching screws and 32446 (2) knife disconnects.)

One (1) S.B. A17-3 tail position light mount.

Two (2) 6187-4Z-1 speed nuts.

This Service Bulletin Kit may be procured from your local Mooney distributor. Direct factory orders will not be accepted.

SUBJECT: CARBURETOR AND FUEL SYSTEM MODIFICATIONS

MODELS AFFECTED:

Instruction I: Forney Models F-1 and F-1A (All aircraft using Continental C-90 engines equipped with the Marvel-Schebler Model MA-3-SPA carburetor).

Instructions I, II, & III Forney Model F-1A, S/N 5764 only.
Alon Model A-2, S/N A-2 thru A-245.
Alon & Mooney Models A-2A, S/N B-246 thru B-298.
Mooney Model M10 S/N 690001 thru 690008.

TIME OF COMPLIANCE: MANDATORY compliance within the next 50 hours.

INTRODUCTION: Certain combinations of atmospheric conditions, aircraft attitudes, fuel levels and/or normal flight maneuvers, may result in a condition where fuel starvation can occur. To preclude this possibility, accomplish applicable instructions.

INSTRUCTION I: Carburetor Modification - Change the float valve and seat from a .125 to .140 diameter assembly. THIS MUST BE ACCOMPLISHED BY AN FAA APPROVED REPAIR FACILITY.

Step 1 Remove the carburetor (Part List No. 10-4252) from the C-90 engine in accordance with the Continental Service and Overhaul "C" series engine manual.

Step 2 Replace the float valve and seat assembly with a Marvel-Schebler P/N ACX-1339-233 assembly. These assemblies are matched sets, pressure tested, and must not be interchanged.

NOTE: For assembly and disassembly instructions, refer to Marvel-Schebler Model MA-3-SPA Aircraft Carburetor Overhaul Instructions.

Step 3 Restamp the reworked carburetor (Part List No. 10-4252) to read "Part List No. 10-4252-1".

Step 4 Reinstall carburetor in accordance with the Continental Service and Overhaul "C" series engine manual.

INSTRUCTION II: Fuel System Modifications - Modify the fuel tank, relocate the fuel filter and replace all fuel lines and fuel fittings between the fuselage tank and the carburetor.

Step 1 Modification of the fuselage tank:

- a. Removal of the fuselage fuel tank (recommended to facilitate rework).

Step 1 cont...

- a.
 1. Remove instrument panels and control wheels with control wheel shafts.
 2. Disconnect clamps retaining engine controls to fuel tank.
 3. Drain fuselage fuel tank.
 4. Disconnect fuel lines at tank fittings.
 5. Remove filler cap.
 6. Remove screws securing tank.
 7. Place control column in full forward position.
 8. Lower tank and pull tank aft.
 9. Remove all fittings from tank.
- b. Modification of fuel tank outlet fitting.
 1. Remove fitting by cutting 1.30 X 2.80 inch hole as shown on Figure 1.
 2. Remove excess weld of existing tank fitting and install 610230-1 nut plate assembly (See Figure 2) with two No. 3 flush rivets.
 3. Thoroughly clean tank, removing all burrs and metal shavings.
 4. Position P/N 610227-1 fuel tank fitting assembly on 1.30 X 2.80 cutout as shown in Figure 2.
 5. Apply PRC 1321-B sealant, install P/N 610227-9 gasket, NAS 221-10 screw, AN960-516 washer, and MS 29513-009 O-ring as shown and noted in Figure 2.
 6. Cap fittings & pressure test tank for leaks with 2.0 psi air.
- c. Install AN911-3D nipple, 9239B-3PP valve, and AN816-6D nipple (Refer to Figure 3).
- d. Reinstall tank in aircraft (if removed).
- e. Reinstall instrument panels, control wheels, and shafts in reverse sequence of removal. Check for clearance.

NOTE: Install new P/N 610229 fuselage tank support strap supplied in Service Bulletin Kit. Use available hardware from existing tank support strap.

Step 2

Installation of firewall plate:

- a. Locate firewall plate S.B. A-19-9 as shown on Figures 3 and 4, on forward side of firewall, 1.9 inches below rivet line of inside firewall stiffener (new location at Water Line -13.3), and 1.1 inches inboard of inboard AN-4 bolt which attaches the fuel filter (at butt line 1.1 inches right hand side).
- b. Cut a 2.3 X 2.3 inch hole (radius bottom to match A-19-9 plate) centered at this location as shown on Figures 3 and 4.
- c. Center firewall plate on cutout and back-drill into firewall, thru existing holes on S.B. A-19-9 plate, eight .166/.170

Step 2 cont...

- c. diameter holes. Remove all sharp edges and burrs.
- d. Apply PRC 1902 primer and PRC 1955 sealant to firewall skin outer faying surfaces around attaching holes, and install S.B. A-19-9 plate attached with eight (8) each AN515-8R8 screws, AN960-8 washers, and AN365-832 nuts (Refer to Figure 4).
- e. Plug existing fuel line hole in firewall with AN4-3A bolt, two AN970-4 washers, and AN365-428 nut.

Step 3**Relocation of fuel filter:**

- a. Remove all fittings and hardware attached to the fuel filter.
- b. Remove fuel filter and plug two (2) holes on firewall by installing on each hole an AN4-3A bolt, AN960-4 washers (2), and AN365-428 nut.
- c. Relocate fuel filter by reinstalling with available hardware 3.7 inches below present location.

NOTE: This location is 3.0 inches below inside firewall stiffener rivet line (at Water Line -14.4) as shown on Figure 3; inboard and outboard location remains unchanged at butt line 3.0 left hand side (center line of fuel filter).

- d. Replace fuel drain pipe with 1/8 NPT pipe and coupling.
- e. Rotate the bottom of fuel filter 180° so as to allow the fuel filter drain line to match the existing cutout thru the cowling.
- f. Install MS21919 DG6 clamp (fuel filter support) on drain pipe and cup on firewall with attaching hardware as shown on Figure 3.
- g. Install fuel fittings on filter and firewall as shown on Figure 3.

Fuel line installation (Refer to Figures 3 and 4).

- a. Install fuel line P/N 610226-1 between fuselage tank and firewall with hardware as noted on Figure 3.
- b. Install fuel line P/N 610188-65 between firewall and fuel filter.
- c. Leak-check all connections.

Step 4 cont...

- d. Replace P/N 610188-45 fuel line from filter to carburetor. Routing of this fuel line shall be such that uniform slope upward is maintained without high or low spots from the fuel filter to the carburetor.
- e. Replace P/N 660170-2 fuel primer line.

Step 5

Updating of Manuals:

Include "Supplement to A-2 and A2-A Owners' Manuals" or replace the M10 Flight Manual and loading graph.

Correct weight and balance record by adding 15.5 lbs. unusable fuel to empty weight of aircraft (at Fus. Sta. 7.0).

INSTRUCTION III:

Installation of Primary Fuel Shutoff Valve Placard - Adhere, over existing placard between ignition switch and carburetor heat control, the S.B. A-19 (M10-1)-3 primary fuel shutoff valve decal. This decal is self-adhering (pressure sensitive).

INSTRUCTION IV:

Upon completion of Instructions I, II, III, and compliance (on applicable aircraft) with mandatory Mooney Service Bulletin A-16 (Alon) "Fuel System Modifications", dated 6-21-68, fill out and mail accompanying Service Bulletin Compliance card.

Neither this document (nor any amendment hereto) nor anything contained herein shall be construed an assumption by this corporation of any of the obligations or liabilities of its predecessors, Mooney Aircraft, Inc. or Mooney Corporation, both Texas corporations, or as otherwise imposing on Mooney Aircraft Corporation (a Pennsylvania corporation) any of the obligations or liabilities of its predecessors.

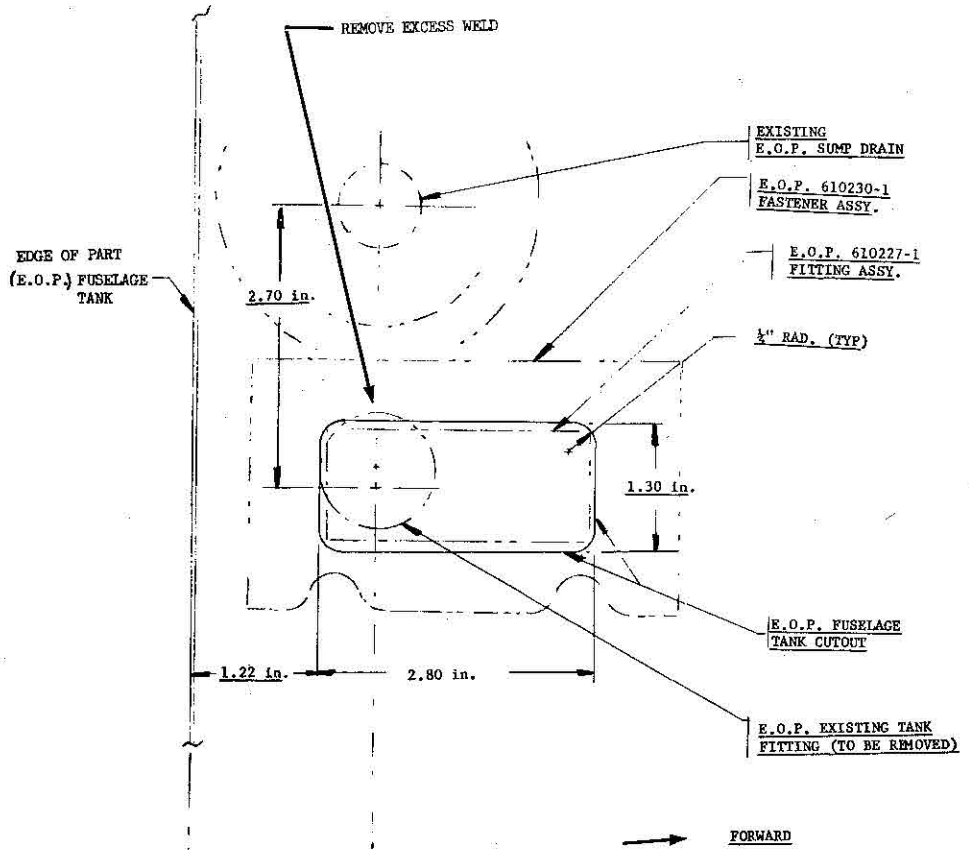


FIGURE 1
(VIEW LOOKING DOWN ON BOTTOM SIDE OF FUSELAGE TANK)
SCALE: NONE

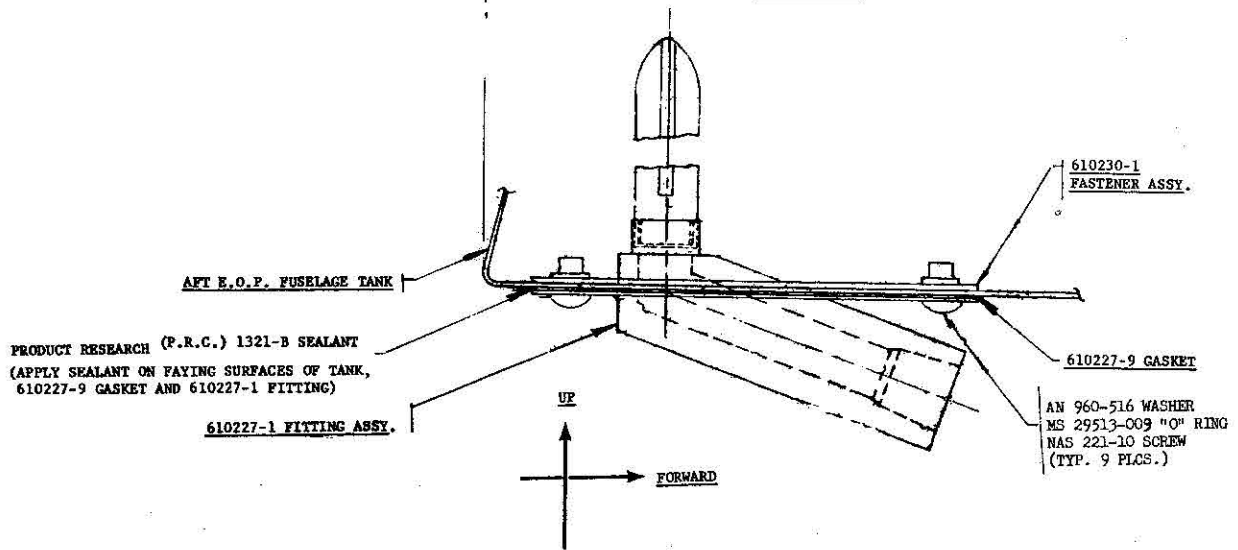


FIGURE 2
(Bottom of Fuselage Tank-Section)
Scale: NONE

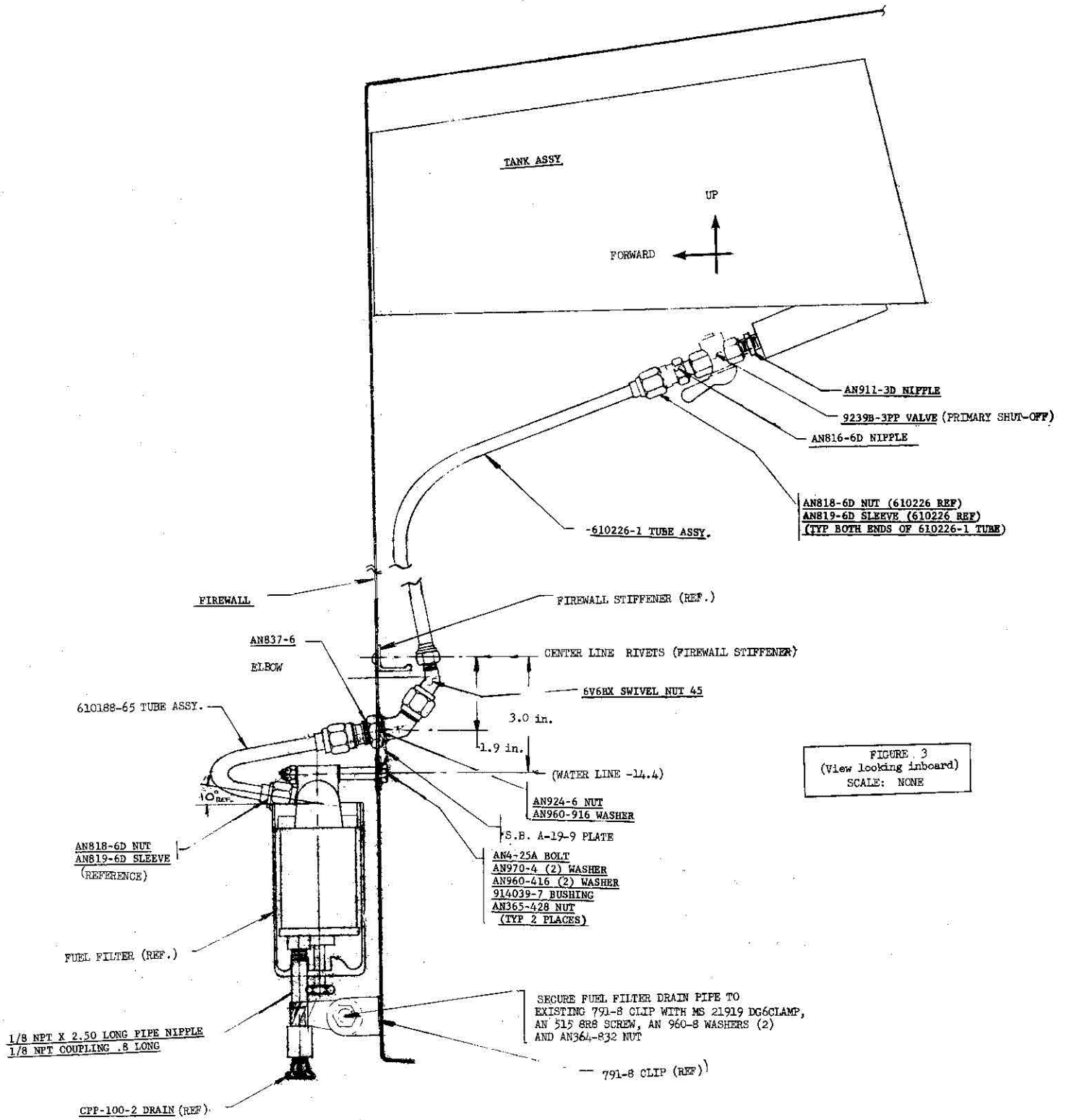
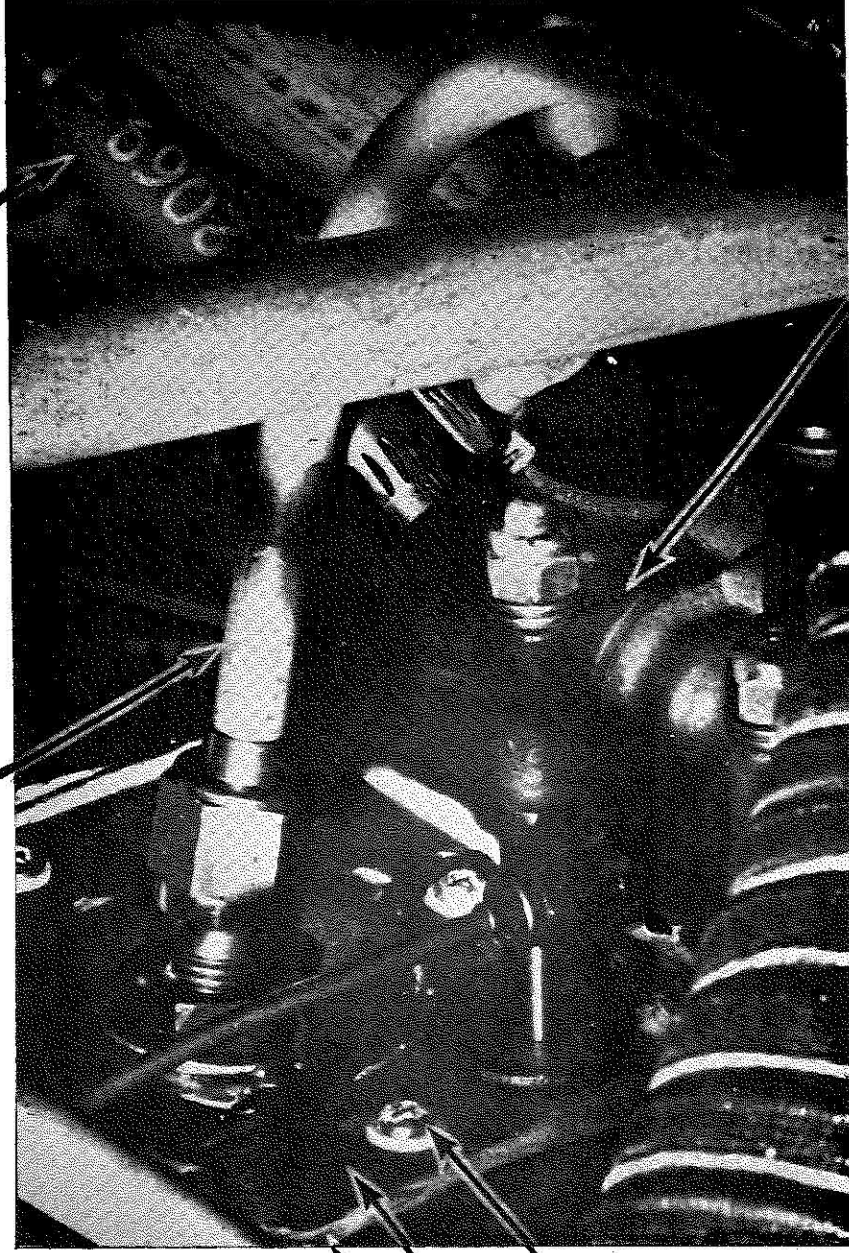


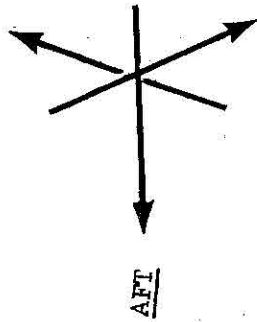
FIGURE 3
(View looking inboard)
SCALE: NONE

610188-65 ASSY.
(FIREWALL TO FILTER FUEL LINE)

FILTER TO CARBURATOR
FUEL LINE



INBOARD



DOWN

PRC 1902 PRIMER & PRC 1955
SEALANT (APPLY ON FIREWALL
AND INSIDE OF A-19-9 PLATE)

A-19-9 PLATE

- AN 515-8R8 Screws
- AN 960-8 Washers (2)
- AN 365-832 Nuts
(typ. 8 Places)

FIGURE 4
(View Looking At Firewall From Engine Compartment R.H. Side)

FILTER

A-19 (M10-1) SERVICE BULLETIN KIT:

No. A-19 (M10-1)-1 Kit for Instructions I, II, and III:

ACX-1229-233 Float Valve & Seat Assemblies	1 matched set
AN365-832 Nut	(8)
AN515-8R8 Screw	(8)
AN818-6D Nut	(1)
AN816-6D Nipple	(1)
AN911-3D Nipple	(1)
AN960-516 Washers	(9)
AN960-8 Washers	(8)
MS29513-009 O-ring	(9)
(Alternate AN6227-3)	
AN970-4 Washer	(6)
NAS 221-10 Screw	(9)
AN960-416 Washer	(4)
9239B-3PP Valve	(1)
AN4-3A Bolt	(3)
AN365-428 Nut	(3)
SB A-19-9 Firewall Plate	(1)
610227-1 Fuel Tank Fitting Assy	(1)
610230-1 Nut Plate Assy	(1)
610227-9 Gasket	(1)
610229-1 Tank Strap Assy	(1)
MS21919 Clamp (DG6)	(1)
610226-1 Fuel Line Assy	(1)
PRC 1321-B Sealant	5 oz. can
PRC 1955 Sealant (Product Research)	5 oz. can
PRC 1902 Primer (Product Research)	4 oz. can
S.B. A-19 (M10-1)-3 "Primary Fuel Shutoff Valve" Decal	
(Reference MG-6-150059)	(1)
1/8 NPT X 2.50 long Pipe Nipple	(1)
1/8 NPT Coupling (.8 long)	(1)
6V6BX Swivel Nut 45	(1)
AN837-6 Elbow	(1)
AN924-6 Nut	(1)
AN960-916 Washer	(1)
AN426 AD3	(2)
AN4-25A Bolt	(2)
914039-7 Bushing	(2)
610188-45	(1)
660170-2	(1)
"Supplement to A-2 and A2-A Owners' Manual"	(1) copy
(Enclosed for A-2 & A2-A Owners only)	
M10 Flight Manual dated 9/9/69 and loading graph (enclosed for M10 Owners only)	(1) copy ea.
Service Bulletin Compliance Card	(1)

No. A-19 (M10-1)-2 Kit (for Instruction I only):

ACX-1229-233 Float Valve & Seat Assemblies	1 matched set
Service Bulletin Compliance Card	(1)

These service bulletin kits may be procured from your local Mooney distributor and service center. Direct factory orders will not be accepted.

SUBJECT: INSTALLATION OF CYLINDER HEAD TEMPERATURE INDICATOR

MODELS AFFECTED: Forney Models F-1 and F-1A (All aircraft using Continental C-90 engines equipped with the Marvel-Schebler Model MA-3-SPA carburetor).

Alon Model A-2, S/N A-2 thru A-245
 Mooney/Alon Model A2-A, S/N B-246 thru B-299
 Mooney Model M-10, S/N 690002 thru 690011
 S/N 700001 thru 700050

TIME OF COMPLIANCE: MANDATORY Compliance within the next 10 hours.

INTRODUCTION: Reports have been received indicating overheating of cylinder heads.

To provide continuous indication of engine operating temperatures accomplish the following:

- INSTRUCTIONS:**
1. Install AN-5540-1 thermocouple on number 2 cylinder lower spark plug. NOTE: Thermocouple replaces spark plug gasket.
 2. Install cylinder head temperature gauge in full view of the pilot. NOTE: Use only full length lead wire supplied in A-20(M10-2)-1 Kit to connect gauge and thermocouple.
 3. Install A-20(M10-2)-3 decal next to CHT temperature gauge in full view of pilot.
 4. Fill out and mail Service Bulletin Compliance Card supplied in Bulletin Kit.

Neither this document (nor any amendment hereto) nor anything contained herein shall be construed an assumption by this corporation of any of the obligations or liabilities of its predecessors, Mooney Aircraft, Inc. or Mooney Corporation, both Texas corporations, or as otherwise imposing on Mooney Aircraft Corporation (a Pennsylvania corporation) any of the obligations or liabilities of its predecessors.

SERVICE BULLETIN KIT:

A-20(M10-2)-1	CHT Indicator (600°F) Red Line at 525°F-----	(1)
	AN-5540-1 Thermocouple (Spark Plug Gasket)-----	(1)
	Lead Wire of Iron Constantan (Supplied with Terminals and Cut to Length Approximately 10 Ft. for Proper Resistance to match CHT Indicator and AN-5540-1 Thermocouple)-----	(1)
	A-20(M10-2)-3 Decal (Make from Dymo-Label or equivalent) to Read: "Do Not Exceed 525°F CHT."-----	(1)
	Service Bulletin Compliance Card-----	(1)

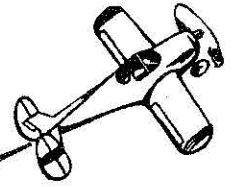
The above bulletin kit may be procured from your local Mooney distributor, service center or factory.

**ERCOUPE
SERVICE
BULLETIN**

**No. 29
Revision C**

Ercoupe **BULLETIN**

**SUBJECT: Mandatory Outer Wing
Panel Inspection**



July 8, 1999

MANDATORY SERVICE BULLETIN

**SERVICE BULLETIN NO. 29, REVISION C
OUTER WING PANEL INSPECTION**

DATE: July 8, 1999

SUBJECT: Visual inspection of outer wing panel structure for evidence of corrosion.

MODELS AFFECTED: All Ercoupe 415-C, 415-CD, 415-D, 415-E and 415-G aircraft.
All Forney F-1 and F-1A aircraft.
All Alon A-2 and A-2A aircraft.
All Mooney M10 aircraft.

COMPLIANCE: Inspection required within the next one hundred hours of operation or at the next periodic inspection, whichever occurs first.

STATEMENT OF DIFFICULTY:

There have been field reports of severe corrosion in the outer wing panel structure of several aircraft. The most effective means of preventing corrosion damage is early identification and correction. However, the original design configuration does not provide adequate means for routine visual examination of the wing panels during periodic inspections. Consequently, this Service Bulletin provides for the installation of strategically placed inspection openings to allow for complete visual access to the wing panel structure, and calls for an inspection to establish the current condition of the structure. The inspection openings will then allow routine inspections to be accomplished as required under FAR Part 43, Appendix D, (f).

Revision C of this Service Bulletin provides some clarifications to Revision B. If Service Bulletin No. 29 Rev. B has been complied with, then only the continued inspection procedures of Step 7 below need to be accomplished.

PROCEDURE:

1. The following optional procedure is intended only as a preliminary inspection to determine if a major corrosion problem exists, prior to installing the permanent inspection openings in the wing panels.

If equipment is available, cut borescope hole in center of inspection opening locations as shown on diagram SB-29, Rev. B. Inspect wing interior and make preliminary assessment of wing condition. FAA Advisory Circular AC 43-4A, "Corrosion Control for Aircraft", dated 7/25/91 or later, should be used to identify and treat corroded areas. Service Memos 45, 58, 58A, 64 and Service Bulletin No. 27 concern outer wing panel structure and should be reviewed at this time. If preliminary examination reveals conditions that are not repairable through an inspection opening, remove wing covering as required and repair or replace unairworthy parts prior to further operation. Replace covering. Install inspection openings and covers per Steps 2, 3, and 5. If borescope equipment is not available, proceed to Step 2.

2. Inspection opening location -

Locate inspection openings on the lower wing surface per the enclosed diagram, SB-29, Rev. B. Aircraft with factory covered metal skinned wings may already have existing inspection openings. SB-29, Rev. B, includes these openings.

CAUTION: If the opening locations specified by the diagram interfere with any skin stiffeners on metal skinned wings, alter the opening location to clear the stiffener.

3. Cutting procedure -

Metal skinned wings - Cut 3.50 inch diameter inspection openings at the locations of No. 2 above and deburr.

Fabric covered wings - Remove finish to bare fabric at the locations of No. 2 above. Attach reinforcing ring (P/N 483-15) with Rand-O-Bond, Super Seam or cement approved for use with covering process STC. If the wing is covered with synthetic fabric, it is recommended that a cover patch be applied over the inspection ring to prevent the ring peeling away from the fabric surface. Apply finish as required to touch-up area surrounding reinforcing ring. Carefully cut out center opening of ring.

NOTE: The four outboard inspection openings in each wing may have already been installed per Service Bulletin No. 27.

4. Inspection procedure -

Using the openings made in Step 3 above, inspect the wing panel structure for corrosion and unrepaired damage. FAA Advisory Circular AC 43-4A,

"Corrosion Control for Aircraft", dated 7/25/91 or later, should be used to identify and treat corroded areas. Service Memos 45, 58, 58A, 64 and Service Bulletin No. 27 concern outer wing panel structure and should be reviewed at this time.

Service Memo 45 regarding leading edge skin dents applies to Ercoupes Serial Nos. 1 to 112. Use heavier gage sheet metal to replace dented leading edge skins on these aircraft.

Service Memo 58 stresses the importance of maintaining the fabric on fabric covered wings. It also details the inspection and repair of the wing tip splice on Ercoupes Serial Number 4893 and earlier. If the wing tip splice is held with countersink rivets they should be replaced with larger diameter universal head rivets in accordance with Service Memo 58.

Service Memo 58A reiterates the importance of compliance with Service Memo 58. Service Memo 58A suggests the replacement of countersink rivets in the wing tip splice with universal head rivets when fabric is being replaced whether the rivets are loose or not. *Univair Aircraft Corporation strongly recommends the replacement of countersink rivets in the wing tip splice with universal head rivets in accordance with Service Memo 58 as soon as practical.*

Service Memo 64 announces the availability of repair kit S.A 24 to simplify repair of damage to the inboard end of the outer wing panel rear spar, providing the damage does not extend outboard of a point 15 inches from the inner rib. If the rear spar attach fitting or the rear spar around the fitting is corroded, kit S.A. 24 may be installed to replace the corroded fitting and the inboard 15 inches of the rear spar.

Service Bulletin No. 27 details procedures for inspection of suspected wing tip damage.

Repair or replace any parts considered unairworthy prior to further operation.

5. Cover plate installation -

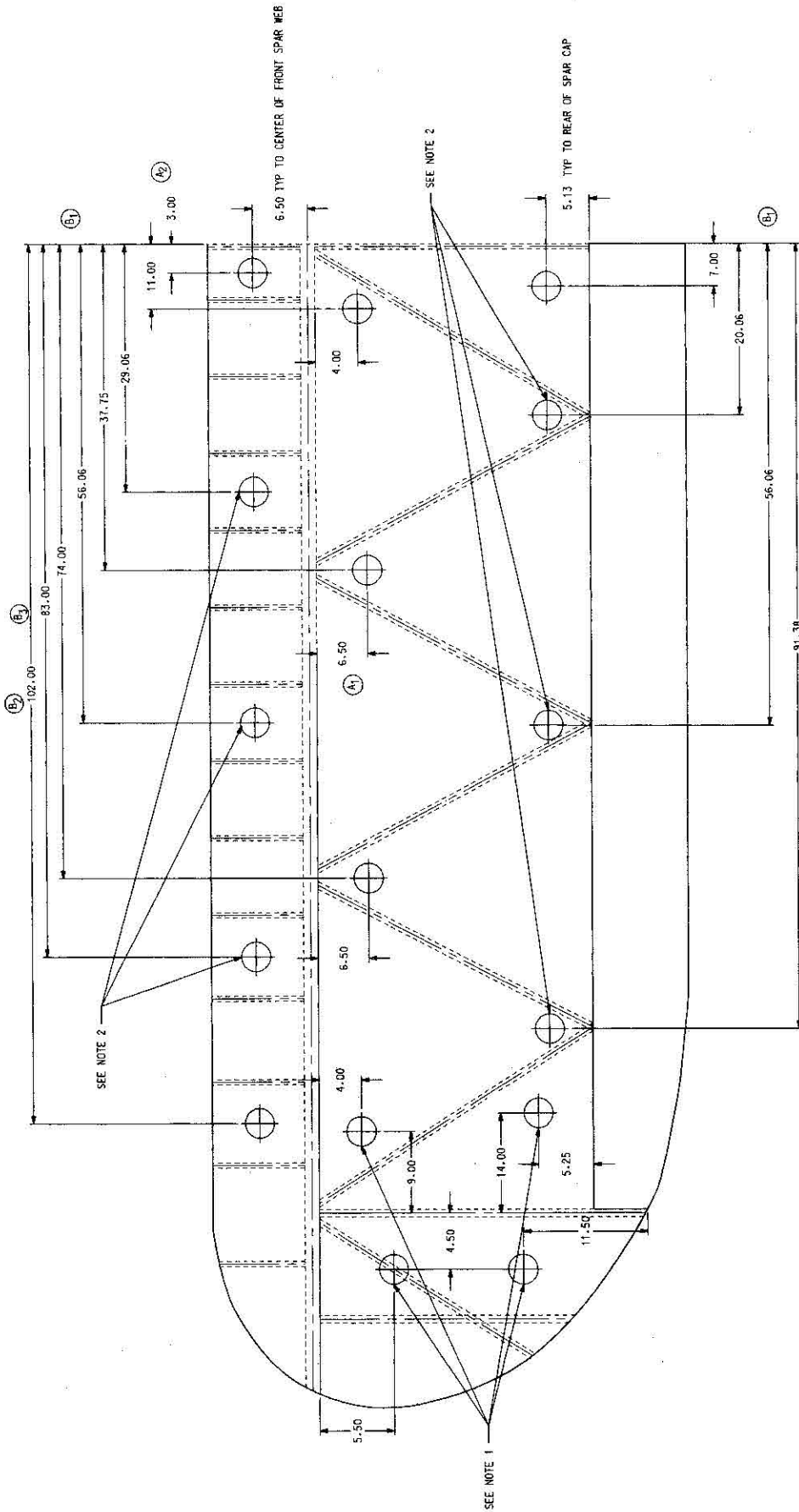
After inspection is complete, install cover plates (P/N 483-10) in each opening. On metal skinned wings, secure each cover plate at the leading edge with one 4 X 3/8 TRA sheet metal screw.

6. Required documentation -

Make log book entry stating compliance with Service Bulletin No. 29C. Weight and balance change is considered negligible.

7. Continued inspections -

At each 100 hour and annual inspection, remove the cover plates installed per Step 3 and inspect outer wing panel for corrosion or damage per Step 4 as required by FAR Part 43, Appendix D (f). Repair or replace corroded or damaged parts as required.



BOTTOM VIEW

1. MAY HAVE ALREADY BEEN INSTALLED PER SERVICE BULLETIN NO. 27
2. MAY ALREADY EXIST ON FORNEY & MOONEY MODELS
3. MODELS: EROUPE 415-C, -CD, -D, -E, -G
FORNEY F-1 & F-1A
ALON A-2 & A-2A
MOONEY M10
4. ALL DIMENSIONS ±0.13
5. INSTALL COVERS, RINGS & SCREWS PER SERVICE BULLETIN NO. 28B
483-15 RING USED ON FABRIC COVERED WINGS ONLY
4 X 3/8 TRA SCREW USED ON METAL COVERED WINGS ONLY

4 X 3/8 TRA	SCREW	SEE NOTE 5	20		
483-15	RING	SEE NOTE 5	20		
483-10	COVER		20		
PART NUMBER	NAME	STOCK SIZE	QTY	MATERIAL	SPECIFICATION
38488 B71	K. STERNMAN	DATE: 9-4-43	SCALE: NONE	FAV. WHEEL	EROUPE
L. DATE: 5-13	2-100	± 2"	UNIVAIR AIRCRAFT CORPORATION 5500 HAWAIIA WIND AUBURN, COLORADO, 80011		
FINISH	NONE				
PAINT	AS REQUIRED TO MATCH EXISTING SCHEME	TITLE: INSTALLATION - INSPECTION HOLES			
E.O. NO.	REVISION	DATE	SHEET NO. 1 4 OF 4		
			DRAWING NO. 1 SB-29C		

All Owners & Operators of Alon A2 Aircraft

Returned Parts and Warranty Program Procedures

Gentlemen:

A procedure or action to be taken when material is returned to Alon, Inc., McPherson, Kansas, is given below.

To adhere to this procedure will alleviate correspondence and improve customer service. We will appreciate your co-operation.

1. All material returned must be accompanied by a properly filled out Return Goods Tag, and if applicable, a warranty claim form.
2. A letter, or remarks on the form, as to the desired disposition. That is, if considered a warranty item, or a new part replacement order.
3. Material returned for warrant consideration must be accompanied by the above documents, always including (a) serial number if applicable, (b) total hours at time of failure, (c) reason for failure, if known, or (d) other pertinent information. (Doesn't work is not sufficient). Describe malfunction briefly.

Example: Gyro horizon bar indicates left wing low in level flight.

4. If time permits, a letter in advance of the parts shipment, forwarded to the Aircraft Sales & Service Department, would expedite the whole procedure. (NOTE: No parts will be shipped as replacement items until a purchase order is received).
5. The warranty for aircraft produced by Alon, Inc. may be found in its entirety on the reverse side of the Warranty Claim Form. The following is inserted as a guide if disposition is in doubt. Warranty applies to any defective or malfunctioning part, either purchased by, or manufactured by Alon Inc., with the following exceptions.

Tires and Tubes - Warranted through the manufacturer.

Engines and Accessories - Warranted through the Continental Motors Corp.

Vacuum Pumps - Warrantied by Airborne Mechanism for a period of ninety (90) days or two hundred and fifty (250) hours, whichever comes first.

Radio - Warrantied by the Manufacturer.

Propeller - Warrantied by the Manufacturer.

For your assistance in the above:

- A. Return Goods Tags are available upon request.
- B. Warranty Claim Forms are available upon request.
- C. All Alon warranty decisions are made only at the factory.
- D. Please keep on hand Service Letters/Bulletins which affect returned items.
- E. Warranty on items is generally impossible if they have been tampered with or disassembled in the field.
- F. Information given in phone conversations must be reiterated on paper and accompany returned material.

The above procedures, if adhered to, will expedite warranty claims, and be of mutual benefit to Alon and its valued customers.



Ray Berscheidt
Sales/Service

RB: jlo

TO: All Owners and Operators of Alon A2 Aircraft
Subject: Service Letter/Bulletin Compliance Record

Gentlemen:

DATE: Nov. 7, 1966

It is the desire of Alon, Inc. to continually improve its products, marketing procedures, and service methods.

To effect a follow-up program pertaining to service also means increased safety and added service life to our customers' aircraft.

With this in mind, we are inaugurating our Service Letter/Bulletin Compliance Program which will allow Alon, Inc. to more closely monitor the maintenance on the A2 Aircoupe.

Enclosed you will find a quantity of Compliance Record Forms, with instructions for use listed below.

1. Service Bulletin (SB-13) is the current bulletin as of this date.
2. All bulletins have aircraft serial numbers affected listed at the top of the page.
3. Using your aircraft serial number as a guide line, determine which bulletins affect your aircraft.
4. As this is the first Compliance Record you have received, please ----
 - (a) Use one copy to list all bulletins affecting your aircraft, which have been complied with, and forward to the Service Department, Alon, Inc. One should go to the distributor as indicated at the bottom of the record
5. In the future, please comply with bulletin as soon as possible and forward form to the proper agency.
(Reminder: Please use carbon between copies and either print or use typewriter so that all copies will be legible).

You will receive bulletins as they become available. If more Compliance Record Forms are needed, mail us a request and they will be sent at no charge.

Ray Berscheidt

Ray Berscheidt
Sales-Service

RB:jlo

2/6/67

ALON 

SERVICE LETTER

NO. 3

TO: All Owners and Operators of Alon A2 Aircraft

Subject: Returned Goods (Instruments)

Gentlemen:

It is obvious that instruments do malfunction at times for no apparent reason, and when this happens to a new installation, or one that is still under warranty, it is our desire to replace the part with a minimum amount of down time and inconvenience.

In order that we may expedite claims, we solicit cooperation from the field. Normally, when an instrument, especially a gyro driven type is returned, inspection reveals that only a minor adjustment is needed to repair it.

However, in many cases, damage sustained during shipment, and by improper handling, causes a complete overhaul of the instrument. This overhaul is billed to the factory at a minimum charge of 45.00, or more, plus handling. In the future, this charge will be billed to the outlet that returned the parts improperly packed.

Summary of information:

1. Do not send instruments via parcel post.
2. Make sure instrument has been fully caged before returning.
3. List the specific causes for rejection.
4. Artificial horizons must be fully uncaged while in aircraft to operate properly.
5. Re-acquaint all personnel with Service Letter No. 1, Items 1, 2, 3 and 4.
6. No returned goods will be considered for warranty unless the properly completed paperwork accompanies the part in question.

Please cooperate by using acceptable handling methods, and if special circumstances arise that require special consideration, contact us immediately and we will do our utmost to be of assistance.



R.L. Berscheidt
Sales/Service Dept.

RLB:jlo

3/1/67

All Owners & Operators of Ercoupes and Aircoupes prior to and including Serial No. 5714

Installation of Nylon Bearings in Rudder Bellcrank

Gentlemen:

To eliminate the need for continuous re-oiling of the bellcrank as required in Ercoupe Service Memo No. 63, it is recommended that the assembly be reworked per either method contained in Alon Service Bulletin No. 14. Both of these methods replace the bakelite bushing with nylon bearings.

These nylon bearings have been a standard installation item in over 250 A2 Aircoupes and have required no further maintenance.

parts necessary for compliance:

Method 1 - Rework old Casting:

Parts required: (1) Bushing
(2) Nylon Bearings

Method 2 - Installation of new Castings:

Parts required: (1) New Casting
(2) Nylon Bearings



R.L. Berscheidt
Sales/Service