

DATE: February 23, 1972

SUBJECT: Fuel Tank Vent Line Inspection and Modification

SERIALS AFFECTED: AA5-0002 through AA5-0045

TIME OF COMPLIANCE: Inspection: Before further flight if aircraft is to be operated in an OAT of less than 32°F. Otherwise, at time of modification.

Modification No. 1: Within the next 50 hours of operation or at the next scheduled inspection, whichever occurs first.

Modification No. 2: With modification No. 1 if No. 1 is required, otherwise within the next 50 hours of operation or at the next scheduled inspection, whichever occurs first.

General

Wire Bulletin No. 128, issued on February 16, 1972, described the procedure to inspect and remove any low spots or kinks in the PVC fuel tank vent line between the vent outlet housing and the outboard end of the 1/4" dia. aluminum tank vent line on some selected aircraft. (See Fig. 2A).

Subsequent field reports indicate that some additional aircraft may have an additional low spot at the vent line junction between the inboard and outboard wing panels. This condition could cause fuel tank vent line blockage if enough water accumulated and froze in this low spot to completely close off the tube. This could lead to the collapse of a fuel tank and ultimately cause fuel starvation to the engine.

Inspection of the Fuel Tank Vent Line at the Outboard Wing Splice Joint

The fuel tank vent line connections to be inspected can be reached through inspection covers located approximately 5 1/2 ft. inboard from each wing tip and 1 ft. back from the wing leading edge on the wing lower surfaces. Some aircraft have vent line connections as shown in Figure 1A, where a long length (approximately 6") of PVC flexible tubing was used to make the connection with one clamp located between the two closely spaced wing ribs and the other clamp located directly over the inspection cover. No rubber grommets were used where the PVC tubing passed through the wing rib. This long length of PVC tubing can sag and cause a low spot if the outboard 1/4" dia. aluminum tank vent line is inadvertently moved inboard at any time. Any sag must be removed prior to further flight on any aircraft that will be operated in an OAT of less than 32°F. See below for modification instructions.

1. Modification No. 1 - Fuel Tank Vent Line PVC Connections at the Outboard Wing Splice Joint Change (Both Wings)

Aircraft that have the vent line splice joint configuration as shown in Fig. 1A must be modified to the joint shown in Fig. 1B. Any change in this joint requires

simultaneous compliance with modification No. 2. Proceed with modification No. 1 as follows:

1. Remove existing long length of PVC tubing (Fig. 1A).
2. Install a rubber grommet part no. MS35489-6 in the wing rib hole that the PVC tubing passed through originally.
3. Slide a 2 1/2" long length of PVC tubing 1" onto the inboard vent line and clamp in place. (use a section of the original tubing removed in step 1)
4. Slide the hose clamp over the outboard tube and insert the aluminum tube into the PVC connection approximately 1" until a 1/2" gap exists between the ends of the aluminum tubes.
5. Install the clamp on the PVC tube completing the connection and replace the inspection cover.

2. Modification No. 2 - Outboard Fuel Tank Vent Line to Vent Housing Connection
Modification (Both Wings)

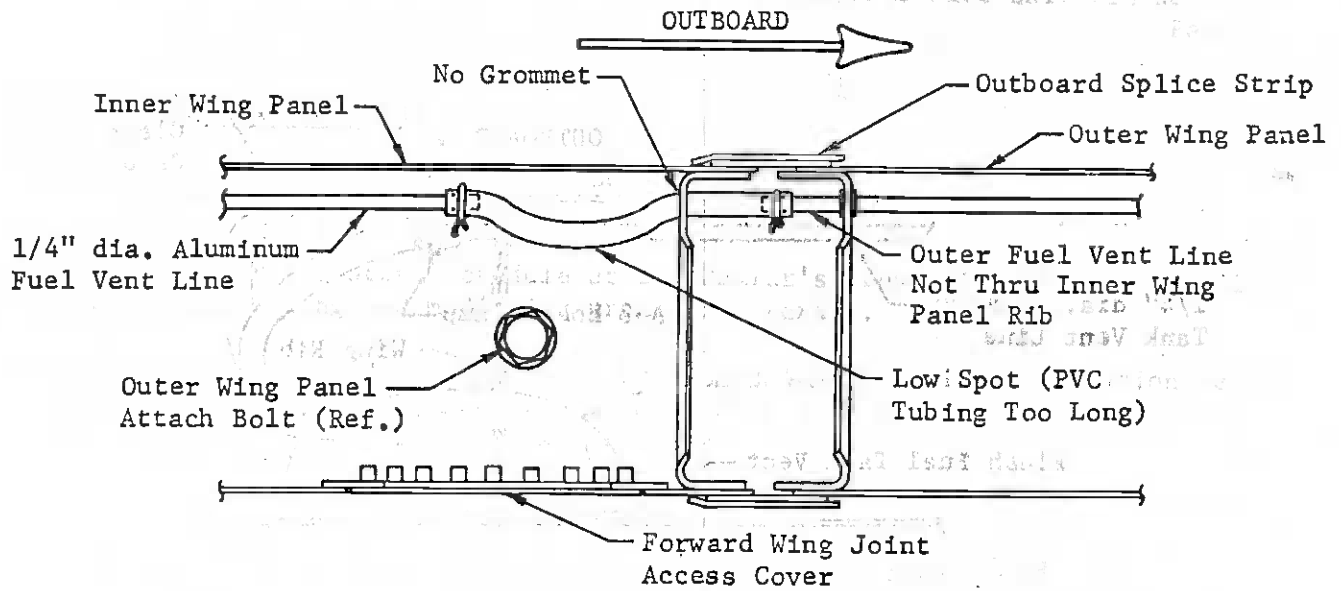
The outboard vent line to vent housing PVC tubing connections must be modified per Fig. 2B as follows:

1. Verify that aircraft complies with modification No. 1 before starting this modification.
2. Remove both wing tips.
3. Disconnect the 1/2" dia. PVC tube and remove PVC spacer from 1/4" dia. aluminum tank vent line (upper connection). Some aircraft have an adhesive backed plastic clamp mounted to the upper wing skin supporting the existing loop in the PVC tube. This clamp should be removed from the aircraft.
4. Install the 1 3/8" long x 3/8" O.D. PVC tube (part no. 10300-2) and the 1/4" dia. aluminum tube 170° bend (part no. 10300-1) on the outboard end of the existing vent line per Fig 2B, using (2) #A-6 hose clamps (Corbin).
5. Shorten existing 1/2" O.D. PVC tube to approximately 8 1/4" long, insert #5200003-16 spacer (PVC) removed in step 3 and clamp to the 170° bend tube with #A-8 original hose clamp, being sure tube is properly positioned and is free of kinks.
6. Remove fuel tank filler cap. Then to verify that the vent line is open and properly connected, carefully blow air (10 p.s.i. max.) into the vent line opening located on the bottom outboard wing surface. CAUTION - BE SURE FILLER CAP IS OFF BEFORE APPLYING AIR, TO AVOID PRESSURIZING THE FUEL TANK.
7. Replace wing tips.

Parts Information

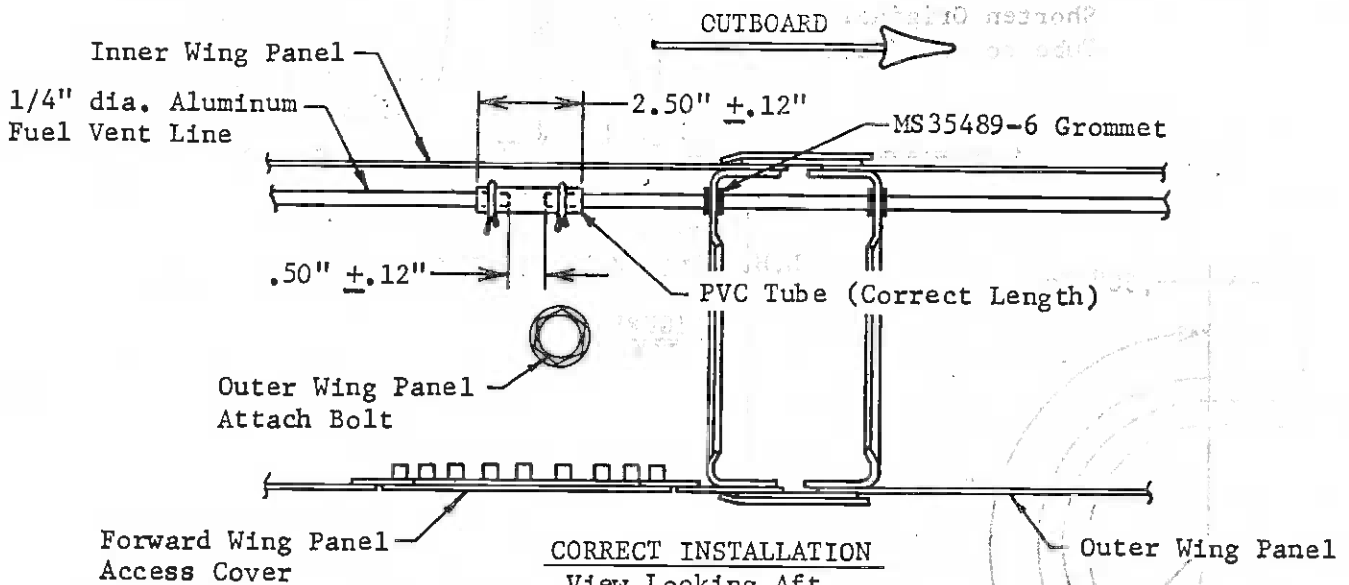
The following parts required for the modifications may be fabricated locally or obtained through your authorized American Aviation Corporation Dealer at no charge until August 31, 1972:

<u>Quantity</u>	<u>Per Aircraft</u>	<u>Part Number</u>	<u>Description</u>
2		MS35489-6	Grommet
2		10300-1	Tube
4		A-6	Hose Clamp
2		10300-2	Tube



INCORRECT INSTALLATION
 View Looking Aft
 L.H. Wing (R.H. Opposite)

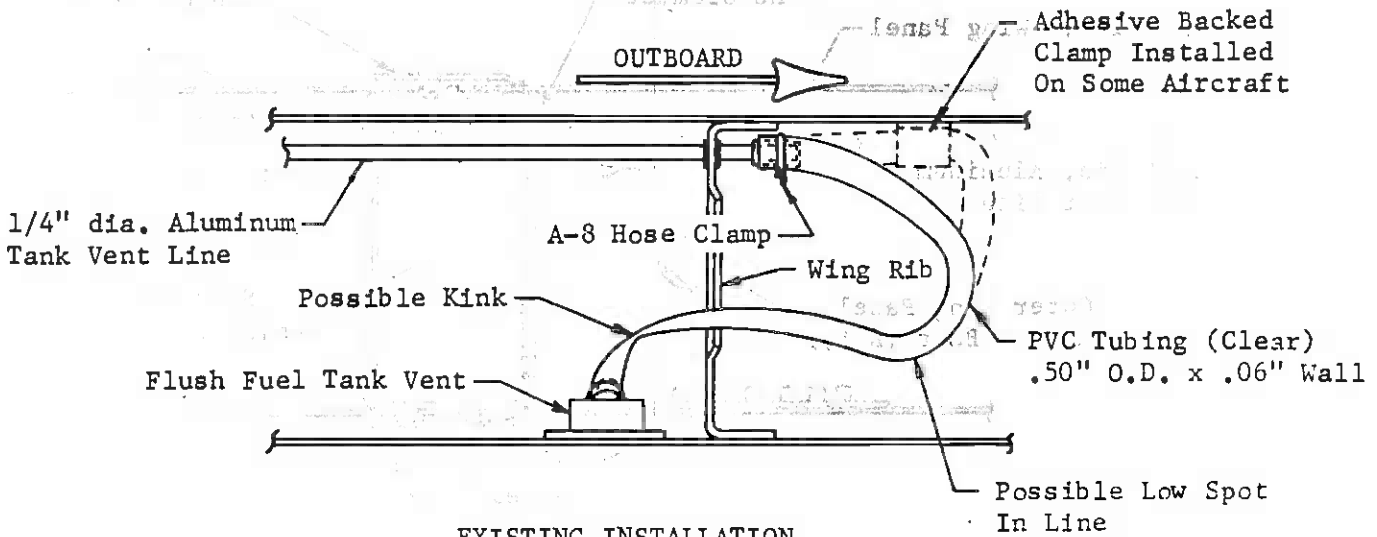
FIGURE 1A



CORRECT INSTALLATION
 View Looking Aft
 L.H. Wing (R.H. Opposite)

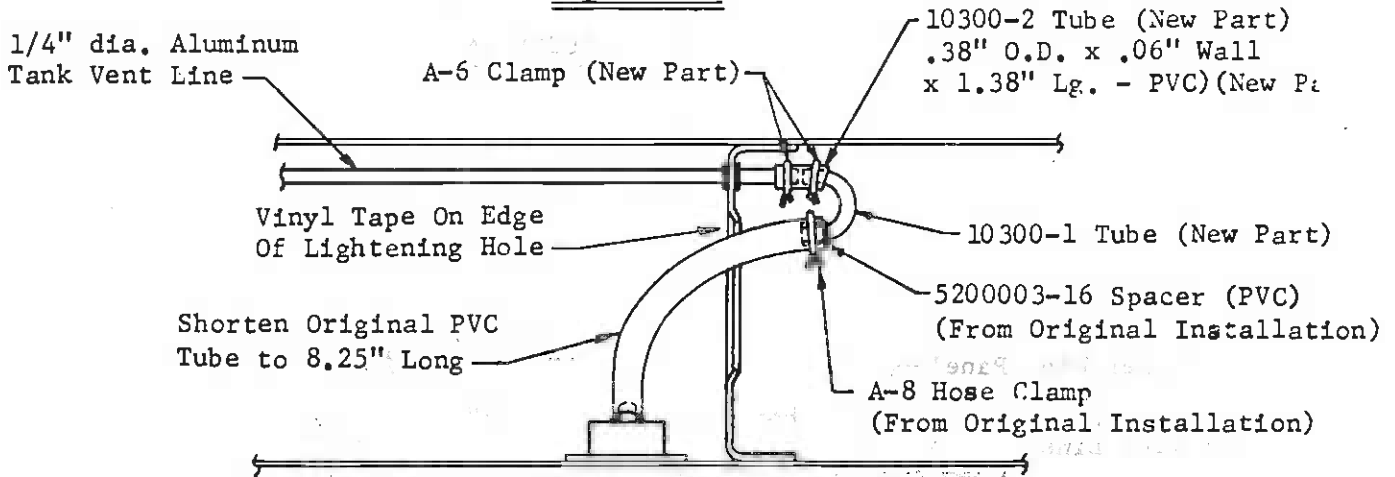
FIGURE 1B

MODIFICATION NO. 1



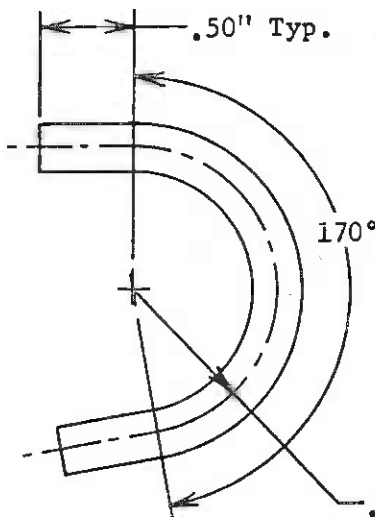
EXISTING INSTALLATION
 View Looking Aft
 L.H. Wing (R.H. Opposite)

FIGURE 2A



MODIFIED INSTALLATION
 View Looking Aft
 L.H. Wing (R.H. Opposite)

FIGURE 2B



10300-1 Tube
 Mat'l. - .25" O.D. x .035" Wall,
 5052-0 Aluminum

MODIFICATION NO. 2

Credit Allowance Per Aircraft

<u>Inspection</u>	<u>Modification No. 1</u>	<u>Modification No. 2</u>
.3 hr.	.5 hr.	.8 hr.

A labor credit, per the above schedule at the Dealer's Prevailing Shop Rate, will be available for inspecting and modifying affected aircraft.

All work must be performed or authorized by an American Aviation Corporation Dealer or representative and a completed Warranty Claim, Form AA-740, submitted to the factory prior to August 31, 1972 for credit allowance.

N O T E

Complete and mail in attached Service Reply Card

Prices are subject to change without notice.

AMERICAN AVIATION CORPORATION

PHS:pjr

Attachment: Service Reply Card

Distribution (B)