

SERVICE LETTER NO. 71-13

DATE: December 10, 1971

SUBJECTS: Item 1. Stall Warning Wire Relocation  
Item 2. Master Cylinder Operation  
Item 3. Windshield/Canopy Improvement  
Item 4. Nose Gear Fork Installation  
Item 5. Canopy Attachment Improvement  
Item 6. Prestolite Service Bulletin No. ASM-5

SERIALS AFFECTED: As indicated on each subject.

Item 1. Stall Warning Wire Relocation (AA1A-0001 thru AA1A-0279)

The stall warning switch is installed in the model AA-1A wing such that flexing of the lower wing skin could cause intermittent contact of the normally open switch terminal to the inside of the wing skin resulting in a premature stall warning indication.

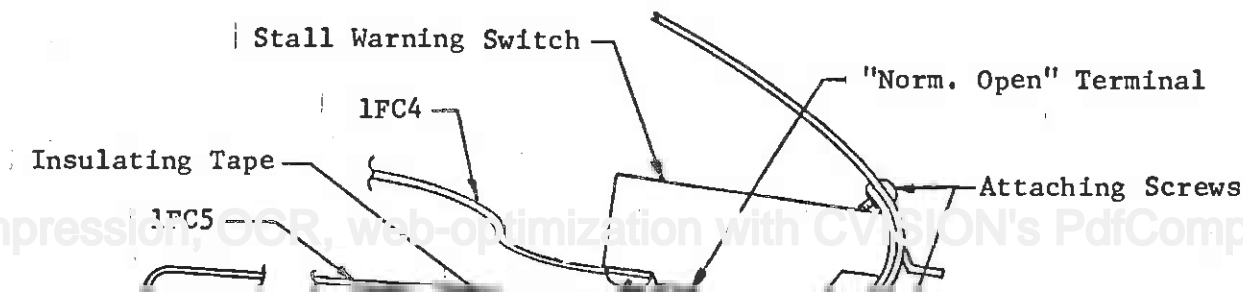
To eliminate this possibility, it is recommended that at the next scheduled inspection or sooner at the owner's discretion, the leads on the stall warning switch be reversed so that the 1FC5 ground wire terminal is connected to the "norm open" switch terminal per the following instructions:

Relocation Instructions (Figure 1.)

1. Remove right wing tip.
2. Mark exact position of stall warning switch and vane in relation to wing leading edge.
3. Remove switch from wing by removing screws that secure switch bracket to wing skin.
4. Reverse 1FC4 and 1FC5 wires on switch terminals so that 1FC5 is connected to "norm open" terminal as shown in Figure 1.
5. Confirm satisfactory condition of insulating tape on inside wing skin.
6. Install switch in exact same position as removed. Install wing tip.

**N O T E**

If switch is not relocated in exact same position as removed, the aircraft must be flight tested to confirm that stall warning horn sounds at 5-10 mph above stall speed at gross weight flaps up and flaps down.



Aircraft nos. AA1A-0280 and up have the wire terminals connected as shown in Figure 1 and are not affected by this item.

Item 2. Master Cylinder Operation (All model AA-1, AA-1A and AA-5).

A few field reports of intermittent locking of a brake on the pilot's side of the aircraft have been received. The reports indicate that the brakes will operate normally for an extended period of time, but occasionally one wheel may lock for no apparent reason, particularly after several rapid applications of brakes such as "pumping" the brake pedal.

A cause for this intermittent brake locking has been traced to a slightly mislocated Gerdes part no. A-087-A screw and washer assembly which acts as an up travel stop for the piston and opens the bypass port between the piston and shaft when brake pedal pressure is released. Mislocation of the screw and washer assembly too far from the cylinder bore could result in insufficient washer overlap on the piston which could allow the piston to occasionally slip by the washer, and not open the bypass port, causing that brake to lock or drag.

If intermittent brake locking is experienced, the cause should be determined as quickly as possible. Cylinders that do not have proper washer overlap per Figure 2, should be removed from service immediately and replaced with new cylinders part no. 403010-3.

Note that this possible defect applies only to the reservoir type master cylinders installed on the pilot's side of the aircraft and does not affect the co-pilot's side.

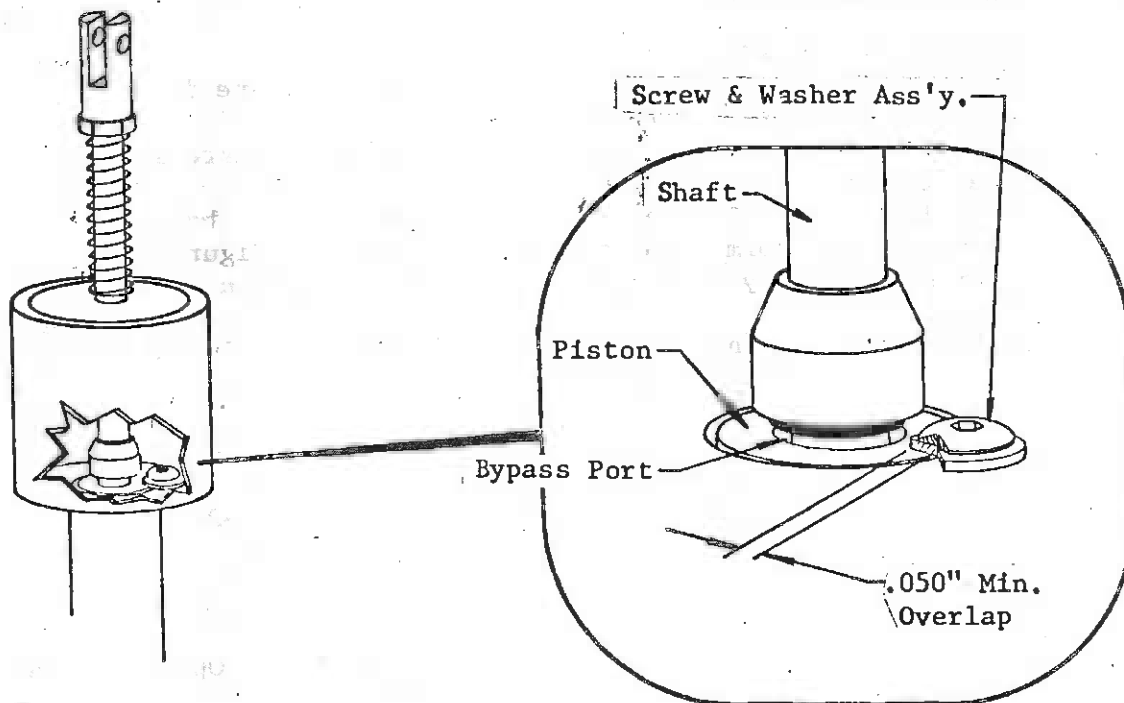


Figure 2. Master Cylinder

The rubber washers located between the windshield/canopy plexiglas and the aluminum retaining washers, have recently been improved. The improved washers are fabricated from a higher durometer rubber and will not extrude in service and allow the windshield/canopy bows to move when latching the canopy.

It is recommended that these improved washers, part no. AES75-2, \$.25 (H), (24 required per aircraft), be installed on the above affected aircraft if the existing washers are extruded to the point that they allow the bows to move or the appearance of the extruded washers is objectionable.

Item 4. Nose Gear Fork Installation (All model AA-1 and AA-1A with 6.00 x 6 main gear tires installed)

It has come to our attention that some model AA-1 and AA-1A have been improperly modified in the field when replacing the factory installed 15 x 6.00 x 6 main gear tires and tubes with 6.00 x 6 tires and tubes. Those modifications have been accomplished without installing the extended nose gear fork assembly part no. 702067-501 in place of the original factory installed part no. 702052-501 or 702052-503 fork assembly as called out in Accessory Kit No. AK-120.

Failure to install part no. 702067-501 extended fork assembly when installing 6.00 x 6 main gear tires, results in reduced propeller clearance and is not approved. We cannot be responsible for any aircraft operated in this condition. Figure 3 below illustrates the different fork assemblies to assist you in identifying these components.

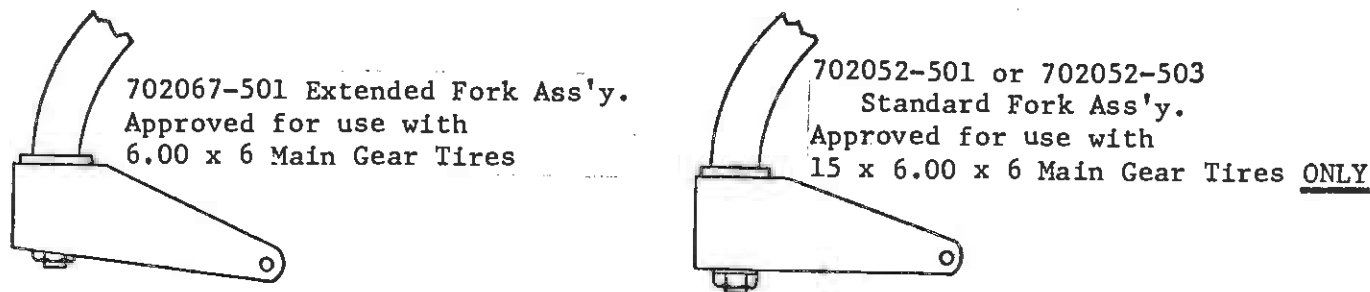


Figure 3. Nose Gear Fork

Item 5. Canopy Attachment Improvement (AA1-0457, AA1-0458, AA1A-0039 thru AA1A-0042, AA1A-0046 thru AA1A-0285)

The above aircraft were produced with AN526-1032R10 screws installed in the four lower forward canopy/track attachment holes. These screws were secured to the stainless steel reinforcement inside the canopy track with Loctite.

Effective with aircraft no. AA1-0459 and up and AA1A-0286 and up the Loctite was eliminated, and the hardware changed to increase the screw length and add lock washers to secure the screws.

To prevent possible cracking of the canopy as a result of the Loctited screws loosening in service, it is recommended that the screws on the above affected aircraft be inspected for security within the next 10 hours of operation. If the screws are found loose, they should be replaced with the improved hardware shown in Figure 4.

It is further recommended that the original hardware be replaced per Figure 4 regardless of condition, at the next interval of maintenance that requires canopy removal for cleaning and identification of the tracks.

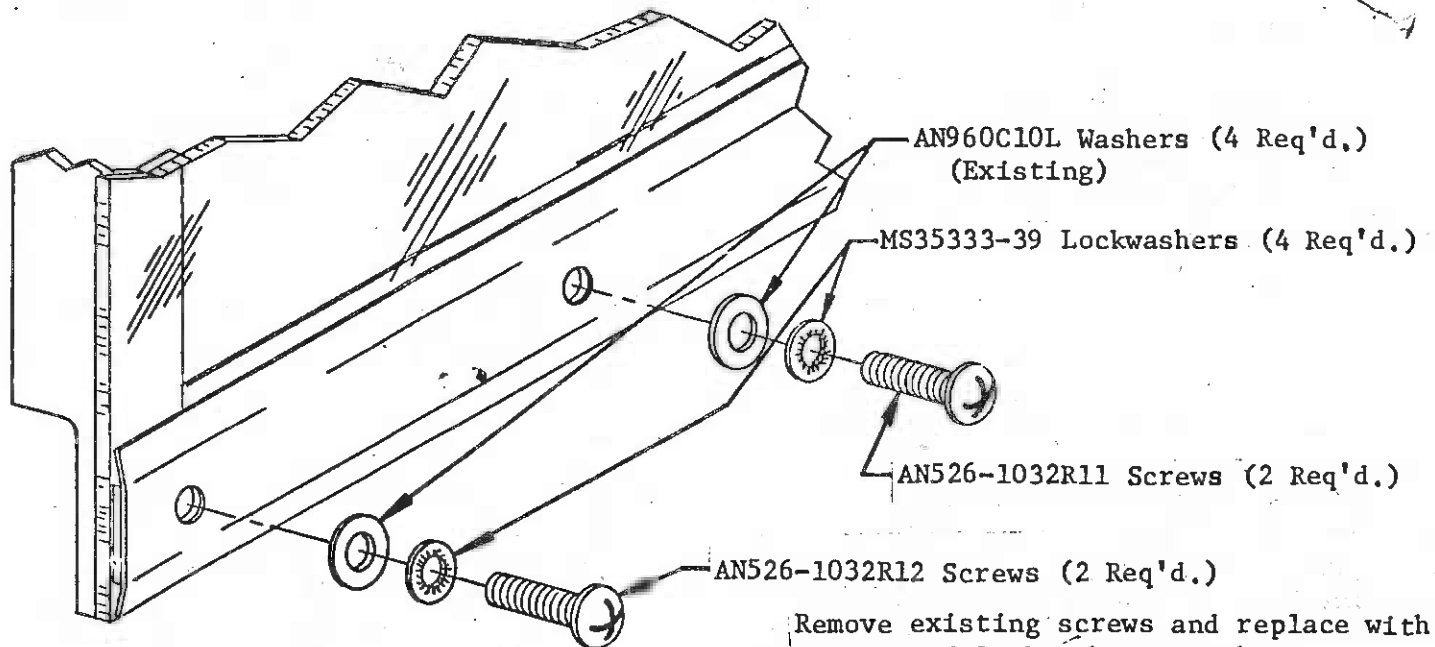


Figure 4.

## NOTE

When tightening any fasteners that secure the plexiglas windshield or canopy, the fasteners should be tightened only enough to insure proper plexiglas retention. Overtightening can cause cracking of the plexiglas.

Item 6. Prestolite Service Bulletin No. ASM-5 (All model AA-1 and AA-1A)

Attached is a copy of Prestolite Service Bulletin No. ASM-5 covering Field Terminal Stud Insulation Replacement. Compliance with this Bulletin is recommended.

Your requirements of Prestolite part no. P90-2213, insulating material should be obtained through your local Prestolite outlet.

Very truly yours,

AMERICAN AVIATION CORPORATION

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PHS:jac

Attachment:

Distribution (A)