

SERVICE BULLETIN NO. 159
"FAA (DER) APPROVED"

DATE: FEBRUARY 25, 1977

SUBJECT: CARBURETOR HEAT VALVE INSPECTION/REPLACEMENT

SERIALS AFFECTED: AA5-0641 thru AA5-0834
AA5A-0001 thru AA5A-0321

TIME OF COMPLIANCE:

1. Visual inspection before further flight. If carburetor heat valve of configuration "A" indicates cracks along bend radius, replace with new valve of configuration "B" and check carburetor heat control rigging.
2. If initial inspection indicates no cracks along bend radius of valve and carburetor heat control rigging is in accordance with Service Manual, aircraft may be flown an additional 25 hours.
3. After 25 hours, reinspect valve and cable rigging. If no discrepancies are noted, the aircraft may be flown an additional 25 hours. The configuration "A" valve must be replaced with the new configuration "B" valve at the end of this period.

UNDER NO CIRCUMSTANCES SHOULD THE CONFIGURATION "A" VALVE BE FLOWN IN EXCESS OF 50 HOURS.

GENERAL

Field reports indicate that the carburetor heat valve may be subject to failure with possible interruption of the airflow to the carburetor. A new butterfly valve assembly, Part No. 5503006-505 has been designed with increased strength to reduce the possibility of failure in this area.

Unusual indications from the engine instruments when applying carburetor heat should be followed by a complete inspection in accordance with this Service Bulletin and rigging of the carburetor heat control in regard to the AA5 series Service Manual.

INSTRUCTIONS

- I. Initial Inspection-before further flight, remove the lower cowl and inspect the carburetor heat valve assembly for configuration as shown in FIGURE 1. If configuration "A" exists, remove the valve assembly and inspect for cracks in the bend radius. If cracks are found, remove valve assembly from service and replace with a new valve assembly Part No. 5503006-505. Destroy removed valve assembly. Do not reuse.

If no cracks are found in configuration "A" valve, proceed to Part II of instructions.

- II. Subsequent Inspection-if no cracks are found in configuration "A" valve assembly, valve assembly may be reinstalled and temporarily returned to service for twenty-five (25) hours of operation. At the end of this time period the valve assembly must undergo the initial inspection procedure as described in Part I of instructions. If no cracks are evident at the second inspection of configuration "A" valve assembly, the valve assembly may be reinstalled and returned to service for a final twenty-five (25) hour operational period. Under no circumstances shall a configuration "A" valve assembly remain in service beyond fifty (50) hours of operation.
- III. To insure adequate carburetor heat rise after the removal and reinstallation of any configuration carburetor heat valve, the following checks are to be made prior to flight:
1. After valve assembly is installed into air box assembly, temporarily install air box assembly onto lower cowl. Remove air filter and check the forward and aft gap between the valve assembly and carburetor heat box/lower cowl contact points. Maximum gap is .120 inches at both ends of valve with carburetor heat in the on and off position. If excessive gap exists, remove air box assembly and crimp edge of valve assembly up or down as required to arrive at the minimum gap (SEE FIGURE 1).
 2. Following cowl installation, perform engine run up to check carburetor heat drop (50 RPM drop minimum). If drop does not meet minimum requirements, rework valve per paragraph No. 1 above.
 3. Carburetor heat rigging is to be accomplished in accordance with the AA5 series Service Manual.

PARTS INFORMATION

The parts necessary to comply with this Service Bulletin (Part No. 5503006-505, BUTTERFLY VALVE) may be obtained through your Grumman American Aviation Dealer at no cost.

CREDIT

A labor allowance of 3.0 hours at the Dealer's prevailing shop rate will be available for aircraft under Warranty at the date of this Service Bulletin, for removal and installation of a new butterfly valve. There will be no labor allowance for out of Warranty aircraft.

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All work must be performed or authorized by a Grumman American Aviation Dealer. A completed Warranty Claim Form No. GAA-740 must be submitted to the factory before August 31, 1977 for credit allowance on domestic aircraft, and September 30, 1977 for affected export aircraft.

Immediately on completion of work, a Service Reply Card (enclosed) is to be returned, noting the compliance with the requirements of this Service Bulletin No. 159.

Prices subject to change without notice.

GRUMMAN AMERICAN AVIATION CORPORATION

REB:rjm

Distribution (02)

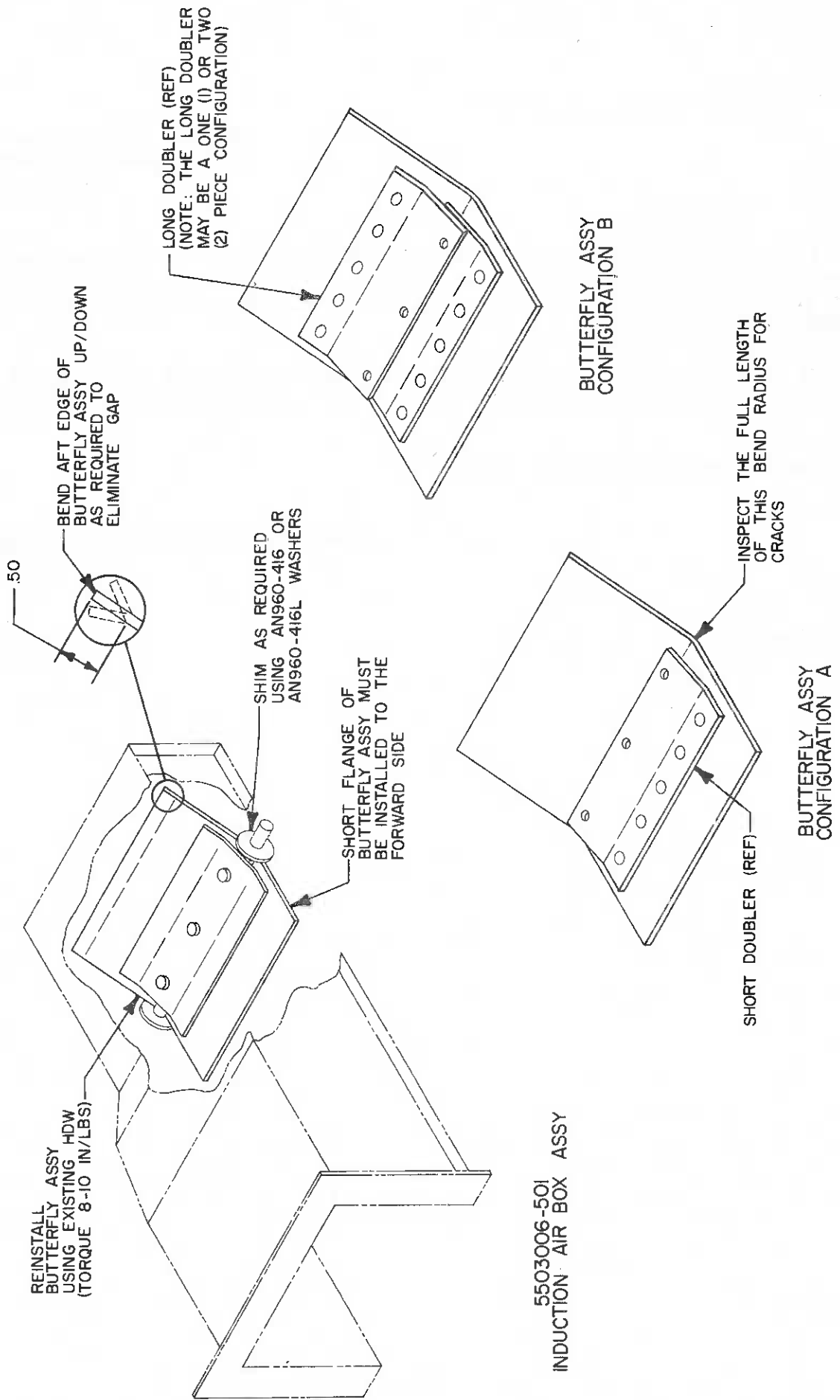


FIGURE 1