



## Gulfstream Aerospace Corporation

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# SERVICE

SERVICE BULLETIN NO. 174  
June 26, 1987

# BULLETIN

**SUBJECT: INSPECTION OF CARBURETOR HEAT BUTTERFLY VALVE**

**MODEL AND SERIALS AFFECTED: All AA-1, AA-1A, AA-1B and AA-1C Aircraft**

This Service Bulletin is considered by Gulfstream Aerospace Corporation to be **MANDATORY** and must be complied with within 50 flight hours and at each 100 hour or annual inspection thereafter.

### GENERAL

A report has been received of a loose carburetor heat butterfly valve on an AA-1B aircraft. Engine vibration had apparently caused this valve to wear partially through the screws holding the valve to the shaft. Broken screws could be ingested into the engine causing possible engine damage.

### NOTE

If your aircraft has been sold or has been deregistered as an in-service aircraft please notify Gulfstream Aerospace Corporation immediately upon receipt of this bulletin by completing and returning the attached prepaid card.

### INSTRUCTIONS

1. Remove lower cowl to gain access to the carburetor air box.
2. Remove air filter from the carburetor air box. Grasp butterfly valve in one hand and heat control shaft in the other hand. Attempt to move butterfly valve without moving the shaft.
3. If there is any detectable play between valve and the shaft, remove carburetor air box from the engine. Remove the screws (AN526-632R7) from shaft and inspect screws, shaft and valve for wear. If there is any sign of wear, replace the worn parts and reassemble according to following procedures.
4. There are two types of valve shafts in service: threaded screw holes and unthreaded screw holes. Inspect the shaft to determine the type of shaft used. If screw holes are threaded, perform Step a. below. If screw holes are unthreaded, perform Step b. below.
  - a. On threaded screw holes, install butterfly to the shaft, use Loc-Tite or equivalent on screw threads and tighten screws to standard torque. Then install new nuts (MS20365-632) and tighten nuts to standard torque. Safety wire screw heads.
  - b. On unthreaded screw holes, install butterfly to the shaft, insert screws and install new nuts (MS20365-632), tighten nuts to standard torque and safety wire screw heads.
5. Reinstall air box and adjust carburetor heat valve control as required. Install air filter and cowling to aircraft. Record compliance with this Service Bulletin in logbook and return aircraft to service.