

Gulfstream (Grumman American/ American Aviation) AA-1 Series Aeroplanes

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**AD/AA-1/20**

**Wing Attach Shoulder Bolts**

**11/95 DM**

Applicability: All models AA-1.

Requirement: 

1. Remove the subject bolts, or other approved replacement bolts in accordance with American General Aviation AA-5 (repeat, AA-5) SB-185.
2. Inspect the bolts for cracking at the bolt shoulder using either the Magnaflux or Fluorescent Dye NDI technique and discard any bolts with indications of cracking.
3. Until further notice, install bolts in accordance with the requirements of American General Aviation AA-5 SB-185.

Compliance: Unless already accomplished, prior to attaining 1000 hours bolt time in service, or within 10 hours time in service after the effective date, whichever occurs last; thereafter at intervals not exceeding 500 hours time in service.

The effective date of this Directive is 06 September 1995.

Background: The intent of this Directive was initially aimed at AA-5 Series aircraft. However, a report has been received of an AA-1 found with both attach bolts in both wings cracked, when randomly inspected as a result of the AD/AA-5/27 Amdt 1.

The AA-5 AD was raised as the result of a MDR received stating that a bolt had been found cracked when inspected using Magnaflux, instead of visually, in accordance with the SB 185. The defect was highlighted in the AAC Major Defect Summary. However, subsequent laboratory examination of the bolt revealed that the fatigue cracking could be attributable to the rapid change in section at the shoulder and the sharp edge revealed at X230 magnification.

Failure of a shoulder bolt may compromise the structural integrity of an aircraft and could result in a loss of flight control.

Until further notice, the bolt inspection and reinstallation will be carried out in accordance with the AA-5 instructions.