

Twin Commander (Gulfstream/Rockwell/ Aerocommander 500, 600 and 700) Series Aeroplanes

**AD/AC/85
Amdt 1**

Flight in Icing Conditions

7/95

Applicability: All 690, 690A, 690B, 690C, 690D, 695, 695A and 695B aircraft not incorporating an automatic engine ignition relight system per Gulfstream Aerospace Custom Kit 138 or 139.

Requirement: 1. Inspect both engines and determine if both;

the part number of the engine ignition unit on each engine complies with AlliedSignal Service Bulletin TPE/TSE331-74-0003, and

the anti-ice shield assemblies are in accordance with AlliedSignal Service Bulletin TPE/TSE331-75-0004.

Enter the part number of the ignition units and the anti-ice shield service bulletin status in the aircraft log book and in each engine log book.

2. Arrange for the Ignition Unit/Anti-ice Shield configuration to be made available in the cockpit for flight crew information.

Note: This information is required by the crew for compliance with the Ignition Override Time Limits specified in the aircraft flight manual.

3. If, following inspection per Requirement 1 of this Directive, an aircraft is found to have either one or both engines not in compliance with AlliedSignal Service Bulletins TPE/TSE331-74-0003 and/or TPE/TSE331-75-0004, then an appropriate placard shall be securely affixed to the aircraft instrument panel in clear view of the pilot in command. (“DYMO” tape is not considered to be an appropriate placard for the purpose of this Directive)

The placard shall state in capital letters, white on a red background, a minimum of 3mm high:

“THIS AIRCRAFT IS PROHIBITED FROM FLIGHT INTO ACTUAL OR FORECAST ICING CONDITIONS”.

Removal of the placard is only permitted if:-

- (a) The aircraft is modified to incorporate the automatic engine ignition relight system per Gulfstream Aerospace Custom Kit 138 or 139, as applicable, or
- (b) Both engines comply fully with Allied Signal Service Bulletins TPE/TSE331-74-0003 and TPE/TSE331-75-0004.

Note: FAA Airworthiness Directive 87-24-07 R1 refers.

4. Revise applicable engine maintenance programs as necessary to ensure Requirements 1, 2 and 3 are carried out at each occasion either an engine or an ignition unit is replaced.

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5. Unless Ignition Override Time Limits associated with ignition unit/anti-ice shield configurations are already incorporated in the Limitations Section of the Aircraft Flight Manual (AFM), incorporate the approved AFM amendment which reflects this information.

The applicable AFM amendment is to be provided by the Authority.

Compliance: Within 25 hours time in service after 22 June 1995 or prior to flight into actual or forecast icing conditions, whichever occurs first.

Background: This Directive has been issued to mandate requirements necessary to reduce the possibility of an engine flameout which may result from operating certain aircraft in icing conditions.

This amendment re-formats the original requirement for inspection of the engines to determine engine ignition unit and anti-ice shield status and for installation of a placard on the instrument panel for aircraft not incorporating extended cycle ignition units and modified anti-ice shields on both engines. The amendment also introduces a flight manual amendment that specifies the ignition system duty cycles and a requirement to revise engine maintenance programs to ensure the requirements of this Directive are carried out at each engine or ignition unit replacement.