

Radio Communication and Navigation Equipment

AD/RAD/58
Amdt 1

AlliedSignal CAS-81 TCAS II

7/98

Applicability: AlliedSignal Commercial Avionics Systems CAS-81 Traffic Alert and Collision Avoidance Systems (TCAS), with serial numbers below 6066.

Note: CAS-81 TCAS II equipments are known to be installed on, but not limited to, the following aircraft series:

<i>Aerospatale</i>	<i>ATR-42, ATR-72</i>
<i>Airbus Industries</i>	<i>A300, A310, A320, A321, A330 and A340</i>
<i>Beech</i>	<i>1900 and BE-65 through BE-90</i>
<i>Boeing</i>	<i>727, 737, 747, 757, 767 and 777</i>
<i>Convair</i>	<i>CV-580</i>
<i>de Havilland</i>	<i>DHC-7 and DHC-8</i>
<i>Embraer</i>	<i>EMB-120</i>
<i>Fairchild</i>	<i>F227</i>
<i>Fokker</i>	<i>F28 Mk 100, Mk 1000 and Mk 4000</i>
<i>General Dynamics</i>	<i>Convair 340 and 440</i>
<i>Gulfstream</i>	<i>G-159 and G-IV</i>
<i>Lockheed</i>	<i>L1011</i>
<i>McDonnell Douglas</i>	<i>DC-8, DC-9, DC-10, MD-11 and MD-80</i>
<i>Rockwell International</i>	<i>NA-265-65</i>
<i>SAAB</i>	<i>340</i>
<i>Shorts</i>	<i>360</i>

SCHEDULE OF AIRWORTHINESS DIRECTIVES

Requirement: Amend the Limitations Section of the Aircraft Flight Manual to include the following:

“In order to ensure that the audio output of the CAS-81 TCAS operates properly, accomplish the following:

- a. Prior to the first flight of the day; prior to the accumulation of 10 hours of uninterrupted power; and at the mid-point of any one flight scheduled to exceed 10 hours: Cycle the power to the TCAS Processor via the circuit breaker or power bus.
- b. Prior to taxi before take-off: Initiate the TCAS functional test in accordance with the procedures in the Aircraft Flight Manual to verify the operational condition of the CAS-81 TCAS.”

Alternately,

If the aircraft manufacturer has substantiated 30°C as a maximum ambient for the TCAS processor location amend the Limitations Section of the Aircraft Flight Manual to include the following:

“In order to ensure that the audio output of the CAS-81 TCAS operates properly, accomplish the following:

Prior to each flight of up to 18 hours duration, reset the TCAS circuit breaker and conduct a TCAS self-test.”

Note 1: Applications for an amendment to the Aircraft Flight Manual should be made to the local CASA District Airworthiness Office.

Note 2: Tests may be performed by a flight crew member.

Note 3: Modification of the TAP-81A TCAS processor receiver in accordance with AlliedSignal Service Bulletin TPA-81A-34-82 dated January 1996 or TPA-81A-34-84 dated January 1996 is considered an optional terminating action for the requirement of this Directive. Following incorporation of the modifications the Flight Manual amendment may be removed (see Note 1).

Note 4: FAA AD 95-26-15 R1 Amdt 39-9824 refers.

Compliance: The original compliance of ‘Effective 3 January 1996’ remains unchanged.

This amendment becomes effective on 18 June 1998.

Background: The FAA has received reports of failure of the audio output of CAS-81 TCAS. This condition could result in the CAS-81 TCAS failing to perform its collision avoidance function.

The original issue of this Directive required a revision to the Aircraft Flight Manual to provide the flightcrew with procedures to cycle power to the TCAS processor via the circuit breaker or power bus and to perform a TCAS functional test to verify proper operation of the TCAS.

This Amendment amends the title of the Directive, identifies the serial number range of the effected equipment and introduces an optional terminating action, whereby the original flight manual amendment may be removed. It also introduces an alternative flight manual amendment, which may be used if the aeroplane manufacturer has substantiated 30° C as a maximum ambient temperature for the TCAS processor location.

The original issue of this airworthiness directive became effective on 3 January 1996.