

Radio Communication and Navigation Equipment

AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.1 (1) of CAR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

AD/RAD/69

AlliedSignal RIA-32A ILS Receiver

2/2000

Applicability: AlliedSignal RIA-32A Instrument Landing System (ILS) navigation receivers having part numbers (P/N) 2070724-3201 and -3203.

Note 1: These ILS navigation receivers are known to be installed in, but not limited to, Airbus Model A300 series aeroplanes and Boeing Model 747-100, -100B, -100B SUD, -200B, -200F, -200C, -300, 747SR, and 747SP series aeroplanes.

Requirement:

1. For ILS navigation receivers having serial numbers 1 through 2365 inclusive - Replace three resistors in the ILS navigation receiver with higher ohm resistors in accordance with Bendix/King Service Bulletin (SB) RIA-32A-34-47, Revision 1, dated January 1992; and replace the nameplate on the receiver with a new nameplate in accordance with Bendix/King SB RIA-32A-34-48, dated December 1991.
2. For ILS navigation receivers having serial numbers 2366 and subsequent - Replace the nameplate on the receiver with a new nameplate in accordance with Bendix/King SB RIA-32A-34-48, dated December 1991.

Note 2: FAA AD 99-23-24 Amdt 39-11420 refers.

Compliance: For Requirements 1 and 2 - Within six months after the effective date of this directive.

This Airworthiness Directive becomes effective on 24 February 2000.

Background: The FAA has received reports indicating that, during final approach, ILS navigation receivers installed on certain Airbus Model A300 series aeroplanes have indicated a valid signal from the glideslope ground station, though the ground station was not operating. An absent glideslope signal is normally indicated by the glideslope instrument warning flag on the radio direction magnetic indicator. In these events, the glideslope instrument warning flag moved out of view, indicating to the flight crew that a valid signal had been received from the glideslope ground station.

Investigation revealed that the ILS navigation receiver was incorrectly responding to a low-voltage signal from the glideslope ground station to the ILS enable input. The manufacturer of the receiver has determined that certain resistors within the receiver are improperly sized to ensure a correct response to all possible voltage signals. This condition, if not corrected, could result in the ILS navigation receiver providing inaccurate data to the flight crew by falsely indicating a valid signal from the glideslope ground station. The glideslope is the vertical flight path that an aeroplane is to follow when making an ILS landing. Inaccurate data from the ILS navigation receiver could lead to the aeroplane making an approach off the glideslope, which could result in a landing short of the runway or a runway overrun.



David Alan Villiers
Delegate of the Civil Aviation Safety Authority

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