AIRWORTHINESS DIRECTIVE

Radio Communication and Navigation Equipment

AD/RAD/76 Honeywell Primus II RNZ-850 or -851 Integrated Navigation Units 4/2003 DM

Applicability: Honeywell Primus II RNZ-850 or -851 Integrated Navigation Units with a part number (P/N) from the following range:

- 7510100-811 through 7510100-814 inclusive,
- 7510100-831 through 7510100-834 inclusive,
- 7510100-901 through 7510100-904 inclusive,
- 7510100-911 through 7510100-914 inclusive,
- 7510100-921 through 7510100-924 inclusive, and
- 7510100-931 through 7510100-934 inclusive.

Note 1: RNZ-850 or -851 units are known to be fitted to, but not limited to, the following series of aircraft:

- BAE Systems (Operations) Limited (Jetstream) Model 4101
- Bombardier BD-700-1A10 and CL-215-6B11 (CL415 variant)
- Cessna Model 560, 560XL and 650
- Dassault Model Mystère-Falcon 50
- Dornier Model 328-100 and -300
- Embraer Model EMB-135
- Learjet Model 45
- Raytheon Model Hawker 800XP and Hawker 1000
- Sikorsky Model S-76A, S-76B and S-76C

Requirement: 1. Perform a one-time general visual inspection of the modification plate for the NV-850 Navigation Receiver Module P/N 7510134-811, -831, -901 or -931, which is part of the RNZ-850 or -851 Integrated Navigation Unit; to determine if Mod "L" has been incorporated.

The modification plate, which is located on the bottom of the RNZ-850 or -851 unit, is labelled NV-850 and contains the P/N together with the serial number for the NV-850 Navigation Receiver Module, if Mod "L" is incorporated, the letter "L" will be blacked out.

If Mod "L" is not incorporated, this Directive requires no further action.
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2. If, following the Requirement 1 inspection, Mod "L" is determined to be incorporated, revise the limitations section of the Aircraft Flight Manual (AFM) to include the following statements, this may be accomplished by inserting a copy of this Directive into the AFM:

   Flight Limitations
   
   When crossing the Outer Marker on glideslope, the altitude must be verified with the value on the published procedure.

   For aircraft with a single operating glideslope receiver, the approach may be flown using normal procedures no lower than Localizer Only Minimum Descent Altitude (MDA).

   For aircraft with two operating glideslope receivers, the aircraft may be flown to the published minimums for the approach using normal procedures if both glideslope receivers are tuned to the approach and both crewmembers are monitoring the approach using independent data and displays.

3. Honeywell Primus II NV-850 Navigation Receiver Modules, with Mod "L" incorporated, may not be fitted to any Honeywell Primus II RNZ-850 or -851 Integrated Navigation Unit on any aircraft as a replacement part, unless the Requirement 2 AFM revision is accomplished.


Compliance:

For Requirement 1 - Within five days after the effective date of this Directive.

For Requirement 2 - Before further flight, after the Requirement 1 inspection.

For Requirement 3 - As of the effective date of this Directive.

This Airworthiness Directive becomes effective on 11 March 2003.
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AD/RAD/76 (continued)

Background: The United States Federal Aviation Administration has advised of receiving reports indicating that erroneous glideslope indications have occurred on Empresa Brasileira de Aeronautica S.A. (Embraer) Model EMB-145 series airplanes. In these incidents, the glideslope deviation indicator unexpectedly changed from a centred position to a hard-fly-down or hard-fly-up indication during an instrument landing system (ILS) approach. These incidents have been attributed to discrepancies of certain Honeywell Primus II NV-850 Navigation Receiver Modules that are part of the Honeywell Primus II RNZ-850 or -851 Integrated Navigation Units installed on the affected aeroplanes. An affected navigation receiver module may produce an erroneous glideslope deviation indication when operating in a narrow range of cold temperatures with the glideslope receiver tuned to certain frequencies. An erroneous glideslope deviation indication could lead to the aircraft making an approach off the glideslope, which could result in impact with an obstacle or terrain.

This Directive requires a visual inspection to determine the modification status of the receiver module and, if necessary, the revision of the AFM. These actions are considered interim and further rulemaking is anticipated.

James Coyne
Delegate of the Civil Aviation Safety Authority

26 February 2003