

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 20717 4/18/2000]

[Docket No. 2000-NM-83-AD; Amendment 39-11683; AD 2000-07-27]

RIN 2120-AA64

Airworthiness Directives; Various Transport Category Airplanes Equipped With Certain Honeywell Air Data Inertial Reference Units

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to various transport category airplanes equipped with certain Honeywell air data inertial reference units (ADIRU). This action requires inspection of a failed ADIRU to determine its modification status, and replacement of an unmodified failed ADIRU with a serviceable ADIRU. This action also provides for optional terminating action for the requirements of the AD. This amendment is prompted by reports of dual critical failures of inertial reference units on ADIRU's during flight. The actions specified in this AD are intended to prevent loss of the main sources of attitude data, consequent high pilot workload, and a significant increase in the likelihood of pilot error.

DATES: Effective May 3, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 3, 2000.

Comments for inclusion in the Rules Docket must be received on or before June 19, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-83-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

The service information referenced in this AD may be obtained from Honeywell, Publications, P.O. Box 21111, Mail Stop DV-10, Phoenix, Arizona 85036. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Chicago Aircraft Certification Office, 2350 East Devon Avenue, Room 323, Des Plaines, Illinois; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Wess Rouse, Aerospace Engineer, Systems and Flight Test Branch, ACE-117C, FAA, Chicago Aircraft Certification Office, 2350 East Devon Avenue, Room 323, Des Plaines, Illinois 60018; telephone (847) 294-8113; fax (847) 294-7834.

SUPPLEMENTARY INFORMATION: The FAA has recently received three reports of dual inertial reference (IR) critical faults of the air data inertial reference system comprising two or more air data inertial reference units (ADIRU) on transport category airplanes during flight. Three days prior to one of the dual

IR critical fault incidents, one of those ADIRU's had an IR critical fault in flight. During the subsequent ground check, the failed ADIRU passed the built-in test and aligned, functioning normally.

The subject ADIRU's are subject to IR critical faults related to the power supply margin. The demand for voltage increases as operating hours and temperature increase. Once the demand for voltage exceeds the capability of the power supply, the inertial reference portion of the ADIRU will exhibit an IR critical fault, while the air data portion of the ADIRU will continue to function normally. It may be possible to reset the failed inertial reference unit on the ground after the temperature of the ADIRU decreases; however, the risk of the dual critical fault increases when an ADIRU with a failed inertial reference power supply is returned to service. If two inertial reference units fail, the airplane is left with only one functioning source of attitude data. This condition could result in loss of the main sources of attitude data, consequent high pilot workload, and a significant increase in the likelihood of pilot error.

Explanation of Relevant Service Information

The FAA has reviewed and approved Honeywell Alert Service Bulletins HG2030AD-34-A0009, and HG2050AC-34-A0008, both dated March 9, 2000, which describe procedures for determining the modification status of the ADIRU. For any ADIRU part number (P/N) HG2050AC not marked as modification 2 or 3 and any ADIRU P/N HG2030AD not marked as modification 3 or 6, the alert service bulletins also describe procedures for replacement of the ADIRU with a serviceable ADIRU.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of the same type design, this AD is being issued to prevent loss of the main sources of attitude data, consequent high pilot workload, and a significant increase in the likelihood of pilot error. This AD requires inspection of a failed ADIRU to determine its modification status, and replacement of any unmodified failed ADIRU with a serviceable ADIRU. This AD also provides for optional terminating action for the requirements of the AD. The actions are required to be accomplished in accordance with the alert service bulletins described previously.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-83-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460



U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at <http://av-info.faa.gov>

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2000-07-27 TRANSPORT CATEGORY AIRPLANES: Amendment 39-11683. Docket 2000-NM-83-AD.

Applicability: Transport category airplanes including but not limited to those listed below, certificated in any category; equipped with any Honeywell air data inertial reference unit (ADIRU) having a serial number below 0841 and a part number (P/N) listed below:

Airplane manufacturer	Model	ADIRU P/N
Boeing	757-300 737-600 737-700 737-800	HG2050AC02 HG2050AC03 HG2050AC04 HG2050AC05
Airbus	A319-111, A319-112, A319-113, A319-114, A319-131, A319-132, A320-111, A320-211, A320-212, A320-214, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A330-202, A330-301, A330-223, A330-321, A330-322, A330-323, A340-211, A340-311, A340-212, A340-312, A340-213, A340-313	HG2030AD09
Airbus	A330-202, A330-301, A330-223, A330-321, A330-322, A330-323, A340-211, A340-311, A340-212, A340-312, A340-213, A340-313	HG2030AD10

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of the main sources of attitude data, consequent high pilot workload, and a significant increase in the likelihood of pilot error, accomplish the following:

Inspection and Replacement

(a) Prior to the next flight following any critical inertial reference failure of an ADIRU: Inspect the identification plate of the ADIRU to determine its modification status, in accordance with Honeywell Alert Service Bulletin HG2030AD-34-A0009 (for an ADIRU having P/N HG2030AD09 or HG2030AD10) or HG2050AC-34-A0008 (for an ADIRU having P/N HG2050AC02, HG2050AC03, HG2050AC04, or HG2050AC05), both dated March 9, 2000; as applicable.

(1) If any ADIRU having P/N HG2050AC02, HG2050AC03, HG2050AC04, or HG2050AC05 is not marked as modification 2 or 3: Prior to further flight, replace the ADIRU with an ADIRU as specified in either paragraph (a)(1)(i) or (a)(1)(ii) of this AD, in accordance with Honeywell Alert Service Bulletin HG2050AC-34-A0008, dated March 9, 2000.

(i) Replace with an ADIRU that has P/N HG2050AC03, HG2050AC04, or HG2050AC05; and that is marked as modification 2 or 3. Or

(ii) Replace with a serviceable ADIRU that has P/N HG2050AC03, HG2050AC04, or HG2050AC05; and that is not marked as modification 2 or 3; and that has been determined to have accumulated less than 7,000 operating hours in accordance with the alert service bulletin.

(2) If any ADIRU having P/N HG2030AD09 or HG2030AD10 is not marked with modification 3 or 6: Prior to further flight, replace the ADIRU with an ADIRU as specified in either paragraph (a)(2)(i) or (a)(2)(ii), in accordance with Honeywell Alert Service Bulletin HG2030AD-34-A0009, dated March 9, 2000.

(i) Replace with an ADIRU having P/N HG2030AD09 or HG2030AD10 that is marked as modification 3 or 6; or

(ii) Replace with a serviceable ADIRU having P/N HG2030AD09 or HG2030AD10 that is not marked as modification 3 or 6, and that has been determined to have accumulated less than 7,000 operating hours in accordance with the alert service bulletin.

NOTE 2: For purposes of this AD, a "serviceable" ADIRU is one that satisfies the replacement requirements of paragraph (a)(1)(ii) or (a)(2)(ii), and on which no critical inertial reference failure has occurred.

(b) Installation of all ADIRUs on the airplane that meet the criteria of paragraph (b)(1) or (b)(2) of this AD constitutes terminating action for the requirements of this AD:

(1) ADIRUs that have P/N HG2050AC03, HG2050AC04, or HG2050AC05; and that are marked as modification 2 or 3; or

(2) ADIRUs that have P/N HG2030AD09 or HG2030AD10, and that are marked as modification 3 or 6.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Chicago Aircraft Certification Office

(ACO), FAA, Small Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Chicago ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Chicago ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished, provided that the remaining, functioning ADIRU(s) has accumulated less than 7,000 total operating hours, as specified by Honeywell Alert Service Bulletin HG2030AD-34-A0009 (for ADIRU P/N's HG2030AD09 and HG2030AD10) or HG2050AC-34-A0008 (for an ADIRU P/N HG2050AC), both dated March 9, 2000; as applicable.

Incorporation by Reference

(e) The actions shall be done in accordance with Honeywell Alert Service Bulletin HG2050AC-34-A0008, dated March 9, 2000; or Honeywell Alert Service Bulletin HG2030AD-34-A0009, dated March 9, 2000; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Honeywell, Publications, P.O. Box 21111, Mail Stop DV-10, Phoenix, Arizona 85036. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Chicago Aircraft Certification Office, 2350 East Devon Avenue, Room 323, Des Plaines, Illinois; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on May 3, 2000.

FOR FURTHER INFORMATION CONTACT:

Wess Rouse, Aerospace Engineer, Systems and Flight Test Branch, ACE-117C, FAA, Chicago Aircraft Certification Office, 2350 East Devon Avenue, Room 323, Des Plaines, Illinois 60018; telephone (847) 294-8113; fax (847) 294-7834.

Issued in Renton, Washington, on April 6, 2000.

Donald L. Rigg, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.