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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27735; Directorate Identifier 2007-NM-027-AD; Amendment 39-15809; AD 2007-07-12]

RIN 2120-AA64

Airworthiness Directives; Honeywell Flight Management Systems (FMS) Served by Honeywell NZ-2000 Navigation Computers Approved Under Technical Standard Order (TSO) TSO-C115a, and IC-800 Integrated Avionics Computers Approved Under TSOs C9c, C52a, and C115a; as Installed on Various Transport Category Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Honeywell FMSs served by Honeywell NZ-2000 navigation computers and IC-800 integrated avionics computers. This AD requires identifying affected computers by part number and software modification level and revising the Limitations section of applicable airplane flight manuals to provide procedures for retaining optimum position determination and intended navigation. This AD results from reports of in-flight unannounced shifts of computed position in airplanes with the subject flight management system (FMS) computers. We are issuing this AD to prevent a shift in the FMS computed position, which could result in uncommanded deviations from the intended flight path of the airplane and, if those deviations are undetected by the flight crew, compromised terrain/traffic avoidance.

DATES: This AD becomes effective April 18, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of April 18, 2007.

You must receive comments on this AD by June 4, 2007.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590.
- Fax: (202) 493-2251.

- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact Honeywell, P.O. Box 21111, Phoenix, AZ 85036-1111, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Joe Brownlee, Flight Test Pilot, Flight Test Branch, ANM-160L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5365; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:

Discussion

We have received reports of in-flight unannounced shifts of computed position in airplanes with Honeywell NZ-2000 navigation and IC-800 integrated avionics computers serving Honeywell Flight Management Systems (FMSs). The computed position shift, attributed to a software design error induced during a previous software modification, occurs when the number of inertial reference units (IRUs) supplying data to the FMS degrades from 3 to 2 or from 2 to 1, or increases from 2 to 3 or from 1 to 2. If the FMS system is coupled to an autopilot or flight director system, this shift in the FMS computed position could result in uncommanded deviations from the intended flight path of the airplane and, if those deviations are undetected by the flight crew, compromised terrain/traffic avoidance.

Relevant Service Information

We have reviewed Honeywell Technical Newsletter A23-6111-008, Revision 001, dated February 22, 2007. This technical newsletter describes procedures for determining affected FMS computers receiving position information from multiple IRUs by identifying the part number and software modification level of the NZ-2000 navigation and IC-800 integrated avionics computers serving these Flight Management Systems. For airplanes with affected part numbers and software modification levels, the newsletter also describes revising the Limitations section of the applicable airplane flight manuals (AFM) to provide procedures for deselecting all but one IRS to each FMS on every power-up cycle. The AFM revision is provided as Appendix A in the newsletter.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. For this reason, we are issuing this AD to prevent errors in airplane position displays and subsequent deviation from the intended flight path. This AD requires accomplishing the actions specified in the Technical Newsletter described previously.

Interim Action

We consider this AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

FAA's Determination of the Effective Date

Since an unsafe condition exists that requires the immediate adoption of this AD, we have found that notice and opportunity for public comment before issuing this AD are impracticable, and that good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed in the ADDRESSES section. Include "Docket No. FAA-2007-27735; Directorate Identifier 2007-NM-027-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of that web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that the regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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), 1113, 14701.

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



2007-07-12 Honeywell, Inc.: Amendment 39-15009. Docket No. FAA-2007-27735; Directorate Identifier 2007-NM-027-AD.

Effective Date

(a) This AD becomes effective April 18, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Honeywell NZ-2000 navigation computers approved under Technical Standard Order (TSO) TSO-C115a, and IC-800 integrated avionics computers approved under TSOs C9c, C52a, and C115a; as installed on transport category airplanes, certified in any category, including but not limited to the airplanes identified in Table 1 of this AD.

Table 1 – Known Affected Airplanes

Manufacturer	Model
Bombardier, Inc.	CL-600-2B1 (CL-601-2A, CL-601-3R, and CL-604) airplanes
Dassault Aviation	Mystere Falcon 50 airplanes
Gulfstream Aerospace Corporation	G-1152A, G-IV, and GV airplanes
Lockheed	382 series airplanes
Raytheon Aircraft Company	Boeing 125 Series 800A (including C-29A and U-125) airplanes Hawker 800XP and 1000 airplanes

Unsafe Condition

(d) This AD results from reports of in-flight unannounced shifts of computed position in airplanes with the subject flight management system (FMS) computers identified in paragraph (c) of this AD. We are issuing this AD to prevent a shift in the FMS computed position, which could result in uncommanded deviations from the intended flight path of the airplane and, if those deviations are undetected by the flight crew, compromised terrain/traffic avoidance.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Identification of Part Number/Modification Level

(f) Within 14 days after the effective date of this AD: Determine if the installed NZ-2000 navigation computers and IC-800 integrated avionics computers serving FMSs have computer part numbers and software modification levels identified in Honeywell Technical Newsletter A23-6111-008, Revision 001, dated February 22, 2007. For purposes of this AD, airplanes with FMS computers having a part number and software modification level identified in the newsletter are "affected airplanes."

Revision of Airplane Flight Manual (AFM)

(g) For any affected airplane: Within 14 days after the effective date of this AD, revise the Limitations section of the applicable AFM to incorporate the information included in Appendix A of Honeywell Technical Newsletter A23-6111-008, Revision 001, dated February 22, 2007. This may be done by inserting a copy of Appendix A of the newsletter into the AFM.

Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

Material Incorporated by Reference

(i) You must use Honeywell Technical Newsletter A23-6111-008, Revision 001, dated February 22, 2007, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Honeywell, P.O. Box 21111, Phoenix, AZ 85036-1111, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 800-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on March 23, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-5896 Filed 4-2-07; 8:45 am]