

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2012-0758; Directorate Identifier 2012-CE-027-AD; Amendment 39-17129; AD 2012-14-15]

RIN 2120-AA64

**Airworthiness Directives; Honeywell International, Inc. Global Navigation Satellite Sensor Units**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain aircraft equipped with Honeywell International, Inc. Model KGS200 Mercury<sup>2</sup> wide area augmentation system (WAAS) global navigation satellite sensor units (GNSSU). This AD requires you cease all localizer performance (LP), localizer performance with vertical guidance (LPV), and satellite based augmentation system (SBAS) lateral navigation/vertical navigation (LNAV/VNAV) approaches until a software problem is corrected. This AD was prompted by a report and follow-up investigation of a software problem that occurred during flight test trials of SBAS-capable aircraft using a similar Honeywell global positioning system (GPS) sensor and the same software as the Model KGS200 Mercury<sup>2</sup> GNSSU. A software problem occurred that could result in misleading information during LP, LPV, or SBAS LNAV/VNAV approaches. We are issuing this AD to correct the unsafe condition on these products.

**DATES:** This AD is effective July 19, 2012.

We must receive comments on this AD by September 4, 2012.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- **Federal eRulemaking Portal:** Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- **Fax:** 202-493-2251.
- **Mail:** U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- **Hand Delivery:** U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590,

between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:**

- **Non-Pilatus aircraft-related:** Albert Ma, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 S. Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4151; fax: (316) 946-4107; email: [albert.ma@faa.gov](mailto:albert.ma@faa.gov).
- **Pilatus aircraft-related:** Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; fax: (816) 329-4090; email: [doug.rudolph@faa.gov](mailto:doug.rudolph@faa.gov).

**SUPPLEMENTARY INFORMATION:****Discussion**

We received a report that during flight test trials of SBAS-capable aircraft using a similar Honeywell GPS sensor with the same software as the Honeywell International, Inc. Model KGS200 Mercury<sup>2</sup> WAAS GNSSU, a software problem occurred that could result in misleading information during LP, LPV, or SBAS LNAV/VNAV approaches.

Investigation found the GPS receiver could compute an incorrect ionospheric correction and error estimate such that the error estimate no longer bounds the error and the downstream monitor cannot detect it. This can potentially lead to hazardous misleading information.

The software problem is due to a mathematical rounding error, which results in misleading information.

At this time, the only type-certificated airplanes that the product is installed in is Pilatus PC-12/47E airplanes.

This condition, if not corrected, could result in misleading information during instrument meteorological conditions, which could prevent the aircraft from performing safe instrument approach procedures, causing controlled flight into terrain.

**FAA's Determination**

We are issuing this AD because we evaluated all the relevant information

and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

**AD Requirements**

This AD requires incorporating airworthiness limitations and placards that prohibit LP, LPV, and SBAS LNAV/VNAV approaches until the software problem is corrected.

**Interim Action**

We consider this AD interim action. If and when new software is developed, the FAA will evaluate this software and may take further rulemaking action.

**FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because this condition, if not corrected, could result in misleading information during instrument meteorological conditions, which could prevent the aircraft from performing safe instrument approach procedures, causing controlled flight into terrain. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

**Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number FAA-2012-17129 and Directorate Identifier 2012-CE-027-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

**Costs of Compliance**

We estimate that this AD affects 195 GNSSU installed on, but not limited to,

PILATUS AIRCRAFT LTD. Model  
PILATUS PC-12/47E airplanes of U.S.  
registry.

We estimate the following costs to  
comply with this AD:

#### ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Incorporate language into the limitations section of the flight manual and manufacture and install a placard.	0.5 work-hour × \$85 per hour = \$42.50.	\$5	\$47.50	\$9,263

#### 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

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 this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

#### 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), 40113, 44701.

##### § 39.13 [Amended]

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

**2012-14-15 Honeywell International, Inc.:**  
Amendment 39-17129; Docket No.  
FAA-2012-0758; Directorate Identifier  
2012-CE-027-AD.

##### (a) Effective Date

This AD is effective July 19, 2012.

##### (b) Affected ADs

None.

##### (c) Applicability

(1) This AD applies to all Honeywell International, Inc. Model KGS200 Mercury<sup>2</sup> wide area augmentation system (WAAS) global navigation satellite sensor units (GNSSU), Honeywell part numbers (P/N) 066-01201-0102 and 066-01201-0104.

(2) This product is installed on, but not limited to, PILATUS AIRCRAFT LTD. Model PILATUS PC-12/47E airplanes, certificated in any category.

##### (d) Subject

Joint Aircraft System Component (JASC)/ Air Transport Association (ATA) of America Code 3457, Navigation.

##### (e) Unsafe Condition

This AD was prompted by a report and follow-up investigation of a software problem that occurred during flight test trials of satellite based augmentation system (SBAS)-capable aircraft using a similar Honeywell global positioning system (GPS) sensor and the same software as the Model KGS200 Mercury<sup>2</sup> GNSSU. A software problem occurred that could result in misleading information during localizer performance (LP), localizer performance with vertical guidance (LPV), or SBAS lateral navigation/vertical navigation (LNAV/VNAV) approaches. We are issuing this AD to correct the unsafe condition on these products.

#### (f) Compliance

Comply with this AD within the compliance times specified, unless already done.

#### (g) Incorporate Language Into the Limitations Section of the Aircraft Flight Manual

(1) Before further flight after July 19, 2012 (the effective date of this AD), incorporate language into the limitations section of the aircraft flight manual (AFM) that states, "localizer performance (LP), localizer performance with vertical guidance (LPV), and satellite based augmentation system (SBAS) lateral navigation/vertical navigation (LNAV/VNAV) approach operations are prohibited." If it can be determined by a review of the AFM that the aircraft does not have LP capability and uses barometric vertical navigation (VNAV), then it is permissible to incorporate language into the limitation section of the AFM that states, "local performance with vertical guidance (LPV) approaches are prohibited."

(2) The AFM action required by this AD may be done by an owner/operator (pilot) holding at least a private pilot certificate and must be entered into the aircraft records showing compliance with this AD in accordance with 14 CFR 43.9 (a)(1)(4) and 14 CFR 91.417(a)(2)(v). The record must be maintained as required by 14 CFR §§ 91.173, 121.380, or 135.439.

#### (h) Fabricate and Install a Placard

(1) Within 3 days after July 19, 2012 (the effective date of this AD), fabricate and install a placard that states, "LP, LPV, and SBAS LNAV/VNAV approaches are prohibited." If it can be determined by a review of the AFM that the aircraft does not have LP capability and uses VNAV, then it is permissible to use a placard that states, "LPV approaches are prohibited."

(2) The placard shall be manufactured so that the font size is at least an 1/8" with black lettering on a white background. The placard must be fabricated and installed by a certificated aircraft mechanic on the instrument panel in clear view of the pilot.

#### (i) Special Flight Permit

Special flight permits are prohibited for this AD.

#### (j) Alternative Methods of Compliance (AMOCs)

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

send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

#### (k) Related Information

For more information about this AD, contact:

(1) Non-Pilatus aircraft-related: Albert Ma, Aerospace Engineer, Wichita Aircraft Certification Office, FAA, 1801 S. Airport Road, Room 100, Wichita, Kansas 67209; phone: (316) 946-4151; fax: (316) 946-4107; email: [albert.ma@faa.gov](mailto:albert.ma@faa.gov); or

(2) Pilatus aircraft-related: Doug Rudolph, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4059; fax: (816) 329-4090; email: [doug.rudolph@faa.gov](mailto:doug.rudolph@faa.gov).

#### (l) Material Incorporated by Reference

None.

Issued in Kansas City, Missouri, on July 13, 2012.

**Earl Lawrence,**

*Manager, Small Airplane Directorate, Aircraft Certification Service.*

[FR Doc. 2012-17592 Filed 7-18-12; 8:45 am]

**BILLING CODE 4910-13-P**

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2012-0716; Directorate Identifier 2012-SW-011-AD; Amendment 39-17121; AD 2012-14-07]

**RIN 2120-AA64**

#### Airworthiness Directives; Bell Helicopter Textron Canada Helicopters

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

**ACTION:** Final rule; request for comments.

**SUMMARY:** We are adopting an airworthiness directive (AD) superseding an existing airworthiness directive for Bell Helicopter Textron Canada (Bell) Model 407 and 427 helicopters. The existing AD requires inspecting certain hydraulic servo actuators (servo) to determine whether the shaft turns independently of the nut or the clevis assembly, and additional actions based upon the inspection's outcome. The AD also requires reidentifying the servo. Since we issued

that AD, Bell has learned that additional servos may need repair or removal. This AD expands the scope of the current AD to include inspections for all servos, and requires that servos meeting inspection requirements be marked with the letter "V" after the part number on the data plate. The actions are intended to detect any loose or misaligned parts in the servo that could lead to failure of the servo and subsequent loss of helicopter control.

**DATES:** This AD becomes effective August 3, 2012.

We must receive comments on this AD by September 17, 2012.

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.

- **Fax:** 202-493-2251.

- **Mail:** Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590-0001.

- **Hand Delivery:** Deliver to the "Mail" address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

#### Examining The AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at the Docket Operations Office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the economic evaluation, any comments received, and other information. The street address for the Docket Operations Office (telephone 800-647-5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this AD, contact contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7Y1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

**FOR FURTHER INFORMATION CONTACT:** Matt Wilbanks, Aviation Safety Engineer, Regulations and Policy Group, Rotorcraft Directorate, FAA, 2601 Meacham Blvd., Fort Worth, Texas 76137; telephone (817) 222-5110; email [matt.wilbanks@faa.gov](mailto:matt.wilbanks@faa.gov).

**SUPPLEMENTARY INFORMATION:**

#### Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments prior to it becoming effective. However, we invite you to participate in this rulemaking by submitting written comments, data, or views. We also invite comments relating to the economic, environmental, energy, or federalism impacts that resulted from adopting this AD. The most helpful comments reference a specific portion of the AD, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time. We will file in the docket all comments that we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning this rulemaking during the comment period. We will consider all the comments we receive and may conduct additional rulemaking based on those comments.

#### Discussion

On September 19, 2011, we issued AD 2011-15-51, Amendment 39-16817 (76 FR 66609, October 27, 2011) for Bell Model 407 helicopters with a servo, part number (P/N) 206-076-062-105 or 206-076-062-107, and Bell Model 427 helicopters, with a servo, P/N 206-076-062-109 or 206-076-062-111, installed. This AD requires inspecting certain servos to determine whether the shaft turns independently of the nut or the clevis assembly. If the shaft turns independently, this AD requires replacing the servo with an airworthy servo. If the shaft does not turn independently, the AD requires inspecting to determine the condition of the lock washers. Based on the condition of the lock washers, the AD requires either replacing the servo with an airworthy servo or bending the tab of the lock washer flush against a flat surface of the nut or clevis assembly. The AD also requires reidentifying the servo by metal-impression stamping or vibro-etching "67-01" onto the modification plate. The AD was prompted by a report that a supplier had a "quality escape" resulting in servos with a loose nut, shaft, and clevis assembly because of improper lock-washer installation. An investigation after an accident revealed the clevis nut on the servo was loose. Transport Canada, which is the aviation authority for Canada, notified the FAA of this