



**[4910-13-P]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2017-0492; Directorate Identifier 2016-SW-025-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Honeywell International Inc. (Honeywell) Enhanced Ground Proximity Warning System (EGPWS)**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for various normal and transport category rotorcraft with certain Honeywell EGPWS installed. This proposed AD would require updating the software version of the EGPWS. This proposed AD is prompted by a software defect that prevents the EGPWS from providing terrain warnings. The proposed actions are intended to address an unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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> by searching for and locating Docket No. FAA-2017-0492; 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 proposed 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 proposed rule, contact Honeywell International Inc. 15001 N.E. 36 Street, Redmond, Washington, 98052-5317; telephone (800) 601-3099; internet address [www.myaerospace.com](http://www.myaerospace.com). You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

**FOR FURTHER INFORMATION CONTACT:** Judy Heredia, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5335; email [judy.heredia@faa.gov](mailto:judy.heredia@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

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 might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, 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 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 proposed rulemaking. Before acting on this proposal, we will consider all comments we receive on or before the closing date for comments. We will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. We may change this proposal in light of the comments we receive.

### **Discussion**

We propose to adopt a new AD for Honeywell MK XXI EGPWS part number (P/N) 965-1227-005 and MK XXII EGPWS P/N 965-1595-020, P/N 965-1595-021, 965-1595-022, 965-1595-024, 965-1595-026, 965-1595-028, and 965-1595-030 installed on various normal and transport category helicopters from five manufacturers. This proposed AD would require updating the software of the EGPWS. This proposed AD is prompted by a software defect found by Honeywell in certain MK XXI and MK XXII

EGPWSs during testing. The testing revealed the terrain alerting feature will not function as intended in certain specific geographical areas under altitudes of 175-feet mean sea level (MSL). According to Honeywell, the terrain display is not affected by the defect and will correctly present terrain and its corresponding elevation information. However, in some locations, the EGPWS will not issue a warning or caution for terrain, water, or obstacles below 175 feet MSL. Without this feature of the EGPWS, the helicopter could potentially operate into threatening terrain or obstacles without providing any warning to the crew, resulting in loss of the helicopter. Since the defect was discovered, Honeywell has developed a software modification (MOD) that corrects this condition.

#### **Record of Ex Parte Communication**

In preparation of AD actions such as notices of proposed rulemaking and immediately adopted final rules, it is the practice of the FAA to obtain technical information and information on the operational and economic impact from design approval holders and aircraft operators. We discussed certain aspects of this proposed AD by email with Honeywell. A copy of each email contact can be found in the rulemaking docket. For information on locating the docket, see “Examining the AD Docket.”

#### **FAA’s Determination**

We are proposing this AD because we evaluated all known relevant information and determined that an unsafe condition exists and is likely to exist or develop on other helicopters of these same type designs.

#### **Related Service Information Under 1 CFR part 51**

We reviewed Honeywell Service Bulletin (SB) 965-1227-34-0001, Revision 0, dated May 4, 2015 (SB 965-1227-34-0001); Honeywell SB 965-1595-34-0034, Revision

0, dated February 18, 2015 (SB 965-1595-34-0034); and Honeywell SB 965-1595-34-0035, Revision 0, dated March 25, 2015 (SB 965-1595-34-0035). SB 965-1227-34-0001 specifies procedures for installing and verifying a software MOD to a certain part-numbered MK XXI EGPWS and for replacing the front panel label identifying the software version. SB 965-1595-34-0034 specifies procedures for installing and verifying a software MOD to certain part-numbered MK XXII EGPWS and for replacing the front panel label identifying the software version. SB 965-1595-34-0035 specifies procedures for installing and verifying a software MOD to certain part-numbered MK XXII EGPWS and for replacing the front panel label identifying the software version. This service information also states that terrain database version 437 must be installed prior to updating the EGPWS software.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

#### **Other Related Service Information**

We also reviewed Honeywell SB ATA No. 965-1590/1595-34-18, dated July 30, 2004. This service information contains procedures for updating the MK XXII EGPWS with terrain database version 437 and verifying the updated software was successfully installed.

#### **Proposed AD Requirements**

By following certain procedures in the manufacturer's service bulletin, this proposed AD would require, within 1,080 hours time-in-service (TIS), installing terrain database version 437 if not already installed; updating, installing, and confirming

software MOD 1 or MOD 2 as determined by the model and serial number of the EGPWS; and replacing the software version label on the EGPWS front face.

### **Differences Between this Proposed AD and the Service Information**

The service information requires the software MODs to be accomplished within 60 months, while this proposed AD would require compliance within 1,080 hours TIS.

### **Costs of Compliance**

We estimate that this proposed AD would affect 3,000 appliances installed on helicopters of U.S. Registry.

We estimate that operators may incur the following costs in order to comply with this proposed AD. At an average labor rate of \$85 per hour, updating and confirming the software and replacing the software version label would require about 0.5 work-hour, and required parts would cost \$2,500, for a total cost of \$2,543 per helicopter and \$7,629,000 for the U.S. fleet.

According to Honeywell's service information all of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage by Honeywell. Accordingly, we have included all costs in our cost estimate.

### **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 determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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, I certify this proposed 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);
3. Will not affect intrastate aviation in Alaska to the extent that it justifies making a regulatory distinction; 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.

We prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

## **List of Subjects in 14 CFR Part 39**

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

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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):

**Honeywell International, Inc. (Honeywell):** Docket No. FAA-2017-0492; Directorate Identifier 2016-SW-025-AD.

##### **(a) Applicability**

This AD applies to Honeywell MK XXI Enhanced Ground Proximity Warning System (EGPWS) part number (P/N) 965-1227-005 with software modification (MOD) 1 and MK XXII EGPWS P/N 965-1595-020 with MOD 1, P/N 965-1595-021 with MOD 1, 965-1595-022 with MOD 1, 965-1595-024 with MOD 1, 965-1595-026 with MOD 1, 965-1595-028 with MOD 0, and 965-1595-030 with MOD 0. These EGPWSs are installed on, but not limited to, the following helicopters, certificated in any category:

(1) Agusta S.p.A. Model A109 and AW139;

(2) Airbus Helicopters Model AS350B, AS350B1, AS350B2, AS350B3, AS350BA, AS350C, AS350D, AS350D1, AS355E, AS355F, AS355F1, AS355F2,

AS355N, AS355NP, SA-365N, EC130B4, EC130T2, EC 155B, EC155B1, and EC225LP;

(3) Airbus Helicopters Deutschland GmbH Model EC135P1, EC135P2, EC135P2+, EC135P3, EC135T1, EC135T2, EC135T2+, and EC135T3;

(4) Bell Helicopter Textron Inc. Model 212 and 412;

(5) Bell Helicopter Textron Canada Limited Model 407;

(6) Bell Helicopter Textron Model 430;

(7) MD Helicopters, Inc. Model MD900; and

(8) Sikorsky Aircraft Corporation Model S-76B, S-76C, S-76D, and S-92A.

**(b) Unsafe Condition**

This AD defines the unsafe condition as failure of an EGPWS to generate a terrain warning, which could result in flight into terrain.

**(c) Comments Due Date**

We must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

**(e) Required Actions**

Within 1,080 hours time-in-service:

(1) Install terrain database version 437 if not already installed.

(2) For helicopters with an MK XXI EGPWS P/N 965-1227-005:

(i) Update the software by following the Accomplishment Instructions, paragraphs 3.B.(1)(a) through 3.B.(1)(j), of Honeywell Service Bulletin (SB) 965-1227-34-0001, Revision 0, dated May 4, 2015 (SB 965-1227-34-0001).

(ii) Determine whether the software updated by following paragraphs 3.B.(2)(a) through 3.B.(2)(d) of SB 965-1227-34-0001.

(iii) Install a new software version label on the EGPWS by following paragraph 3.D.(1) or 3.D.(2), as appropriate for your model EGPWS, of SB 965-1227-34-0001.

(3) For helicopters with an MK XXII EGPWS P/N 965-1595-020, P/N 965-1595-021, or P/N 965-1595-022:

(i) Update the software by following the Accomplishment Instructions, paragraphs 3.C.(1)(a) through (h), of Honeywell SB 965-1595-34-0035, Revision 0, dated March 25, 2015 (SB 965-1595-34-0035).

(ii) Determine whether the software updated by following paragraphs 3.C.(2)(a) through 3.C.(2)(d) or 3.C.(3)(a) through (g) of SB 965-1595-34-0035.

(iii) Install a new software version label on the EGPWS by following paragraph 3.E.(1) or 3.E.(2), as appropriate for your model EGPWS, of SB 965-1595-34-0035.

(4) For helicopters with an MK XXII EGPWS P/N 965-1595-024, P/N 965-1595-026, P/N 965-1595-028, or P/N 965-1595-030:

(i) Update the software by following the Accomplishment Instructions, paragraphs 3.C.(1)(a) through 3.C.(1)(h), of Honeywell Service Bulletin 965-1595-34-0034, Revision 0, dated February 18, 2015 (SB 965-1595-34-0034).

(ii) Determine whether the software updated by following paragraphs 3.C.(2)(a) through 3.C.(2)(d) or 3.C.(3)(a) through 3.C.(3)(g) of SB 965-1595-34-0034.

(iii) Install a new software version label on the EGPWS by following paragraph 3.E.(1) or 3.E.(2), as appropriate for your model EGPWS, of SB 965-1595-34-0034.

(5) Do not install an EGPWS on any helicopter unless you have complied with the requirements in this AD.

**(f) Alternative Methods of Compliance (AMOC)**

(1) The Manager, Los Angeles Aircraft Certification Office, FAA, may approve AMOCs for this AD. Send your proposal to: Judy Heredia, Aviation Safety Engineer, Los Angeles Aircraft Certification Office, Transport Airplane Directorate, FAA, 3960 Paramount Blvd., Lakewood, California 90712; telephone (562) 627-5335; email 9-ANM-LAACO-AMOC-REQUESTS@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, we suggest that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

Honeywell SB ATA No. 965-1590/1595-34-18, dated July 30, 2004, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Honeywell International Inc., 15001 N.E. 36 Street, Redmond, Washington, 98052-5317; telephone (800) 601-3099; internet address [www.myaerospace.com](http://www.myaerospace.com). You may review a copy of information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room

6N-321, Fort Worth, TX 76177.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 3444 Ground Proximity System.

Issued in Fort Worth, Texas, on May 15, 2017.

Scott A. Horn,

Acting Manager, Rotorcraft Directorate,  
Aircraft Certification Service.

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