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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2007-28730; Directorate Identifier 2007-CE-063-AD; Amendment 39-15336; AD 2008-02-06]**

**RIN 2120-AA64**

#### **Airworthiness Directives; GARMIN International GSM 85 Servo Gearbox Units**

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

**ACTION:** Final rule.

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**SUMMARY:** The FAA adopts a new airworthiness directive (AD) for certain GARMIN International (GARMIN) GSM 85 servo gearbox units that are installed on airplanes. This AD requires you to inspect the GSM 85 servo gearbox for foreign object debris and return the unit to the manufacturer for replacement if you find debris. This AD results from reports of certain GARMIN GSM 85 servo gearbox units that have foreign object debris inside the assembly. We are issuing this AD to detect and correct defective GARMIN GSM 85 servo gearbox units, which could result in jamming of the gearbox. Jamming of the gearbox could lead to the pilot having to apply sufficient control force to override the servo gearbox slip clutch in order to control the airplane. In certain situations, this could compromise the safety of the airplane if the pilot was not able to focus on critical duties due to having to tend to the servo gearbox.

**DATES:** This AD becomes effective on February 26, 2008.

On February 26, 2008, the Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD.

**ADDRESSES:** To get the service information identified in this AD, contact GARMIN International Inc., 1200 East 151st Street, Olathe, KS 66062; telephone: 913-397-8200; fax: 913-397-8282.

To view the AD docket, go to U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, or on the Internet at <http://www.regulations.gov>. The docket number is FAA-2007-28730; Directorate Identifier 2007-CE-063-AD.

**FOR FURTHER INFORMATION CONTACT:** Roger A. Souter, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: 316-946-4134; fax: 316-946-4107; e-mail address: [roger.souter@faa.gov](mailto:roger.souter@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

On August 14, 2007, we issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to certain GARMIN International (GARMIN) GSM 85 servo gearbox units that are installed on airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on August 21, 2007 (72 FR 46582). The NPRM proposed to require you to inspect the GSM 85 servo gearbox for foreign object debris and return the unit to the manufacturer for replacement if you find debris.

### **Comments**

We provided the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and FAA's response to each comment:

#### **Comment Issue No. 1: Replace the Phrase "Excessive Manual Force"**

GARMIN states that using the phrase "excessive manual force" in the NPRM implies that the flight crew may not be able to control the airplane if the servo gearbox jams because of loose foreign object debris inside the gear-assembly housing.

GARMIN agrees that more than typical or usual force may be necessary to overcome the slip clutch in the servo, but it is within the capability of the pilot to control the airplane.

GARMIN requests that the phrase "excessive manual force" be replaced with "sufficient control force to override the servo gearbox slip clutch."

We partially agree with GARMIN. We will change the final rule AD action to reflect that jamming could lead to the pilot having to apply sufficient control force to override the servo gearbox slip clutch in order to control the airplane.

#### **Comment Issue No. 2: Incorporate Cessna Service Bulletin**

Cessna Aircraft Company (Cessna) has issued Service Bulletin SB07-22-01, dated June 4, 2007, to transmit GARMIN International, Inc. Service Bulletin No. 0713, Revision C, dated May 29, 2007.

Cessna requests that their service bulletin be incorporated as a means for complying with this AD.

We agree with Cessna and will change the final rule AD action to incorporate this change.

### **Conclusion**

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed except for the changes previously discussed and minor editorial corrections. We have determined that these minor corrections:

Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and

Do not add any additional burden upon the public than was already proposed in the NPRM.

### **Costs of Compliance**

We estimate that this AD affects 900 airplanes in the U.S. registry.

We estimate the following costs to do the inspection:

<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Total Cost Per Airplane</b>	<b>Total Cost on U.S. Operators</b>
7 work-hours X \$80 per hour = \$560	Not applicable	\$560	\$504,000

For airplanes that will need to replace the GSM 85 servo gearbox based on the results of the inspection, we estimate the following costs to set the torque value of the slip-clutch breakaway required for installation. We have no way of determining the number of airplanes that will need this replacement:

<b>Labor Cost Per GSM 85 Servo Gearbox</b>	<b>Parts Cost</b>	<b>Total Cost Per GSM 85 Servo Gearbox</b>
.5 work-hour X \$80 per hour = \$40	Not applicable	\$40

Warranty credit will be given to the extent specified in the service information.

### **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 AD.

### **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 this AD:

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 summary of the costs to comply with this AD (and other information as included in the Regulatory Evaluation) and placed it in the AD Docket. You may get a copy of this summary by sending a request to us at the address listed under ADDRESSES. Include "Docket No. FAA-2007-28730; Directorate Identifier 2007-CE-063-AD" in your request.

### **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 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. FAA amends § 39.13 by adding a new AD to read as follows:



**CORRECTED:** (e)(2) and (e)(3) were inadvertently omitted from the original PDF copy of this AD.

**2008-02-06 GARMIN International:** Amendment 39-15336; Docket No. FAA-2007-28730; Directorate Identifier 2007-CE-063-AD.

**Effective Date**

(a) This AD becomes effective on February 26, 2008.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to the GSM 85 servo gearbox units that are specified in paragraph (c)(1) of this AD and are installed on airplanes. These GSM 85 servo gearbox units are installed in, but not limited to, airplanes that are certificated in any category and presented in paragraph (c)(2) of this AD:

(1) GSM 85 servo gearbox units, part numbers (P/Ns): 011-00894-00, 011-00894-02, 011-00894-04, 011-00894-06, 011-00894-07, 011-00894-08, 011-00894-09, 011-00894-10, 011-00894-11, and 011-00894-14.

(2) Airplanes with the GSM 85 servo gearbox units installed (other aircraft could have installations through other methods such as field approval):

<b>Type Certificate Holder</b>	<b>Models</b>
(i) Cessna Aircraft Company	182T, T182T, 206H, and T206H
(ii) Hawker Beechcraft Corporation	G36 and G58
(iii) Diamond Aircraft Industries GmbH	DA40 and DA40F
(iv) Columbia Aircraft Manufacturing	350 and 400
(v) Mooney Airplane Company, Inc.	M20M and M20R

**Unsafe Condition**

(d) This AD results from reports of certain GARMIN GSM 85 servo gearbox units that have foreign object debris inside the assembly. We are issuing this AD to detect and correct defective GARMIN GSM 85 servo gearbox units, which could result in jamming of the servo gearbox. This jamming could lead to the pilot having to apply sufficient control force to override the servo gearbox slip clutch in order to control the airplane. In certain situations, this could compromise the safety of the airplane if the pilot was not able to focus on critical duties due to having to tend to the servo gearbox.

## Compliance

(e) To address this problem, you must do the following, unless already done:

Actions	Compliance	Procedures
<p>(1) Check the serial tag of the installed GSM 85 servo gearbox unit to determine the mod level. The mod level marked on the serial tag indicates if the GSM 85 servo gearbox unit is already in compliance with this AD.</p> <p>(i) If the serial tag on the installed GSM 85 servo gearbox unit for P/Ns 011-00894-00 or 011-00894-10 is marked at mod level 3, no further action is required.</p> <p>(ii) If the serial tag on the installed GSM 85 servo gearbox unit for P/Ns 011-00894-02, 011-00894-04, 011-00894-06, 011-00894-07, 011-00894-08, 011-00894-09, 011-00894-11, or 011-00894-14 is marked at mod level 1, no further action is required.</p> <p>(iii) If the serial tag on the above GSM servo gearbox unit is not at mod level 1 or 3 as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this AD, then go to paragraph (e)(2) of this AD.</p>	<p>Check within the next 100 hours time-in-service (TIS) after February 26, 2008 (the effective date of this AD) or within the next 3 months after February 26, 2008 (the effective date of this AD), whichever occurs first.</p>	<p>Check following GARMIN International, Inc. Service Bulletin No. 0713, Revision A, dated May 7, 2007; Service Bulletin No. 0713, Revision B, dated May 18, 2007; Service Bulletin No. 0713, Revision C, dated May 29, 2007; Service Bulletin No. 0713, Revision D, dated June 13, 2007; or Cessna Aircraft Company Single Engine Service Bulletin SB07-22-01, dated June 4, 2007, as applicable. If the Mod Level of the P/Ns specified in paragraph (e)(1)(i) and (e)(1)(ii) are at mod level 1 and mod level 3, as applicable, make an entry into the aircraft logbook showing compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9). The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may do this action.</p>
<p>(2) If the serial tag on the GSM 85 servo gearbox for P/Ns specified in paragraph (e)(1) of this AD is not marked at mod level 1 or mod level 3 as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this AD, inspect the servo gearbox for foreign object debris.</p>	<p>Within the next 100 hours TIS after February 26, 2008 (the effective date of this AD) or within the next 3 calendar months after February 26, 2008 (the effective date of this AD), whichever occurs first.</p>	<p>Follow the Modification Instructions in GARMIN International, Inc. Service Bulletin No. 0713, Revision A, dated May 7, 2007; Service Bulletin No. 0713, Revision B, dated May 18, 2007; Service Bulletin No. 0713, Revision C, dated May 29, 2007; Service Bulletin No. 0713, Revision D, dated June 13, 2007; or Cessna Aircraft Company Single Engine Service Bulletin SB07-22-01, dated June 4, 2007, as applicable.</p>

(3) If foreign object debris is found during the inspection required in paragraph (e)(2) of this AD, remove and return the GSM 85 servo gearbox to the manufacturer for replacement.	Before further flight after the inspection required in paragraph (e)(2) of this AD.	Follow the Modification Instructions in GARMIN International, Inc. Service Bulletin No. 0713, Revision A, dated May 7, 2007; Service Bulletin No. 0713, Revision B, dated May 18, 2007; Service Bulletin No. 0713, Revision C, dated May 29, 2007; Service Bulletin No. 0713, Revision D, dated June 13, 2007; or Cessna Aircraft Company Single Engine Service Bulletin SB07-22-01, dated June 4, 2007, as applicable.
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**Alternative Methods of Compliance (AMOCs)**

(f) 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. Send information to ATTN: Roger A. Souter, Aerospace Engineer, FAA, Wichita ACO, 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4134; fax: (316) 946-4107; e-mail address: roger.souter@faa.gov. 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**

(g) You must use GARMIN International, Inc. Service Bulletin No. 0713, Revision A, dated May 7, 2007; GARMIN International, Inc. Service Bulletin No. 0713, Revision B, dated May 18, 2007; GARMIN International, Inc. Service Bulletin No. 0713, Revision C, dated May 29, 2007; GARMIN International, Inc. Service Bulletin No. 0713, Revision D, dated June 13, 2007; and Cessna Aircraft Company Single Engine Service Bulletin SB07-22-01, dated June 4, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact GARMIN International, Inc., 1200 East 151st Street, Olathe, KS 66062; telephone: (913) 397-8200; fax: (913) 397-8282.

(3) You may review copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Kansas City, Missouri 64106; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Kansas City, Missouri, on January 11, 2008.  
 John Colomy,  
 Acting Manager, Small Airplane Directorate, Aircraft Certification Service.  
 [FR Doc. E8-828 Filed 1-18-08; 8:45 am]