

SERVICE INFORMATION NO. SI 42-073

NOTE: SI's are used only:
1) To distribute information from DAI to our customers.
2) To distribute applicable information / documents from our suppliers to our customers with additional information.
Typically there is no revision service for SI's. Each new information or change of that will be send along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 42 and DA 42 M aircraft equipped with GARMIN GFC 700 A/P System (GSM 85 Servo Gearbox).

1.2 Subject:

GARMIN Service Bulletin No. 0713 Rev. D
FAA Airworthiness Directive 2008-02-06, dated 26-Feb-2008
ATA-Code: 22-10

1.3 Reason:

Compliance to Garmin Service Bulletin and FAA Airworthiness Directive.

1.4 Information:

GARMIN has issued the Service Bulletin No. 0713 Rev. D, dated 13-Jun-2007, concerning the inspection of the GSM 85 servo gearbox for the presence of FOD (Foreign Object Debris). Additionally the FAA issued the Airworthiness Directive 2008-02-06, dated 26-Feb-2008, based on GARMIN's Service Bulletin.

In cooperation with GARMIN, Diamond Aircraft Industries GmbH performed further investigation and identified by S/N, that all DA 42 and DA 42 M aircraft equipped with the GARMIN GFC 700 A/P System and GSM 85 servo gearbox are not affected and thus comply with the mentioned GARMIN Service Bulletin and FAA Airworthiness Directive.

For further information refer to GARMIN Service Bulletin No. 0713 Rev. D and the FAA Airworthiness Directive 2008-02-06.

II. OTHERS

The GARMIN Installation Bulletin No. 0713 Rev. D and the FAA AD No. 2008-02-06 are attached to this SI.

In case of doubt contact Diamond Aircraft Industries GmbH.



SERVICE BULLETIN

NO.: 0713 Revision D

TO: All Garmin Aviation Service Centers and Aircraft OEM Service Centers

DATE: 13 June 2007

SUBJECT: GSM 85 Inspection Procedure

REVISION D: Revision D corrects LRU Part Numbers listed in Step 3.4, Step 4.6, Step 5.4, and in Tables 2, 4, and 5. Previous revisions of Service Bulletin 0713 are superseded by this bulletin.

PURPOSE

All GSM 85 servo gearboxes (also referred to as servo mounts) must be inspected per the instructions in this bulletin.

DESCRIPTION

All GSM 85 servo gearboxes must be inspected for the presence of FOD (Foreign Object Debris) that may be inside the housing.

APPROVAL

| LRU | LRU Part Number | TSO/ETSO |
|--------|-----------------|-------------------|
| GSM 85 | 011-00894-() | TSO-C9c, ETSO-C9c |

Table 1

AFMS AND PILOT'S GUIDE CONSIDERATIONS

There are no Pilot's Guide or Cockpit Reference Guide changes required.

REFERENCES

GSA 8X/GSM 85(A) Installation Manual, 190-00303-72
OEM Aircraft Maintenance Manual
Garmin Service Bulletin 0607

PRODUCT AFFECTED

This bulletin is applicable to all GFC 700-equipped aircraft (excluding Cessna Mustang). These aircraft include up to four GSM 85s.

GSM 85s with a Mod Level marked on the serial tag as listed in Table 2 have already been inspected for FOD, and are therefore not affected by this bulletin.

| LRU | LRU Part Number | Mod Level |
|------------|--|------------------|
| GSM 85 | 011-00894-00 or -10 | 3 |
| GSM 85 | 011-00894-02 011-00894-04 011-00894-06 011-00894-07 011-00894-08 011-00894-09 011-00894-11 011-00894-14 | 1 |

Table 2

| |
|-------------|
| NOTE |
|-------------|

This bulletin is not applicable to GSM 85A (011-01436-XX) servo gearboxes.

COMPLIANCE

Mandatory: This service bulletin must be incorporated in all GFC 700-equipped aircraft (excluding Cessna Mustang) within the time specified below.

Which ever of the following occurs first:

- The next maintenance activity that involves removal or inspection of the GSM 85 servo gearboxes
- 100 hours of time in-service from the date of this bulletin
- 3 months from the date of this bulletin

Garmin will request an Airworthiness Directive (AD) for this issue. If/when an AD is issued, Garmin anticipates that it will refer to this service bulletin.

WARRANTY INFORMATION

This modification is warranty reimbursable for the hours listed in the Manpower section. When completing the Garmin warranty claim, be sure to include the following information to ensure proper reimbursement.

- Aircraft Serial Number
- Aircraft Registration Number
- Part Number of each GSM 85
- Serial Number of each GSM 85
- Clearly indicate that this Service Bulletin has been complied with

MANPOWER

| Aircraft | Axis | Manpower Hours Allowed per Procedure(s) | | |
|------------------------------------|---------------|---|-----|-----|
| | | A | B | C |
| Columbia 350 | Pitch | 2.0 | 3.0 | 0.3 |
| | Roll | 1.5 | 2.5 | 0.3 |
| Columbia 400 | Pitch | 3.0 | 4.0 | 0.3 |
| | Roll | 1.5 | 2.5 | 0.3 |
| Diamond DA40 | Pitch | 1.0 | 3.0 | 0.3 |
| | Roll/PT | 2.0 | 4.0 | 0.3 |
| Mooney M20M/R | Pitch/Roll/PT | 1.5 | 2.5 | 0.3 |
| Cessna 182 (no air conditioning) | Roll | 0.7 | 2.1 | 0.3 |
| | Pitch | 0.6 | 1.5 | 0.3 |
| | Pitch Trim | 0.6 | 1.5 | 0.3 |
| Cessna 182 (with air conditioning) | Roll | 0.7 | 2.1 | 0.3 |
| | Pitch | 1.1 | 2.0 | 0.3 |
| | Pitch Trim | 1.1 | 2.0 | 0.3 |
| Cessna 206 (no air conditioning) | Roll | 0.9 | 2.8 | 0.3 |
| | Pitch | 0.9 | 2.2 | 0.3 |
| | Pitch Trim | 0.9 | 2.2 | 0.3 |
| Cessna 206 (with air conditioning) | Roll | 0.9 | 2.8 | 0.3 |
| | Pitch | 2.9 | 4.2 | 0.3 |
| | Pitch Trim | 0.9 | 2.2 | 0.3 |
| Hawker Beechcraft G36/58 | Pitch/Roll/PT | 2.0 | 3.0 | 0.3 |
| | Yaw | 1.5 | 2.5 | 0.3 |

Table 3

Column A – These are the allowable hours for the Modification Instructions in Section 4 Borescope Inspection where completing these steps did not necessitate the removal of a GSM 85 from the aircraft. These hours may not be combined with the hours in Columns B or C.

Column B - These are the allowable hours for the Modification Instructions in Section 4 Borescope Inspection or 5 FOD Inspection by GSM Removal (not both) where any of these steps necessitated removal of a GSM 85.

Column C - These are the allowable hours for setting the slip-clutch breakaway torque value as per Section 6 Reinstallation, which is necessary if a GSM 85 is replaced. If applicable, these hours may be additive to the hours in Column B, but not to the hours in Column A.

IDENTIFICATION PROCEDURE

Check the aircraft's maintenance records to determine if the inspection procedure in this bulletin has already been performed or is not applicable. If not previously accomplished and is determined to be applicable, proceed with the inspection steps listed in this bulletin.

MODIFICATION INSTRUCTIONS

1 General Instructions

Any GSM 85s returned from Garmin will require a Garmin Slip-Clutch Fixture, P/N T10-00110-01 to set the slip-clutch breakaway torque before it can be installed in the aircraft. Ensure the fixture is available before returning GSM 85s to Garmin. In some cases, a preset GSM 85 may be available from the aircraft manufacturer, contact them for availability.

2 Pre-Inspection Procedure

Perform all of the following instructions for all affected GSM 85 servo gearboxes in the aircraft.

- 2.1 Move the flight controls full travel in every axis including the pitch trim, to verify smooth operation of all GFC 700 components.
- 2.2 If roughness is felt in any axis, determine if the roughness is caused by an airframe component other than a GSM 85 servo gearbox. If the roughness in any axis is caused by an airframe component other than a GSM 85, then correct the condition. If the roughness in any axis is caused by a GSM 85 servo gearbox, then remove and return suspect GSM 85 servo gearbox to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation.
- 2.3 When smooth operation of every axis with a flight control servo has been verified, proceed to one of the following sections as applicable:
 - o Section 3 Extrusion Surface Inspection for aircraft at an OEM facility
 - o Section 4 Borescope Inspection for inspection without removal of GSM 85
 - o Section 5 FOD Inspection by GSM Removal for inspection by removal of GSM 85

3 Extrusion Surface Inspection

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|-------------|
| NOTE |
|-------------|

The Extrusion Surface Inspection is for OEM Factories only.

The potential for FOD resulted from a tumbling process that is selectively used to deburr the aluminum extrusion (housing) of the GSM 85. Since not all extrusions were deburred using the tumbling process, determining which extrusions were tumbled can also identify the candidate GSM 85s that require inspection. Only extrusions that were tumbled have the possibility of FOD in the extrusion. Garmin will provide samples (work-aids) of tumbled and non-tumbled extrusions to OEM's for this inspection process. If a Garmin provided work-aid is not available, proceed to Section 4 Borescope Inspection or Section 5 FOD Inspection by GSM Removal as applicable.

Perform all of the following instructions for all affected GSM 85 servo gearboxes in the aircraft.

- 3.1 Inspect any visible side of the GSM 85 extrusion per the Garmin supplied work-aids. Only one side of the extrusion must be visible for this inspection.
- 3.2 If the extrusion surface matches the tumbled work-aid (a dull surface, and without the adjacent parallel vertical lines), or if no conclusive determination can be made as to a tumbled or non-tumbled status of the extrusion, further inspection is necessary, proceed to Section 4 Borescope Inspection or Section 5 FOD Inspection by GSM Removal as applicable.
- 3.3 If the extrusion surface matches the non-tumbled work-aid, (a shiny surface, and the presence of adjacent parallel vertical lines), no possibility of FOD exists, and no further inspection is necessary, proceed to Step 3.4.

- 3.4 For GSM 85s part number 011-00894-00 or 011-00894-10, mark the MOD 3 circle (on the serial tag) with an indelible marker indicating compliance with this bulletin. For GSM 85s part number 011-00894-XX (where -XX is -02, -04, -06, -07, -08, -09, -11, or -14), mark the MOD 1 circle (on the serial tag) with an indelible marker indicating compliance with this bulletin.

NOTE

If the serial tag is not accessible (for marking mod status) on an installed GSM 85 servo gearbox, a Supplemental Mod Status Tag (Figure 3-1), P/N 161-01726-00 (or equivalent that provides all of the same information) can be marked Mod 1 or Mod 3 per Step 3.4 and placed on an accessible surface of the GSM 85.

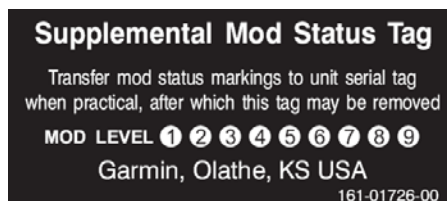


Figure 3-1

The serial tag shall be marked with the mod status from the Supplemental Mod Status Tag during the next regular service that allows access to the serial tag. The supplemental tag should be removed from the GSM 85.

- 3.5 Proceed to Step 6.6 of this bulletin.

4 Borescope Inspection (optional process that may be performed instead of Section 5 FOD Inspection by GSM Removal)

This method of inspection requires the availability of a flexible borescope. If inspection cannot be performed using a borescope, proceed to Section 5 FOD Inspection by GSM Removal.

Perform all of the following instructions for all affected GSM 85 servo gearboxes in the aircraft.

- 4.1 Remove the GSA 8X servo from the GSM 85 per the OEM Aircraft Maintenance Manual.
- 4.2 Insert the borescope into the hole on the bottom side of the GSM 85 where the actuator gear of the GSA 8X servo inserts.
- 4.3 Maneuver the borescope to view all potential areas where foreign objects (FOD) may be present, particularly in the corners of the extrusion (Figure 4-1). Also look closely at the gears for the presence of FOD, rotate the gears to view all potential areas for FOD. FOD may be present anywhere inside of the extrusion, not only where shown in Figure 4-1.

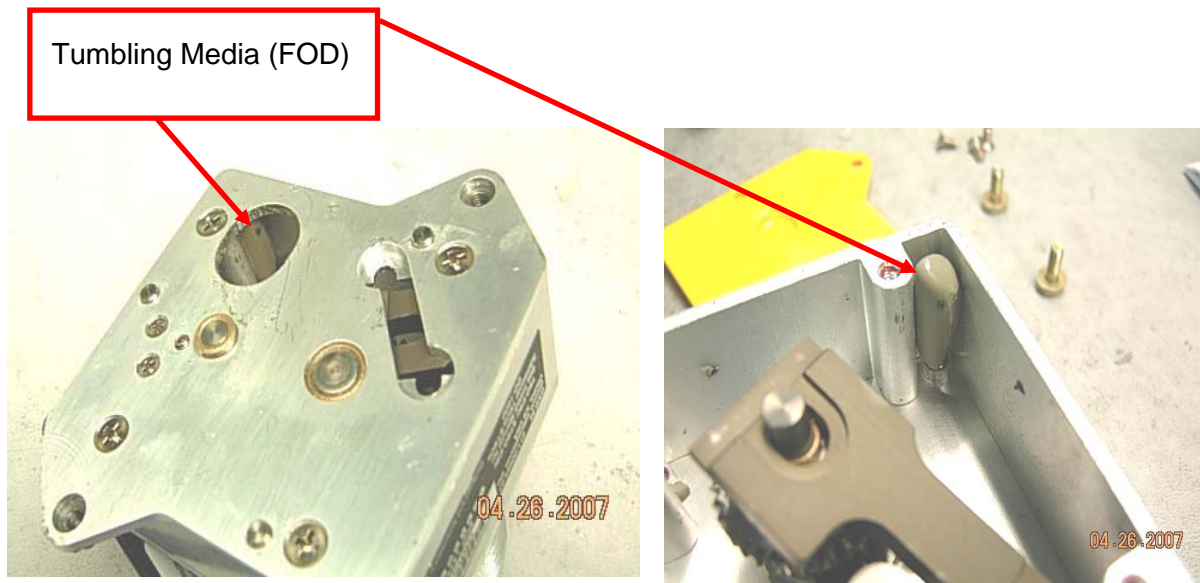


Figure 4-1

- 4.4 If FOD is present, remove the GSM 85 per the OEM Aircraft Maintenance Manual and return the GSM 85 servo gearbox to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation.

- 4.5 If the borescope inspection produces no conclusive determination regarding the absence of FOD, proceed to Section 5 FOD Inspection by GSM Removal.
- 4.6 If it is conclusively determined that no FOD is present:
- For GSM 85s part number 011-00894-00 or 011-00894-10 only, mark the MOD 3 circle (on the serial tag) with an indelible marker indicating compliance with this bulletin.
 - For GSM 85s part number 011-00894-XX (where -XX is -02, -04, -06, -07, -08, -09, -11, or -14), mark the MOD 1 circle (on the serial tag) with an indelible marker indicating compliance with this bulletin.

NOTE

If the serial tag is not accessible (for marking mod status) on an installed GSM 85, a Supplemental Mod Status Tag (Figure 4-2), P/N 161-01726-00 (or equivalent that provides all of the same information) can be marked Mod 1 or Mod 3 per Step 4.7 and placed on an accessible surface of the GSM 85.

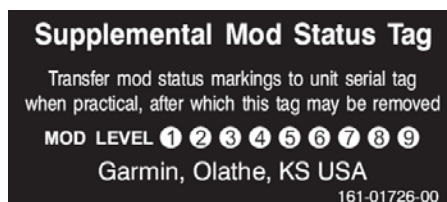


Figure 4-2

The serial tag shall be marked with the mod status from the Supplemental Mod Status Tag during the next regular service that allows access to the serial tag. The supplemental tag should be removed from the GSM 85 servo gearbox.

- 4.7 Proceed to Step 6.3 of this bulletin.

5 FOD Inspection by GSM Removal

This inspection is performed if Section 3 Extrusion Surface Inspection and/or Section 4 Borescope Inspection were either not performed, or were performed and did not conclusively eliminate the possibility of the presence of FOD in the GSM 85 extrusion.

NOTE

While the GSM 85 servo gearbox is removed from the aircraft, Garmin recommends compliance with Service Bulletin 0607.

Perform all of the following instructions for all affected GSM 85 servo gearboxes in the aircraft.

- 5.1 Remove the GSM 85 from the aircraft per the OEM Aircraft Maintenance Manual.
- 5.2 As each GSM 85 is removed, make sure it is appropriately tagged to indicate the axis (pitch, roll, yaw, or pitch trim) from which it was removed in the aircraft. A Slip Clutch Setting Label, P/N 161-01514-00 (or equivalent that provides all of the same information) may be used for this purpose (Figure 5-1). This information is recorded in aircraft maintenance records for reference when the parts are reinstalled.

| Date | Torque | Axis | Aircraft | Label P/N 161-01514-00 |
|------|--------|------|----------|------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Figure 5-1

- 5.3 For GSM 85 servo gearboxes part numbered 011-00894-00 and 011-00894-10 only, check the serial tag for a MOD 2 marking. If MOD 2 is marked on these GSM 85s, proceed to Step 5.5. If MOD 2 is not marked on the serial tag, return the GSM 85 to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation.
- 5.4 For all GSM 85s part numbered 011-00894-XX, where XX is -02, -04, -06, -07, -08, -09, -11, or -14, proceed to Step 5.5.
- 5.5 Use a thin (.098" to 0.130" dia.), stiff tool (such as a small screwdriver) that can go into the mounting holes in each corner to verify it can be inserted at least 1.35". This is to make sure there is not any FOD lodged in the internal corners of the extrusion. If the tool cannot be fully and smoothly inserted and removed from all four mounting holes, it is assumed that FOD is present in the extrusion. If tool cannot be fully inserted, return the GSM 85 servo gearbox to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation. If no FOD is found proceed to Step 5.6.

- 5.6 Shake the unit vigorously along three different axes to listen for loose FOD inside the unit. When shaking the GSM 85, hold the capstan securely so that it does not rattle and is not misinterpreted as FOD. Any rattling from within the gearbox is assumed to be FOD. If rattling occurs, return the GSM 85 to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation. If no FOD is found proceed to Step 5.7.
- 5.7 Rotate the capstan at least two full turns in each direction to check for rough operation or obstructions in the gear-train. Any roughness in the rotation of the capstan is assumed to be caused by the presence of FOD. If there is any roughness in the rotation of the capstan, return the GSM 85 to Garmin for exchange. After receiving the replacement GSM 85 from Garmin, proceed to Section 6 Reinstallation. If no FOD is found and the gearbox is operating smoothly, proceed to Step 5.8
- 5.8 If the GSM 85 complies with the preceding inspection steps 5.1 through 5.7, then mark the MOD status (on the serial tag) with an indelible marker per Table 4.

| LRU | LRU Part Number | Mod Level |
|--------|--|-----------|
| GSM 85 | 011-00894-00 or -10 | 3 |
| GSM 85 | 011-00894-02 011-00894-04 011-00894-06 011-00894-07 011-00894-08 011-00894-09 011-00894-11 011-00894-14 | 1 |

Table 4

- 5.9 Proceed to Step 6.3 of this bulletin.

6 Reinstallation

Perform all of the following instructions for all affected GSM 85 servo gearboxes in the aircraft.

- 6.1 Verify that the Mod Status on the serial tag of the GSM 85 is marked correctly per Table 5.

| LRU | LRU Part Number | Mod Level |
|--------|--|-----------|
| GSM 85 | 011-00894-00 or -10 | 3 |
| GSM 85 | 011-00894-02 011-00894-04 011-00894-06 011-00894-07 011-00894-08 011-00894-09 011-00894-11 011-00894-14 | 1 |

Table 5

- 6.2 Set the slip-clutch breakaway torque per the OEM Aircraft Maintenance Manual. This procedure requires a Garmin Slip-Clutch Fixture, P/N T10-00110-01. If an OEM has provided a GSM 85 with the torque value already set, this step is not required.
- 6.3 The gear on the GSA 8X servo that mates to the GSM 85, should be thoroughly cleaned, inspected for any damage, and re-lubed with grease that conforms to MIL-G-21164D. If any gear damage is found, the GSA 8X servo must be replaced.
- 6.4 Reinstall the GSM 85 (and any GSA 8X servos removed in Section 4) in its original location in the aircraft per the OEM Aircraft Maintenance Manual. During reinstallation, verify the servo motor is aligned with the GSM 85 servo gearbox and both are fully seated together with less than 1/32" gap before tightening the mounting bolts. **Do not use the mounting bolts to draw the assemblies together if there is a larger gap, damage may result to the GSM 85 servo gearbox, requiring replacement.**
- 6.5 Perform the post installation checkout described in the OEM Aircraft Maintenance Manual before returning the aircraft to service.
- 6.6 Make appropriate entry in the aircraft's maintenance records, noting that this Service Bulletin has been complied with and the basis for returning the aircraft to service. Note the serial number and new Mod Level that was marked on each GSM 85 as it was reinstalled.

MATERIAL INFORMATION

Slip Clutch Setting Label, P/N 161-01514-00

Supplemental Mod Status Tag, P/N 161-01726-00

Garmin Slip-Clutch Fixture, P/N T10-00110-01

ADDITIONAL INFORMATION

NA

[Federal Register: January 22, 2008 (Volume 73, Number 14)]
[Rules and Regulations]
[Page 3615-3617]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr22ja08-1]

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.

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.

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:

| Labor Cost | Parts Cost | Total Cost Per Airplane | Total Cost on U.S. Operators |
|--------------------------------------|-------------------|--------------------------------|-------------------------------------|
| 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:

| Labor Cost Per GSM 85 Servo Gearbox | Parts Cost | Total Cost Per GSM 85 Servo Gearbox |
|--|-------------------|--|
| .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:



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):

| Type Certificate Holder | Models |
|--|------------------------------|
| (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> |

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| (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.

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]