AIRWORTHINESS DIRECTIVES FINAL RULES: 2001-23-17

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DOCKET NUMBER: 99-CE-87-AD

AMENDMENT: 39-12516

AD NUMBER: 2001-23-17

SUBJECT HEADING: Airworthiness Directives; GARMIN International GNS 430 Units

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that applies to certain GARMIN International (GARMIN) GNS 430 units that are installed on aircraft. This AD requires you to modify the unit to incorporate circuitry changes to the GNS 430 unit's deviation and flag outputs. This AD is the result of reports of inaccurate course deviations caused by external electrical noise to the GNS 430 unit's course deviation indicator (CDI). The actions specified by this AD are intended to prevent such external noise from causing inaccurate course deviation displays in the GNS 430 unit's CDI or horizontal situation indicator (HSI). Such displays could result in the pilot making flight decisions that put the aircraft in unsafe flight conditions.

DATES: This AD becomes effective on December 28, 2001. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of December 28, 2001.

ADDRESSES: You may obtain the service information referenced in this AD from GARMIN International, 1200 East 151st Street, Olathe, Kansas 66062. You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 99-CE-87-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Roger A. Souter, FAA, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4134; facsimile: (316) 946-4407; e-mail: roger.souter@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

What events have caused this AD? The FAA has received information that external electrical noise to the course deviation indicator (CDI) of GARMIN GNS 430 units could result in the CDI or horizontal situation indicator (HSI) displaying inaccurate course deviations. This could prompt the pilot to make flight decisions

that put the aircraft in unsafe flight conditions.

Certain GNS 430 installations have received electrical noise between 1 and 3 volts alternating current (AC) peak-peak (induced into the GNS 430 CDI input) from other items installed on the aircraft. This high level of noise causes an undesirable oscillation of the CDI outputs, which results in inaccurate course deviation displays in the GNS 430 unit's CDI/HSI.

The condition is installation dependent. The GNS 430 units continue to meet all requirements in the technical standard order (TSO). The condition occurs in aircraft with installations that impose large noise spikes upon the CDI D-bar control wiring. Such installations are autopilots, fan motors, or similar accessories.

What is the potential impact if FAA took no action? As described above, such external noise could cause inaccurate course deviation displays in the GNS 430 unit's CDI/HSI. This could result in the pilot making flight decisions that put the aircraft in unsafe flight conditions.

Has FAA taken any action to this point? 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 GNS 430 units that are installed on aircraft. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on August 6, 2001 (66 FR 40926). The NPRM proposed to require you to modify the unit to incorporate circuitry changes to the GNS 430 unit's deviation and flag outputs. The proposed actions would be accomplished in accordance with GARMIN Service Bulletin No.: 9905, Revision A, dated September 17, 1999.

Was the public invited to comment? The FAA encouraged interested persons to participate in the making of this amendment. The paragraphs that follow present the comment received on the proposal and FAA's response to this comment.

Comment Disposition

What is the commenter's concern? The commenter states that the majority of, if not all, the owners/operators of aircraft with the GARMIN GNS 430 units installed have already complied with the proposed AD through the manufacturer's warranty program. The commenter recommends that FAA withdraw the NPRM.

What is FAA's response to the concern? We do not concur with withdrawing the NPRM. Many of the airplanes equipped with the GARMIN GNS 430 units may actually incorporate the modification. However, AD action is the only way we can mandate that all units currently installed either have the modification incorporated or keep the modification incorporated and that all units installed in the future incorporate this modification.

We are not changing the final rule as a result of this comment.

FAA's Determination

What is FAA's final determination on this issue? After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

--Provide 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.

Cost Impact

How many airplanes does this AD impact? We estimate that 2,010 affected GARMIN GNS 430 units could be installed on aircraft in the U.S. registry.

What is the cost impact of this AD on owners/operators of the affected airplanes? GARMIN will cover all workhours and parts costs associated with this modification under warranty. This AD will not impose any cost impact upon the owners/operators of any aircraft incorporating one of the affected GNS 430 units.

Compliance Time of This AD

What is the compliance time of this AD? The compliance time of this AD is within the next 6 months after the effective date of this AD.

Why is the compliance time presented in calendar time instead of hours time-in-service (TIS)? The compliance time for this AD is presented in calendar time instead of hours TIS because the condition exists regardless of aircraft operation. The external noise outputs could occur and cause the inaccurate CDI/HSI displays regardless of the number of times and hours the aircraft was operated or the age of the GNS 430 unit. For these reasons, we have determined that a compliance based on calendar time should be utilized in this AD in order to ensure that the unsafe condition is addressed within a reasonable time period on all aircraft with an affected GNS 430 unit installed.

Regulatory Impact

Does this AD impact various entities? The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

Does this AD involve a significant rule or regulatory action? For the reasons discussed above, I certify that this action (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); 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. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption **ADDRESSES**.

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.

Sec. 39.13 [Amended]

2. FAA amends Sec. 39.13 by adding a new AD to read as follows:

REGULATORY TEXT:
2001-23-17 GARMIN International: Amendment 39-12516; Docket No. 99-CE-87-AD.

(a) *What airplanes are affected by this AD?* This AD applies to the GNS 430 units that are specified in paragraph (a)(1) of this AD and are installed on aircraft. These GNS 430 units are installed in, but not limited to, aircraft that are certificated in any category and presented in paragraph (a)(2) of this AD:

(1) GNS 430 Units, part number 011-00280-00: serial numbers 9630001, 96300002, 96300017, 96300028, 96300034, 96300040, 96300068, 96300104, 96300108, 96300122, 96300125, 96300130, 96300142, 96300149, 96300161, 96300165, 96300218, 96300222, 96300232, 96300269, 96300272, 96300308, 96300333, 96300340, 96300348, 96300354, 96300369, 96300372, 96300382, 96300394, 96300411, 96300413, 96300429, 96300437, 96300451, 96300484, 96300485, 96300489, 96300504, 96300506, 96300513, 96300522, 96300549, 96300563, 96300585, 96300587, 96300618, 96300621, 96300624, 96300628, 96300641, 96300653, 96300664, 96300713, 96300734, 96300756, 96300766, 96300781, 96300785, 96300786, 96300808, 96300831, 96300837, 96300842, 96300846, 96300866, 96300870, 96300872, 96300899, 96300916, 96300923, 96300925, 96300929, 96300941, 96300961, 96300984, 96300987, 96301021, 96301108, 96301130, 96301280, and 96301296 through 96303200.

(2) Aircraft with the GNS 430 Unit Installation (other aircraft could have field approval installations):

TC holder	Airplane models
Cessna Aircraft Company	172, 182, 206, 208, 210, 401, 402, 404, 406, 411, 414, 414A, 421A, 421B, 421C, 425, 441, 500, 550, S550, 552, 560, 560XL, 501, 525, and 551.
Mooney Aircraft	M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S, and M22.
Raytheon Aircraft Company	Beech Models E33, F33, G33, E33A, F33A, E33C, F33C, 35, 35R, A35, B35, B35TC, C35, D35, E35, F35, G35, H35, J35, K35, M35, N35, P35, S35, V35, V35TC, V35A, V35A-TC, V35B, V35B-TC, 36, A36, A36TC, 50, B50, C50, D50, D50A, D50B, D50C, D50E, E50, F50, G50, H50, J50, 60, A60, B60, 65-90, 65-A90, B90, C90, C90A, C90B, E90, F90, 100, A100, B100, 95-55, 95-A55, 95-B55, 95-C55, D-55, E55, 58, 58P, and 58TC.
Socata	TBM 700.
The New Piper Aircraft, Inc.	J3C-40, J3C-50, J3C-50S (Army L-4, L-4B, L-4H, and L-4J), J3C-65 (Navy NE-1 and NE-2), J3C-65S, J3F-50, J3F-50S, J3F-60, J3F-60S, J3F-65 (Army L-4D), J3F-65S, J3L, J3L-S, J3L-65 (Army L-4C), J3L-65S, J4, J4A, J4A-S, J4E (Army L-4E), J5A

	(Army L-4F), J5A-80, J5B (Army L-4G), J5C, AE-1, HE-1, PA-11, PA-11S, PA-12, PA-12S, PA-14, PA-15, PA-16, PA-16S, PA-17, PA-18, PA-18A, PA-18A (Restricted), PA-18S, PA-18-"105" (Special), PA-18S-"105" (Special), PA-18-"125" (Army L-21A), PA-18AS-"125", PA-18S-"125", PA-18-"135" (Army L-21B), PA-18A-"135", PA-18A-"135" (Restricted), PA-18AS-"135", PA-18S-"135", PA-18-"150", PA-18A-"150", PA-18A-"150" (Restricted), PA-18AS-"150", PA-18S-"150", PA-19 (Army L-18C), PA-19S, PA-20, P-20S, PA-20-"115", PA-20S-"115", PA-20-"135", PA-20S-"135", PA-22, PA-22-108, PA-22-135, PA-22S-135, PA-22-150, PA-22S-150, PA-22-160, PA-22S-160, PA-24, PA-24-250, PA-24-260, PA-24-400, PA-25, PA-25-235, PA-25-260, PA-28-140, PA-28-150, PA-28-151, PA-28-160, PA-28-161, PA-28-180, PA-28-235, PA-28S-160, PA-28R-180, PA-28S-180, PA-28-181, PA-28R-200, PA-28R-201, PA-28R-201T, PA-28RT-201, PA-28RT-201T, PA-28-201T, PA28-236, PA-32R-301 (SP), PA-32R-301 (HP), PA-32R-301T, PA-32-301, PA-32-301T, PA-36-285, PA-36-300, PA-36-375, PA-38-112, PA-46-310P, and PA-46-350P.

(b) *Who must comply with this AD?* Anyone who wishes to operate any aircraft with one of the affected GNS 430 units installed must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to prevent external noise from causing inaccurate course deviation displays in the GNS 430 unit's course deviation indicator (CDI) or horizontal situation indicator (HSI). Such displays could result in the pilot making flight decisions that put the aircraft in unsafe flight conditions.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
(1) Modify the affected GNS 430 unit to incorporate circuitry changes to the deviation and flag outputs.	Within the next 6 months after December 28, 2001 (the effective date of this AD).	In accordance with the MODIFICATION INSTRUCTIONS section of GARMIN Service Bulletin No.: 9905, Revision A, dated September 17, 1999.
(2) Do not install an affected GNS 430 unit unless it has been modified as required by paragraph (d)(1) of this AD.	As of December 28, 2001 (the effective date of this AD).	In accordance with the MODIFICATION INSTRUCTIONS section of GARMIN Service Bulletin No.: 9905, Revision A, dated September 17, 1999.

(e) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust

the compliance time if:

(1) Your alternative method of compliance provides an equivalent level of safety; and

(2) The Manager, Wichita Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

Note: This AD applies to any aircraft with the equipment installed as identified in paragraph (a) of this AD, regardless of whether the aircraft has been modified, altered, or repaired in the area subject to the requirements of this AD. For aircraft that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact Roger A. Souter, FAA, Wichita Aircraft Certification Office (ACO), 1801 Airport Road, Room 100, Wichita, Kansas 67209; telephone: (316) 946-4134; facsimile: (316) 946-4407, e-mail: roger.souter@faa.gov.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with GARMIN Service Bulletin No.: 9905, Revision A, dated September 17, 1999. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may obtain copies from GARMIN International, 1200 East 151st Street, Olathe, Kansas 66062. You may view this information at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) *When does this amendment become effective?* This amendment becomes effective on December 28, 2001.

FOOTER:
Issued in Kansas City, Missouri, on November 14, 2001.
Michael K. Dahl,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.
[FR Doc. 01-29325 Filed 11-30-01; 8:45 am]
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