

Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-357-AD]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Model G-V Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain Gulfstream Model G-V series airplanes. This proposal would require repetitively replacing the existing nose wheel steering actuator with a new or reworked actuator having the same part number. This action is necessary to prevent loss of nose wheel steering control without a corresponding alert message annunciation due to the effects of moisture intrusion into the rotary variable displacement transducer (RVDT) inside the steering actuator, and consequently, an over steering condition. If an over steering condition were to occur during landing, the airplane could depart the runway. This action is intended to address the identified unsafe condition.

DATES: Comments must be received by April 2, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-357-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-nprmcomment@faa.gov. Comments

sent via fax or the Internet must contain "Docket No. 2000-NM-357-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in the proposed rule may be obtained from Gulfstream Aerospace Corporation, P.O. Box 2206, M/S D-10, Savannah, Georgia 31402-9980. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia.

FOR FURTHER INFORMATION CONTACT:

Frank Mokry, Systems Engineer, Systems and Flight Test Branch, ACE-116A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349; telephone (770) 703-6066; fax (770) 703-6097.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this action may be changed in light of the comments received.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the proposed AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by

interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-357-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-357-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received several reports of oscillations and/or over steering of the nose wheel steering system without a "STEER BY WIRE FAIL" message being annunciated. All but one of these events occurred during landing on certain Gulfstream Model G-V series airplanes. None of these airplanes left the runway, but some have experienced minor nose wheel tire damage. An investigation revealed that the cause of these events was moisture intrusion into the rotary variable displacement transducer (RVDT) inside the steering actuator. The pedal steering and hand tiller use the RVDT to determine the position of the nose wheel. At cold temperatures, the moisture can freeze and cause the RVDT feedback shaft to bind. This binding causes nose wheel position data errors of 10 to 12 degrees to be transmitted to the tiller, which could result in oversteering of the airplane.

Loss of nose wheel steering control (i.e., unresponsive steering or uncommanded oscillations) without a corresponding "STEER BY WIRE FAIL" message annunciation could result in an over steering condition. If an over steering condition were to occur during landing (i.e., high speed conditions), the airplane could depart the runway.

Actions Since Reported Incidents

The manufacturer has advised the FAA that all operators, worldwide, of the subject Gulfstream Model G-V series airplanes, serial numbers 501 through

605 inclusive, have replaced all nose wheel steering actuators, part number (P/N) 1159SCL500-41, with new or restored actuators, P/N 1159SCL500-41 Rev. D, per Gulfstream Alert Customer Bulletin 9A, dated September 25, 2000. The upgraded steering actuator, P/N 1159SCL500-41 Rev. D, is one that has been sealed with an improved sealing procedure. The manufacturer also has advised the FAA that it currently is developing a redesigned steering actuator, which prevents moisture intrusion and incorporates an improved spring design to prevent the RVDT shaft from binding.

Therefore, until this redesigned steering actuator is developed, approved, and available, the FAA has determined that the steering actuator, P/N 1159SCL500-41 Rev. D, needs to be replaced with an actuator having the same P/N every 450 flight hours or 12 months, whichever occurs first, to address the identified unsafe condition. The FAA also has determined that, in addition to airplanes having serial numbers 501 through 605 inclusive, airplanes having serial numbers subsequent to 605 (in production airplanes) will be equipped with steering actuator, P/N 1159SCL500-41 Rev. D, and therefore, should be subject to the requirement of the proposed AD.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require repetitively replacing the nose wheel steering actuator, P/N 1159SCL500-41 Rev. D, with a new or reworked actuator having the same part number. The repetitive replacement would be required to be accomplished per the Gulfstream Maintenance Manual.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Cost Impact

There are approximately 94 Model G-V series airplanes of the affected design in the worldwide fleet. The FAA estimates that 89 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 6 work hours per airplane to accomplish the proposed actions, and that the average labor rate is \$60 per work hour. Required parts would cost approximately \$15,000 per airplane. Based on these figures, the cost

impact of the proposed AD on U.S. operators is estimated to be \$1,367,040, or \$15,360 per airplane, per replacement.

The cost impact figure discussed above is based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this proposed AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations proposed herein 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. Therefore, it is determined that this proposal would not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that 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); and (3) if promulgated, 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 draft regulatory 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.

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List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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. Section 39.13 is amended by adding the following new airworthiness directive:

Gulfstream Aerospace Corporation: Docket 2000-NM-357-AD.

Applicability: Model G-V series airplanes, serial numbers 501 and subsequent, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes 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 (b) 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 the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of nose wheel steering control, without a corresponding alert message annunciation, due to the effects of moisture intrusion into the rotary variable displacement transducer (RVDT) inside the steering actuator, which could result in the airplane departing the runway if an over steering condition were to occur during landing, accomplish the following:

Repetitive Replacement

(a) Replace the nose wheel steering actuator, part number (P/N) 1159SCL500-41 Rev. D, with a new or restored actuator having the same part number, per Gulfstream V Maintenance Manual Chapter 05-10-00, dated September 15, 2000; at the later of the times specified in paragraphs (a)(1) and (a)(2) of this AD. Repeat this replacement thereafter every 450 flight hours or 12 months, whichever occurs first.

(1) Within 450 flight hours or 12 months after replacing the nose wheel steering actuator, P/N 1159SCL500-41 Rev. D, with a new or restored actuator having the same part number, whichever occurs first.

(2) Within 30 days after the effective date of this AD.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

Special Flight Permit

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199

of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Issued in Renton, Washington, on February 9, 2001.

Vi L. Lipski,

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

[FR Doc. 01-3853 Filed 2-14-01; 8:45 am]

BILLING CODE 4910-13-U

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-207-AD]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-9-32 Series Airplanes Modified per Supplemental Type Certificate SA4371NM

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the adoption of a new airworthiness directive (AD) that is applicable to all McDonnell Douglas Model DC-9-32 series airplanes modified per Supplemental Type Certificate SA4371NM. This proposal would require an inspection to determine if certain ground wires on the water heater of each lavatory are installed, and corrective action, if necessary. This action is necessary to detect improper grounding of a water heater, which, coupled with an internal short in the water heater, could result in heat or smoke damage or a fire on the airplane. This action is intended to address the identified unsafe condition.

DATES: Comments must be received by April 2, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-207-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-nprmcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2000-NM-207-AD" in the

subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in the proposed rule may be obtained from Hexcel Interiors, 3225 Woburn Street, Bellingham, Washington 98226; or Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Don Eiford, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2788; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this action may be changed in light of the comments received.

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- For each issue, state what specific change to the proposed AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments

submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-207-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

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Discussion

The FAA has received a report indicating that overheating of the water heater in an aft lavatory caused heat and smoke damage on a McDonnell Douglas Model DC-9-32 series airplane. The water heater was installed per Hexcel Supplemental Type Certificate (STC) SA4371NM, which was approved by the Seattle Aircraft Certification Office. Investigation revealed that the affected water heater was not grounded correctly. Further investigation revealed that the water heater in the other aft lavatory on the airplane also was not grounded correctly. The missing ground wires should have been installed during the installation of the lavatory on the airplane. If not corrected, in the event of an internal short in the water heater, this condition could result in heat or smoke damage or a fire on the airplane. Incorrect grounding could also cause an electric shock to a person who touches the water heater.

Explanation of Relevant Service Information

The FAA has reviewed and approved Hexcel Service Bulletin 110000-25-001, dated March 31, 2000, which describes procedures for a one-time general visual inspection to determine if ground wires are installed between the top of the water heater and the sink unit, and between the sink unit and the mounting flange of the toilet flush timer module, on each lavatory. The service bulletin also describes procedures for installation of a ground wire assembly if any ground wire is not installed. Accomplishment of the actions specified in the service bulletin is intended to adequately address the identified unsafe condition.

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would require accomplishment of the actions