

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. 98-NM-109-AD]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-9-80 Series Airplanes, Model MD-88 Airplanes, and Model MD-90-30 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 McDonnell Douglas Model DC-9-80 series airplanes, Model MD-88 airplanes, and Model MD-90-30 airplanes. This proposal would require repetitive inspections to detect cracking of the main landing gear (MLG) shock strut pistons, and replacement of a cracked piston with a new or serviceable part. This proposal is prompted by reports indicating that, while an airplane was positioned on the taxiway, the right MLG shock strut piston failed due to fatigue cracking. The actions specified by the proposed AD are intended to detect and correct such fatigue cracking, which could result in failure of the piston, and consequent damage to the airplane structure or injury to the passengers and flightcrew.

DATES: Comments must be received by October 23, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-109-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.

The service information referenced in the proposed rule may be obtained from The Boeing Company, Douglas Products 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, or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft

Certification Office, 3960 Paramount Boulevard, Lakewood, California.

FOR FURTHER INFORMATION CONTACT: Brent Bandle, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5237; fax (562) 627-5210.

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 notice may be changed in light of the comments received.

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 notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 98-NM-109-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. 98-NM-109-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received a report of failure of the shock strut piston of the right main landing gear (MLG) while a McDonnell Douglas Model DC-9-80 series airplane was positioned on the taxiway. (A similar incident also occurred in 1991.) The report indicated that the affected piston on the airplane had accumulated 22,484 total flight cycles. Investigation revealed that the cause of this failure was attributed to a

large fatigue crack that had propagated across the bottom of the MLG shock strut piston. The crack initiated near the jackball, which is located on the bottom of the MLG shock strut piston and is used by operators to jack up the airplane. This condition, if not corrected, could result in failure of the MLG shock strut piston, and consequent damage to the airplane structure or injury to the passengers and flightcrew.

The subject area on certain McDonnell Douglas Model MD-88 airplanes and Model MD-90-30 airplanes is identical to that of the affected Model DC-9-80 series airplanes. Therefore, all of these airplanes may be subject to the same unsafe condition.

Explanation of Relevant Service Information

The FAA has reviewed and approved McDonnell Douglas Alert Service Bulletins MD80-32A308, dated March 5, 1998, and MD80-32A308, Revision 01, dated May 12, 1998 [for Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes]; and MD90-32A030, dated March 26, 1998, and MD90-32A030, Revision 01, dated May 11, 1998 (for Model MD-90-30 airplanes). These alert service bulletins describe procedures for repetitive fluorescent dye penetrant and fluorescent magnetic particle inspections to detect cracking of the MLG shock strut piston, and replacement of any cracked piston with a new or serviceable part.

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 specified in the alert service bulletins described previously.

Interim Action

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will positively address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

Cost Impact

There are approximately 1,250 airplanes of the affected design in the worldwide fleet. The FAA estimates that 828 airplanes of U.S. registry would be affected by this proposed AD, that it

would take approximately 4 work hours per airplane to accomplish the proposed inspection, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the inspection proposed by this AD on U.S. operators is estimated to be \$198,720, or \$240 per airplane, per inspection cycle.

The cost impact figures discussed above are 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 AD were not adopted.

Should an operator be required to accomplish the proposed replacement of an MLG shock strut piston, it would take approximately 16 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts would cost approximately \$107,070 per airplane. Based on these figures, the cost impact of the replacement proposed by this AD on U.S. operators is estimated to be \$108,030 per airplane.

Regulatory Impact

The regulations proposed herein would not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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.

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:

McDonnell Douglas: Docket 98-NM-109-AD.

Applicability: Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes, as listed in McDonnell Douglas Alert Service Bulletin MD80-32A308, Revision 01, dated May 12, 1998; and Model MD-90-30 airplanes, as listed in McDonnell Douglas Alert Service Bulletin MD90-32A030, Revision 01, dated May 11, 1998; 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 (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 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 detect and correct fatigue cracking of the main landing gear (MLG) shock strut pistons, which could result in failure of the piston, and consequent damage to the airplane structure or injury to the passengers and flightcrew, accomplish the following:

(a) Perform fluorescent dye penetrant and fluorescent magnetic particle inspections to detect cracking of an MLG shock strut piston, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or MD80-32A308, Revision 01, dated May 12, 1998 [for Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes]; or MD90-32A030, dated March 26, 1998, or MD90-32A030, Revision 01, dated May 11, 1998 (for Model MD-90-30 airplanes); as applicable. Perform the inspections at the later of the times specified in paragraphs (a)(1) and (a)(2) of this AD.

(1) Prior to the accumulation of 10,000 total landings on an MLG shock strut piston, or within 6 months after the effective date of this AD, whichever occurs later.

(2) Within 2,500 landings after a major overhaul and initial inspection of the MLG shock strut piston accomplished prior to the effective date of this AD, in accordance with McDonnell Douglas All Operator Letter 9-2153 [for Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes], or McDonnell Douglas Component Maintenance Manual, Chapter 32-17-01 (for Model MD-90-30 airplanes).

(b) Condition 1. If any cracking is detected, prior to further flight, replace any cracked MLG shock strut piston with a new or serviceable piston, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or MD80-32A308, Revision 01, dated May 12, 1998 [for Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes]; or MD90-32A030, dated March 26, 1998, or MD90-32A030, Revision 01, dated May 11, 1998 (for Model MD-90-30 airplanes); as applicable. Repeat the fluorescent dye penetrant and fluorescent magnetic particle inspections thereafter at intervals not to exceed 2,500 landings.

(c) Condition 2. If no cracking is detected, repeat the fluorescent dye penetrant and fluorescent magnetic particle inspections thereafter at intervals not to exceed 2,500 landings, in accordance with McDonnell Douglas Alert Service Bulletin MD80-32A308, dated March 5, 1998, or MD80-32A308, Revision 01, dated May 12, 1998 [for Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes, and Model MD-88 airplanes]; or MD90-32A030, dated March 26, 1998, or MD90-32A030, Revision 01, dated May 11, 1998 (for Model MD-90-30 airplanes); as applicable.

(d) As of the effective date of this AD, no person shall install on any airplane a replacement MLG shock strut piston, part number 5935347-509, -511, or -513, or an MLG assembly from an operator's spares inventory, unless those components have been inspected in accordance with the requirements specified by paragraph (a) of this AD.

(e) 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, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

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

(f) 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 September 1, 1998.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 98-24063 Filed 9-4-98; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97-NM-129-AD]

RIN 2120-AA64

Airworthiness Directives; British Aerospace Model BAe 146 and Model Avro 146-RJ 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 British Aerospace Model BAe 146 and Model Avro 146-RJ series airplanes. This proposal would require a one-time measurement to determine the thickness of the outer links of the side stays of the main landing gear (MLG), and corrective actions, if necessary. This proposal also would provide for replacement of a thin outer link with a new or serviceable part in lieu of certain follow-on inspections. This proposal is prompted by issuance of mandatory continuing airworthiness information by a foreign civil airworthiness authority. The actions specified by the proposed AD are intended to prevent cracking of the outer links of the side stays of the MLG, which could result in increased braking distance during landing, and consequent runway overrun.

DATES: Comments must be received by October 8, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 97-NM-129-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.

The service information referenced in the proposed rule may be obtained from AI(R) American Support, Inc., 13850 Mclearen Road, Herndon, Virginia 20171. This information may be

examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

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 notice may be changed in light of the comments received.

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.

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Discussion

The Civil Aviation Authority (CAA), which is the airworthiness authority for the United Kingdom, notified the FAA that an unsafe condition may exist on certain British Aerospace Model BAe 146 and Model Avro 146-RJ series airplanes. The CAA advises that it has received a report of cracking on the shoulder of two outer links of a side stay of the main landing gear (MLG). Investigation has revealed that the

insufficient thickness of the outer links on certain Model BAe 146 and Model Avro 146-RJ series airplanes causes them to be susceptible to this type of cracking. In addition, this cracking may have been aggravated by insufficient greasing of the spherical bearing, which could result in increased stress on the side stay when the gear is in transit. Such cracking, if not corrected, could result in increased braking distance during landing, and consequent runway overrun.

Explanation of Relevant Service Information

The manufacturer has issued British Aerospace Service Bulletin SB.32-144, dated December 11, 1996, which describes procedures for a one-time measurement to determine the thickness of the outer links of the side stays of the MLG. The measurement involves placing a profile gauge over the thinnest section of the outer link profile. For outer links on which a profile gauge slips over the profile, the service bulletin also describes procedures for follow-on repetitive detailed visual inspections to detect cracking of the outer links, and replacement of any cracked outer link with a new or serviceable part.

The British Aerospace service bulletin references Messier-Dowty Service Bulletin 146-32-128, dated December 6, 1996, as an additional source of service information for accomplishment of the measurement.

Accomplishment of the actions specified in the service bulletins is intended to adequately address the identified unsafe condition. The CAA approved Messier-Dowty Service Bulletin 146-32-128, dated December 6, 1996; classified British Aerospace Service Bulletin SB.32-144, dated December 11, 1996, as mandatory; and issued British airworthiness directive 005-12-96 in order to assure the continued airworthiness of these airplanes in the United Kingdom.

FAA's Conclusions

These airplane models are manufactured in the United Kingdom and are type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the CAA has kept the FAA informed of the situation described above. The FAA has examined the findings of the CAA, reviewed all available information, and determined that AD action is necessary for products of this type design that are