

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 2001-NM-362-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. 2001-NM-362-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

The FAA has received several reports of failure of the auxiliary hydraulic pump systems on Model DC-10 airplanes. Some failures resulted in burnt electrical wiring leading to the electric motor of the auxiliary hydraulic pump, within the right wheel well area of the main landing gear (MLG). Damage also was found on the adjacent structure, control cables, hydraulic pipes, and hoses. These failures occurred during ground operations, or when powered in-flight by the air-driven generator. The failures were due to an electrical short within the electric motor which resulted in arcing damage. These failures consisted of a seized or difficult-to-turn rotor on the pump assembly, burnt and shorted motor feeder cables, and/or uncontained internal electric arcing failures within the electric motor. Investigation revealed that these conditions occurred

on airplanes that had been in service several years and/or had the auxiliary hydraulic pump previously overhauled. These discrepancies can be caused by hydraulic fluid contamination to the electric motor portion of the pump assembly which causes failed rotor bearing, and/or degradation of the stator's encapsulate material. Such discrepancies, if not corrected, could result in fire at the auxiliary hydraulic pump and consequent damage to the adjacent electrical equipment and/or structure.

Explanation of Relevant Service Information

We have reviewed and approved Boeing Alert Service Bulletin DC10-29A144, Revision 2, dated August 1, 2003 (for Model DC-10-10, DC-10-10F, DC-10-15, DC-10-30, DC-10-30F (KC-10A and KDC-10), DC-10-40, DC-10-40F, MD-10-10F, and MD-10-30F airplanes), which describes procedures for modification of the electrical wiring of the auxiliary hydraulic pump installation in the right wheel well area of the MLG. The modification includes, but is not limited to, removing existing clamps, ground wires (if required), and sleeving from the wire assemblies; inspecting for cracks and chafing; installing new support brackets, clips, and bracket assemblies, as applicable; installing sleeving; re-routing the wire assemblies using new clamps and attachments, installing an additional routing clip on the lower bracket of the fuel motor control valve, if applicable, and doing a voltage check and a functional test.

Service Bulletin DC10-29A144 recommends prior or concurrent accomplishment of Boeing Alert Service Bulletin DC10-29A142, Revision 02, dated April 17, 2003, which describes procedures for repetitive inspections (checks) of the number 1 and 2 electric motors of the auxiliary hydraulic pumps for electrical resistance, continuity, mechanical rotation, and associated airplane wiring resistance/voltage, and corrective actions if necessary. The corrective actions include replacing the auxiliary hydraulic pump with a serviceable pump, and repairing the wiring.

We also have reviewed and approved Boeing Alert Service Bulletin MD11-29A059, Revision 2, dated August 1, 2003 (for Model MD-11 and MD-11F airplanes), which describes procedures for modification of the wiring of the electric motors of the auxiliary hydraulic pump in the right wheel well area of the MLG. The modification includes, but is not limited to, removing and retaining wire assembly clamps, if

applicable; retaining the existing ground wire assemblies; retaining or replacing all other wire assemblies for both connectors; installing spiral wrap and sleeving; wrapping upper ends of individual wires with tape; installing new support bracket assemblies, if applicable; re-routing and attaching wire assemblies using new clamps and attachments, if applicable; and doing a voltage check and a functional test.

Service Bulletin MD11-29A059 recommends prior or concurrent accomplishment of Boeing Alert Service Bulletin MD11-29A057, Revision 02, dated April 17, 2003, which describes procedures for repetitive inspections (checks) of the number 1 and 2 electric motors of the auxiliary hydraulic pumps for electrical resistance, continuity, mechanical rotation, associated airplane wiring resistance/voltage, and corrective actions if necessary. The corrective actions include replacing the auxiliary hydraulic pump with a serviceable pump and repairing the wiring.

Accomplishment of the actions specified in the service bulletins is intended to adequately address the identified unsafe condition.

Related Rulemaking

On July 2, 2001, we issued AD 2001-14-08, amendment 39-12319 (66 FR 36441, July 12, 2001), for certain McDonnell Douglas Model DC-10 series airplanes, Model MD-10 series airplanes, and Model MD-11 series airplanes. That AD requires repetitive inspections of the number 1 and 2 electric motors of the auxiliary hydraulic pump for electrical resistance, continuity, mechanical rotation, and associated wiring resistance/voltage; and corrective actions if necessary. The actions specified by that AD are intended to prevent various failures of electric motors of the auxiliary hydraulic pump and associated wiring, which could result in fire at the auxiliary hydraulic pump and consequent damage to the adjacent electrical equipment and/or structure. That AD is being superseded by a separate action to reduce the repetitive inspection intervals currently required.

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 service bulletins described previously, except that the proposed AD does not require completing the Evaluation Forms.