

certain modified or repaired areas only. This action is necessary to find and fix fatigue cracking of the skin panels, which could result in sudden fracture and failure of the skin panels of the fuselage, and consequent rapid decompression of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Comments must be received by August 4, 2003.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2001-NM-246-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 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](mailto:9-anm-nprmcomment@faa.gov). Comments sent via fax or the Internet must contain "Docket No. 2001-NM-246-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 Boeing Commercial Airplane Group, PO Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

**FOR FURTHER INFORMATION CONTACT:** Duong Tran, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6452; fax (425) 917-6590.

#### **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 2001-NM-246-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-246-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

##### **Discussion**

The FAA has received reports indicating that cracks were found along the edges of the chem-milled pockets in the upper skin at stringer S-12, and above the S-4, S-10, and S-14 lap joints, on several Boeing Model 737 series airplanes. The cracks were up to 6 inches long and multiple adjacent bays were found to be cracked along the same stringers on three of the airplanes. The airplanes had accumulated between 34,574 and 56,949 total flight cycles. Additionally, skin cracks up to 4 inches long located below the S-14 lap joint along the bonded skin doublers were reported on 25 other airplanes which had accumulated between 22,786 and 80,113 total flight cycles.

Analysis by the manufacturer revealed that these cracks are caused by fatigue due to high bending stresses at the edge of chem-milled pockets or bonded skin doublers. Such fatigue cracking could result in sudden fracture and failure of the skin panels of the fuselage, and consequent rapid decompression of the airplane.

##### **Related Rulemaking**

This proposed AD is related to AD 2002-07-08, amendment 39-12702 (67 FR 17917, April 12, 2002). That AD references Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001, as the appropriate source of service information for accomplishment of the specified actions. (The AD also referenced, for accomplishment of certain actions, Boeing Alert Service Bulletin 737-53A1177, Revision 1, dated September 19, 1996; Revision 2, dated July 24, 1997; Revision 3, dated September 18, 1997; Revision 4, dated September 2, 1999; and Revision 5, dated February 15, 2001.) That AD is applicable to certain Boeing Model 737 series airplanes and requires repetitive inspections to find cracking of the lower skin at the lower row of fasteners in the lap joints of the fuselage, and repair of any cracking found. That AD also requires modification of the fuselage lap joints at certain locations, which constitutes terminating action for repetitive inspections of the modified areas. Additionally, that AD requires replacement of a preventive modification with an improved modification.

##### **Explanation of Relevant Service Information**

We have reviewed and approved Boeing Alert Service Bulletin 737-53A1210, Revision 1, including Appendix A and Evaluation Form, dated October 25, 2001. The service bulletin describes procedures for repetitive external detailed and eddy current inspections to find fatigue cracking of the upper and lower skin panels of the fuselage (crown area and lower lobe area) at stringer S-12, and above the S-4, S-10, and S-14 lap joints, and repair of any cracking with either a permanent or time-limited repair.

For airplanes on which a time-limited repair is done, Part 4 of the service bulletin describes procedures for a subsequent permanent repair within 10,000 flight cycles after installation of the time-limited repair. Doing a permanent repair eliminates the need for the repetitive inspections for the repaired area only.

For Group 3, 5, 6, and 8 airplanes only, on which no cracking is found, Part 5 of the service bulletin provides procedures for a preventive modification of the chem-milled pockets in the upper skins at stringer S-12, between body station (BS) 500D and BS 520, which would end the repetitive inspections for the modified area only.