

# 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 ENERGY

### Office of Energy Efficiency and Renewable Energy

#### 10 CFR Part 430

[Docket No. EE-RM-97-900]

#### Water Heating Standards: Design Options

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy (DOE).

**ACTION:** Notice of availability.

**SUMMARY:** The Department of Energy (the Department or DOE) today gives notice that copies of the "Technology Assessment and Screening Analysis," Appendix B Supplement to the Water Heater Rulemaking Framework, is available for review and comment.

**DATES:** Written comments in response to this notice must be received by March 2, 1998.

**ADDRESSES:** Copies of the report may be obtained from Sandy Beall at: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, EE-43, 1000 Independence Avenue, SW, Washington, DC 20585-0121, (202) 586-7574. This document may be read at the DOE Freedom of Information Public Reading Room, U.S. DOE, Room 1E-90, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586-3142, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday, except Federal holidays.

Written comments are welcomed. Please submit 10 copies to: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, "Water Heater Docket No. EE-RM-97-900," EE-43, Room 1J-018, 1000 Independence Avenue, SW, Washington, DC 20585-0121.

**FOR FURTHER INFORMATION CONTACT:** Mr. Terrence Logee, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Mail Station EE-43, 1000 Independence Avenue, SW, Washington, DC 20585-0121, Phone:

(202) 586-1689, Fax: (202) 586-4617, or Ms. Sandy Beall, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Mail Station EE-43, 1000 Independence Avenue, SW, Washington, DC 20585-0121, Phone: (202) 586-7574.

**SUPPLEMENTARY INFORMATION:** The Department of Energy has initiated an extensive standards rulemaking process improvement effort to expedite and improve the procedures for developing appliance efficiency standards. This effort includes priority setting for various products, and the Department has determined that water heater standards rulemaking be assigned a "High Priority." The new process is described in the July 15, 1996, **Federal Register**, and includes a planning and prioritization process, data collection and analysis procedures, and decision-making criteria. (61 FR 36973).

The following report is available for review and comment: "Technology Assessment and Screening Analysis," Appendix B Supplement to the Water Heater Rulemaking Framework. This report discusses various design options for improving the energy efficiency and/or reducing the standby losses of gas-fired, oil-fired, and electric storage-type water heaters, and addresses Section 2.3 of the Water Heater Rulemaking Framework document (dated June 11, 1997) that was distributed at the Water Heater Standards Rulemaking Workshop held in Washington, DC, on June 24, 1997. Based on written comments and discussions at the workshop, the design options have been screened and pared down to a list of options that will be used by the Department for the engineering analysis. Eight design options are being considered for engineering analysis because they are currently being applied to commercial or residential water heaters and pass all of the screening criteria. The design options are: Heat Traps, Plastic Tanks, Increased Jacket Insulation, Improved Flue Baffles/Forced Draft, Increased Heat Exchanger Surface Area, Flue Damper (Electromechanical), Side-Arm Heater, and Electronic (or Interrupted) Ignition. The Air-Atomized Burner (Oil-Fired Only) design option is being considered because prototype units are available and field tests are planned in the near future.

The Department will use the information in this report and the

written comments it receives to guide its approach to development of new efficiency standards for water heaters. The next step in the development of new efficiency standards for water heaters is a preliminary engineering and life-cycle cost analysis.

A copy of the above-mentioned document, comments received, and this notice are available at the DOE Freedom of Information Public Reading Room.

Issued in Washington, DC, on January 8, 1998.

**Dan W. Reicher,**

*Assistant Secretary for Energy Efficiency and Renewable Energy.*

[FR Doc. 98-888 Filed 1-13-98; 8:45 am]

BILLING CODE 6450-01-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. NM145; Notice No. 25-98-01-SC]

#### Special Conditions: Lockheed-Martin Model 382J, Automatic Thrust Control System

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed special conditions.

**SUMMARY:** This notice proposes special conditions for the Lockheed-Martin Model 382J airplane. This airplane will have a novel or unusual design feature associated with an automatic thrust control system. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

**DATES:** Comments must be received on or before March 2, 1998.

**ADDRESSES:** Comments on this proposal may be mailed in duplicate to: Federal Aviation Administration, Office of the Assistant Chief Counsel, Attention: Rules Docket (ANN-7), Docket No. NM145, 1601 Lind Avenue SW, Renton, Washington 98055-4056; or delivered in duplicate to the Office of the Assistant

Chief Counsel at the above address. Comments must be marked: Docket No. NM145. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

**FOR FURTHER INFORMATION CONTACT:**

Connie Beane, FAA, Standardization Branch, ANM-113, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW, Renton, Washington 98055-4056; telephone (425) 227-2796.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

Interested persons are invited to participate in the making of these proposed special conditions by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator. The proposals described in this notice may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NM145." The postcard will be date stamped and returned to the commenter.

**Background**

On August 28, 1992, Lockheed-Martin applied for an amendment to Type Certificate No. A150 to include the new Model 382J. The Model 382J, which is a derivative of the Model 382G currently approved under Type Certificate No. A150, is a high wing/low tail configured four-engine turboprop airplane derived from the Lockheed C-130 Hercules military transport. The Model 382J incorporates a new Full Authority Digital Engine Controlled (FADEC), Allison engines with six blade composite propellers, a modernized cockpit including Electronic Flight Instrument Systems (EFIS), Engine Indication and Crew Alerting Systems (EICAS), and a Head Up Display (HUD) of primary flight information.

The increased thrust provided by the new engine/propeller installation would result in the Model 382J being limited by ground minimum control speed ( $V_{MCG}$ ) over a large part of the proposed takeoff operating envelope, which in turn would result in unbalanced takeoff field lengths that Lockheed-Martin finds unacceptable. In order to remedy this situation, Lockheed-Martin has developed an electronically controlled system that will monitor engine and propeller performance, and in the event of a failure of an outboard propulsion unit, will reduce the power setting on the functioning outboard engine to a level that permits compliance with the requirements of § 25.149(e); the operation of this system will thus optimize takeoff field lengths for the Model 382J.

**Type Certification Basis**

Under the provisions of § 21.101, Lockheed-Martin must show that the Model 382J meets the applicable provisions of the regulations incorporated by reference in Type Certificate No. A150 or the applicable regulations in effect on the date of application for the change to the Model 382J. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis." The regulations incorporated by reference in Type Certificate No. A150 are as follows:

The certification basis for the present Model 382 series airplanes is Civil Aviation Regulations (CAR) 9a, which references CAR 4b, effective December 31, 1953, including Amendments 4b-1 through 4b-11, SR422B, SR450A, and Amendment 4b-12 as related to CAR 4b.307(a).

The applicable certification basis for the Model 382J is part 25 of the Federal Aviation Regulations (FAR) through Amendment 25-80 for all new or significantly modified portions of the Model 382J (as compared to the present Model 382) and for unmodified portions of the airplane, the applicable certification standard will be the rules that were effective on February 1, 1965 (part 25, Amendment 25-0). In addition, the certification basis includes certain special conditions that are not relevant to these proposed special conditions.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25 as amended) do not contain adequate or appropriate safety standards for the Model 382J because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special

conditions, the Model 382J must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36.

Special conditions, as appropriate, are issued in accordance with § 11.49 after public notice, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.101(b)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, or should any other model already included on the same type certificate be modified to incorporate the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

**Novel or Unusual Design Features**

The Model 382J will incorporate the following novel or unusual design features:

The Lockheed Model 382J has an Automatic Control System which will, in the event of engine failure on the outboard engine, automatically feather the propeller on the engine and will automatically modulate the output torque on the opposite engine to reduce asymmetric thrust. This system is intended to allow the Model 382J to operate to takeoff decision speeds that result in balanced field lengths, when the decision speed would otherwise be constrained by ground minimum control speed ( $V_{MCG}$ ).

The system is resident in each of the two outboard mission computers, which will limit the differential torque between the two outboard engines by sending torque limit commands to each of the two Full Authority Digital Engine Controls on each engine. The differential torque limit is a function of ambient condition and airspeed, so that in the event of engine failure during takeoff the functional outboard engine will have its output torque momentarily reduced, and then gradually increased as the airplane continues to accelerate. At a certain point in the takeoff, the thrust is restored to its takeoff rated value. This torque differential limiting acts in a similar fashion if the power is manually reduced by retarding the power lever while the airplane is operating in the envelope of atmospheric conditions and airspeeds where the ATCS is designed to function.

## Applicability

As discussed above, these special conditions are applicable to the Model 382J. Should Lockheed-Martin apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well under the provision of § 25.101(a)(1).

## Conclusion

This action affects only certain novel or unusual design features on one model of airplanes. It is not a rule of general applicability, and it affects only the applicant who applied to the FAA for approval of these features on the airplane.

## List of Subjects in 14 CFR Part 25

Air transportation, Aircraft safety, safety.

The authority citation for these special conditions is as follows:

**Authority:** 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

## The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for the Lockheed-Martin Model 382J airplane.

1. The ATCS shall be designed so that the combined probability of engine failure and ATCS failure is extremely improbable (on the order of  $1 \times 10^{-9}$  per flight hour). Inadvertent operation of the ATCS shall be improbable (on the order of  $1 \times 10^{-5}$  per flight hour). These requirements may drive the necessity for automatic fault detection and annunciation and/or periodic functional checks. For the purposes of this requirement, the ATCS is intended to include but is not limited to, all engine failure detection means, all sensor inputs used to compute thrust modulation requirements, all communication provisions between system components (Mil-Std-1553 bus, for example), and actuation mechanisms for the propeller feathering and outboard engine thrust control.

2. Flight deck annunciation of the armed state of the ATCS shall be provided. ATCS failed or not armed must be incorporated into the takeoff configuration warning system, or alternatively, a visual annunciation can be incorporated if the annunciation lies within the primary field of view of both pilots.

3. Provisions for flightcrew override of the ATCS must be provided. The provisions must be through power level actuation, or alternatively, through other

means provided the means (1) is located on or forward of the power levers, (2) is easily identified and operated under all operating conditions by either pilot with the hand that is normally used to actuate the power levers, and (3) meets the location, sense of motion, and accessibility requirements of § 25.777(a), (b), and (c).

4. The critical engine must be identified for the performance requirements of paragraphs 5 and 6 below, i.e., the performance must account for failure of a critical outboard engine with the ATCS (including autofeather) operating, or failure of the critical inboard engine to a feathered propeller condition, whichever is more adverse.

5. The performance must conservatively account for the failure of the critical engine at the critical point in the takeoff path. The effect of the ATCS thrust modulation on the gross and net takeoff paths must be modeled into the published performance data. The approved takeoff distance established in accordance with § 25.113 must account for the adverse effect of ATCS on thrust-to-weight ratio.

6. The one-engine-inoperative climb gradient requirements of § 25.121 must be met at the critical power operating condition for each climb segment. The most critical adverse effect of the ATCS on the thrust-to-weight ratio must be accounted for in establishing the climb limited weights for all ambient conditions within the approved envelope.

7. The determination of minimum control speeds must account for the critical failure mode (ATCS controlled outboard engine failure versus feathered propeller inboard engine failure) for directional controllability.

8. Any reduced takeoff power procedures must be shown compatible with operation of the ATCS and must not result in any reduction in the level of safety established for operation of the airplane with normal takeoff power settings and ATCS operating.

9. The ATCS must clearly indicate to the crew when it has been activated, and indicate that the output torque from the modulated engine is being adequately controlled by the ATCS.

Issued in Renton, Washington, on January 2, 1998.

**Darrell M. Pederson,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-100.*

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BILLING CODE 4910-13-P

## COMMODITY FUTURES TRADING COMMISSION

### 17 CFR Part 1

### Maintenance of Minimum Financial Requirements by Futures Commission Merchants and Introducing Brokers

**AGENCY:** Commodity Futures Trading Commission.

**ACTION:** Proposed rules.

**SUMMARY:** Rule 1.12<sup>1</sup> of the Commodity Futures Trading Commission ("Commission" or "CFTC") sets forth the early warning reporting requirements for futures commission merchants ("FCMs") and introducing brokers ("IBs"). These requirements are designed to afford the Commission and industry self-regulatory organizations ("SROs") sufficient advance notice of a firm's financial or operational problems to take any protective or remedial action that may be needed to assure the safety of customer funds and the integrity of the marketplace. The Commission has determined to propose amendments to Rule 1.12, applicable to FCMs only, that will require immediate notification by an FCM to the Commission and its designated self-regulatory organization ("DSRO") if an FCM knows or should know that it is in an undersegregated or undersecured condition: i.e., the FCM has insufficient funds in accounts segregated for the benefit of customers trading on U.S. contract markets or has insufficient funds set aside for customers trading on non-U.S. markets to meet the FCM's obligations to its customers. The term "funds" in this context includes accrued amounts due to or from the FCM's clearing organizations and/or carrying brokers in connection with customer-related activities, typically, the daily or intraday variation settlement.

The Commission is also proposing to require immediate notification of certain events pertaining to undercapitalization or failure to satisfy margin calls, where notice is currently required within 24 hours. The Commission also proposes to codify a previous staff interpretation that permits notices to be filed by facsimile in addition to telegraphic means and to require immediate telephonic notice as well.

**DATES:** Comments must be received on or before March 16, 1998.

**ADDRESSES:** Comments on the proposed amendments should be sent to Jean A. Webb, Secretary of the Commission, Commodity Futures Trading

<sup>1</sup> Commission rules are found at 17 CFR Ch. I (1997).