Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) 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 final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends 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:

96–10–08 Boeing: Amendment 39–9613. Docket 95–NM–117–AD.

Applicability: Model 737–300, –400, and –500 series airplanes, as listed in Boeing Service Letter 737–SL–24–106, dated March 10, 1995; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise 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 (c) 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 short circuiting of a wire bundle located in the electrical/electronics (E/E) equipment bay, which could result in smoke and fire, accomplish the following:

(a) Within 15 months after the effective date of this AD, accomplish the requirements of paragraphs (a)(1), (a)(2), and (a)(3), of this AD in accordance with Boeing Service Letter 737–SL–24–106, dated March 10, 1995.

Note 2: Screws having part number (P/N) NAS1801-3-() and spacers having P/N NAS42DD-6-(), used to install the clamps as specified by this service letter, should be selected to provide a minimum of 0.25 inch clearance between wire bundles and surrounding structure and objects. Additionally, the spacers should have a part number having a chemical film finish code of "FC" or a gray anodize finish code of "N."

- (1) Perform a visual inspection to detect damage of the wire bundle and clamps in the E/E compartment. If any damage is detected, prior to further flight, repair in accordance with the service letter.
- (2) Reclamp wire bundle W2132 (or W0132) by removing the steel cushioned clamp and installing a nylon clamp on the aft side of the existing nut and bolt hole at body station (BS) 360, water line (WL) 203, left buttock line (LBL) 57, in accordance with the service letter.
- (3) Install additional clamps to wire bundles W2132 (or W0132) and power feeder wire bundle W0142, in accordance with the service letter.
- (b) Within 10 days after detecting any damage to the wire bundle or clamp as a result of the inspection required by paragraph (a) of this AD, submit a report of the damage findings to the FAA, Transport Airplane Directorate, Seattle Manufacturing Inspection District Office (MIDO), Attention: George Carter, 1601 Lind Avenue SW. Renton, Washington 98055-4056; telephone (206) 237-6229; fax (206) 965-0264 Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.
- (c) 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, Seattle 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, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

- (d) 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.
- (e) The actions shall be done in accordance with Boeing Service Letter 737–SL–24–106, dated March 10, 1995, including Attachments I and II. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124–2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North

Capitol Street, NW., suite 700, Washington, DC

(f) This amendment becomes effective on June 13, 1996.

Issued in Renton, Washington, on May 6, 1996.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service. [FR Doc. 96–11824 Filed 5–13–96; 8:45 am] BILLING CODE 4910–13–U

14 CFR Part 25

[Docket No. NM-121, Special Conditions No. 25-ANM-113]

Special Conditions: Cessna Aircraft Model 750 Airplanes; Operation With Fly-by-Wire Rudder

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Cessna Aircraft Model 750 airplane. This airplane will have novel and unusual design features, relating to its electronic rudder flight control system, when compared to the state of technology envisioned in the airworthiness standards of part 25 of the Federal Aviation Regulations (FAR). These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that provided by the airworthiness standards of part 25.

EFFECTIVE DATE: May 1, 1996.

FOR FURTHER INFORMATION CONTACT: Mark I. Quam, FAA, Standardization Branch, ANM-113, Transport Standards Staff, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (206) 227-2145, facsimile (206) 227-1149.

SUPPLEMENTARY INFORMATION:

Background

On October 15, 1991, Cessna Aircraft Company (Cessna), 6030 Cessna Blvd., P.O. Box 7704, Wichita, KS 67277-7704, applied for a new type certificate in the transport airplane category for the Model 750 (Citation X) airplane. The Cessna 750 is a twin-engine, swept-wing business jet aircraft that is configured for approximately 8-12 passengers. The airplane has two Allison Engine Company AE 3007C turbofan engines rated at 6400 pounds of sea level, static takeoff thrust. The airplane has a maximum operating altitude of 51,000 feet and a range of approximately 3300 nautical miles.

The Cessna 750 has a yaw control system provided by a lower rudder and an upper rudder. Each rudder surface has an independent full-time control system, except that they share mechanical input at the rudder pedals. The lower surface is controlled by mechanical input to hydraulically-powered actuators. The upper surface is electronically controlled.

The lower rudder is positioned by two identical power control units (PCUs) installed one above the other, in parallel, in the vertical fin. The PCUs are each powered by an independent hydraulic system. Both the pilot and copilot rudder pedals are connected to the PCUs through conventional 1/8" diameter stainless steel cables, bellcranks, and PCU input bungees. Dual mechanical load paths are provided from the input sector to the PCUs to ensure that no single mechanical disconnect can result in loss of both rudder pedal and electric trim input to the PCUs. Rudder pedal travel of $\pm 1/2$ inches provides a maximum lower rudder deflection of +/-30degrees. The lower rudder system has dual rudder authority limiters designed to limit deflection, depending on the airplane's dynamic pressure. The purpose of the rudder limiter is to protect the airplane structure against overload. Both rudder authority limiters, each controlled by an independent rudder limit module, operate simultaneously so that a failure of one system will not allow the lower rudder to deflect to an unwanted position. Dual yaw damper actuators are linked in series to the lower rudder system to provide Dutch roll damping and turn coordination.

The upper rudder is driven electrically by the stand-alone yaw stability augmentation systems (YSAS) which consist of two identical systems. Each YSAS consists of a yaw stability augmentation computer (YSAC), two dual rotary variable transformer (RVT) sensors, and a servo motor which is a part of an electromechanical actuator (EMA). Either one of two YSASs continuously provides Dutch roll damping of the airplane, as well as tracking of the upper rudder to the mechanical command from the rudder pedals through electronic sensing of the rudder pedal torque tube position in the cockpit. The maximum upper rudder deflection is +/-18 degrees. Upper surface position limiting is accomplished by electrical and mechanical stops at the surface.

In normal conditions, the manual yaw command from either the pilot or copilot rudder pedals is transmitted through the cable system and the PCU

input bungees to the rudder PCUs. The PCUs then drive the lower rudder surface in proportion to the input command. At the same time, the rudder pedal command is electrically sensed at the rudder pedal torque tube and transmitted to the active YSAS for tracking the upper rudder. The position of each rudder surface may be displayed to the pilot along with the authority limiter position. In normal operation, both the lower and upper rudder systems provide yaw damper function at the same time. If the yaw damper function on either rudder system completely fails, the other system will provide adequate control to maintain the yaw stability of the airplane.

Type Certification Basis

Under the provisions of § 21.17 of the FAR, Cessna must show, except as provided in § 25.2, that the Model 750 (Citation X) meets the applicable provisions of part 25, effective February 1, 1965, as amended by Amendments 25-1 through 25-74. In addition, the certification basis for the Model 750 includes § 25.1316, System lightning protection, as amended by Amendment 25–80; part 34, effective September 10, 1990, plus any amendments in effect at the time of certification; and part 36, effective December 1, 1969, as amended by Amendment 36-1 through the amendment in effect at the time of certification. These special conditions form an additional part of the type certification basis. The certification basis also includes Special Conditions No. 25-ANM-99, dated 5/8/95, pertaining to protection from High Intensity radiated fields, and may include other special conditions that are not relevant to these 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 Cessna Model 750 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16 to establish a level of safety equivalent to that established in the regulations.

Special conditions, as appropriate, are issued in accordance with § 11.49 of the FAR after public notice, as required by §§ 11.28 and 11.29, and become part of the type certification basis in accordance with § 21.17(a)(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, the special condition

would also apply to the other model under the provisions of § 21.101(a)(1).

Discussion

The type design of the Cessna 750 contains novel or unusual design features not envisioned by the applicable part 25 airworthiness standards and therefore special conditions are considered necessary in the following areas:

1. Upper Rudder Control System Operation Without Normal Electrical *Power.* The Cessna Model 750 upper rudder control system is required in order to maintain safe flight. The Cessna design has four yaw dampers, including lower rudder dual yaw dampers that are hydraulically powered, and an upper rudder with dual YSASs that are electrically powered. If all hydraulic power is lost to the lower rudder (manual revision), then availability of the upper rudder yaw damper function becomes critical. Section 25.1351(d) of the FAR, Operation without normal electrical power, requires safe operation in VFR conditions for at least five minutes with inoperative normal power. This rule was structured around a traditional design utilizing mechanical control cables for flight control, while the crew took time to sort out the electrical failure, start engine(s) if necessary, and re-establish some of the electrical power generation capability.

Service experience with traditional two-engine airplane designs has shown that the loss of electrical power generated by the airplane's engines is not extremely improbable. The electrical power system of the Cessna 750 must therefore be designed with standby or emergency electrical sources of sufficient reliability and capacity to power the upper rudder control system in the event of the loss of normally generated electrical power. The need for electrical power for the Cessna Model 750 upper rudder control system was not envisioned by part 25 since, in traditional designs, cables and hydraulics are utilized for the flight control system. Therefore, Special Condition No. 1 is needed.

2. Design Maneuver Requirements. In a conventional airplane, pilot inputs directly affect control surface movement (both rate and displacement) for a given flight condition. In the Cessna Model 750, the pilot provides only a portion of the input to the upper rudder control surface, and it is possible that the pilot control displacements specified in § 25.351 of the FAR may not result in the maximum displacement and rates of displacement of the upper rudder. The intent of these noted rules may not be

satisfied if literally applied. Therefore, Special Condition No. 2 is needed.

3. Interaction of Systems and Structures. The Cessna Model 750 has a full-time electronic upper rudder flight control system affecting the yaw axis. The current rules are inadequate for considering the affects of this system, and its failures, on structural performance. Therefore, Special Condition No. 3 is needed.

As discussed above, these special conditions are applicable initially to the Cessna Model 750 (Citation X) airplane. Should Cessna 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 provisions of § 21.101(a)(1).

Discussion of Comments

Notice of proposed special conditions No. SC-96-1-NM was published in the Federal Register on March 22, 1996 (61 FR 11779). No comments were received.

Under standard practice, the effective date of final special conditions would be 30 days after the date of publication in the Federal Register. However, as the certification date for the Cessna Aircraft Model 750 airplane is imminent, the FAA finds that good cause exists for making these special conditions effective upon issuance.

Conclusion

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

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for part 25 continues to read as follows:

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

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for the Cessna Aircraft Model 750 airplanes.

1. Upper Rudder Control System Operations Without Normal Electrical Power. In lieu of compliance with § 25.1351(d), it must be demonstrated, by test or combination of test and analysis, that the upper rudder control system provides for safe flight and landing with inoperative normal engine

electrical power (electrical power sources excluding the battery and any other standby electrical sources). The airplane operation should be considered at the critical phase of flight and include the ability to restart the engines and maintain flight for a minimum of 30 minutes in Instrument Meteorological Conditions (IMC).

Discussion: The Cessna Model 750 fly-by-wire upper rudder control system requires a continuous source of electrical power in order to maintain yaw control. Section § 25.1351(d), Operation without normal electrical power, requires safe operation in visual flight rules (VFR) conditions for at least five minutes with inoperative normal power. This rule was structured around a traditional design utilizing mechanical control cables for flight control while the crew took time to sort out the electrical failure and was able to reestablish some of the electrical power generation capability. In order to maintain the same level of safety associated with traditional designs, the Cessna 750 upper rudder control system design shall be demonstrated to operate for at least 30 minutes without the normal source of engine-generated electrical power. It should be noted that service experience has shown that the loss of all electrical power that is generated by the airplane's engines is not extremely improbable.

The emergency electrical power system must be designed to supply the upper rudder control system without the need for crew action following the loss of the normal electrical power system.

For compliance purposes:

- 1. A test demonstration of the loss of normal engine-generated power is to be established such that:
- a. The failure condition should be assumed to occur during night instrument meteorological conditions (IMC), at the most critical phase of flight relative to the electrical power system design and distribution of equipment loads on the system.
- b. The upper rudder control system can provide for continued safe flight and landing using emergency electrical power (batteries, etc.) for at least 30 minutes of operation in IMC. An engine restart should be included in this demonstration.
- c. Availability of APU operation should not be considered in establishing emergency power system adequacy.
- 2. Since the availability of the emergency electrical power system operation is necessary for maintaining safe flight with the upper rudder, the emergency electrical power system must

be available immediately prior to each flight.

- 3. The emergency electrical power system must be shown to be satisfactorily operational in all flight regimes.
- 2. Design Yaw Maneuver Requirements.

In lieu of compliance with § 25.351 of the FAR, the airplane must be designed for loads resulting from the yaw maneuver conditions specified in subparagraphs (a) through (d) of this paragraph, at speeds from $V_{\rm MC}$ to $V_{\rm D}$. Unbalanced aerodynamic moments about the center of gravity must be reacted in a rational or conservative manner considering the airplane inertia forces. In computing the tail loads, the yawing velocity may be assumed to be zero.

- (a) With the airplane in unaccelerated flight at zero yaw, it is assumed that the cockpit rudder control is suddenly displaced to achieve the resulting rudder deflection, as limited by:
- (1) the control system or control surface stops; or
- (2) a limit force of 300 pounds from V_{MC} to V_A and 200 pounds from V_C/M_C to V_D/M_D , with a linear variation between V_A and V_C/M_C .
- (b) With the cockpit rudder control deflected so as always to maintain the maximum rudder deflection available within the limitations specified in subparagraph (a) of this paragraph, it is assumed that the airplane yaws to the overswing sideslip angle.
- (c) With the airplane yawed to the static equilibrium sideslip angle, it is assumed that the cockpit rudder control is held so as to achieve the maximum rudder deflection available within the limitations specified in subparagraph (a) of this paragraph.
- (d) With the airplane yawed to the static equilibrium sideslip angle of subparagraph (c) of this paragraph, it is assumed that the cockpit rudder control is suddenly returned to neutral.
- 3. Interaction of Systems and Structures.

Airplanes equipped with fly-by-wire control systems that affect structural performance, either directly or as a result of a failure or malfunction, must account for the influence of these systems and their failure conditions in showing compliance with the requirements of 14 CFR part 25, Subparts C and D.

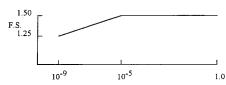
(a) General. The following criteria will be used in determining the influence of the upper rudder control systems and their failure conditions on the airplane structure. (b) System fully operative. With the system fully operative, the following

apply:

- (1) Limit loads must be derived in all normal operating configurations of the systems from all the limit conditions specified in 14 CFR part 25, Subpart C, taking into account any special behavior of such systems or associated functions or any effect on the structural performance of the airplane that may occur up to the limit loads. In particular, any significant nonlinearity (rate of displacement of control surface, thresholds, or any other system nonlinearities) must be accounted for in a realistic or conservative way when deriving limit loads from limit conditions.
- (2) The airplane must meet the strength requirements of 14 CFR part 25 (Static strength, residual strength), using the specified factors to derive ultimate loads from the limit loads defined above. The effect of non linearities must be investigated beyond limit conditions to ensure the behavior of the system present no anomaly compared to the behavior below limit conditions. However, conditions beyond limit conditions need not be considered when it can be shown that the airplane has design features that make it impossible to exceed those limit conditions.
- (3) The airplane must meet the aeroelastic stability requirements of § 25.629.
- (c) System in failure condition. For any failure condition in the system not shown to be extremely improbable, the following apply:
- (1) At the time of occurrence. Starting from 1-g level flight conditions, a realistic scenario, including pilot corrective actions, must be established to determine the loads occurring at the time of failure and immediately after failure. The airplane must be able to withstand these loads multiplied by an

appropriate factor of safety that is related to the probability of occurrence of the failure. The factor of safety (F.S.) is defined in Figure 1.

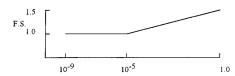
Figure 1 Factor of Safety at Time of Occurrence



- $\begin{array}{c} P_{j} \text{--Probability of occurrence of failure} \\ \text{mode } j \text{ (per hour)} \end{array}$
- (i) These loads must also be used in the damage tolerance evaluation required by § 25.571(b) if the failure condition is probable.
- (ii) Freedom from flutter, divergence, and control reversal must be shown up to the speeds defined in § 25.629(b)(2). For failure conditions which result in speed increases beyond $V_{\rm C}/M_{\rm C}$, freedom from flutter, divergence, and control reversal must be shown to increased speeds, so that the margins intended by § 25.629(b)(2) are maintained.
- (iii) Notwithstanding subparagraph (1) of this paragraph, failures of the system that result in forced structural vibrations (oscillatory failures) must not produce loads that could result in catastrophic fatigue failure or detrimental deformation of primary structure.
- (2) For the continuation of the flight. For the airplane in the system failed state, and considering any appropriate reconfiguration and flight limitations, the following apply:
- (i) Static and residual strength must be determined for loads derived from the following conditions at speeds up to V_C, or the speed limitation prescribed for the remainder of the flight:
- (A) The limit symmetrical maneuvering conditions specified in §§ 25.331 and 25.325.

- (B) The limit gust conditions specified in § 25.341 (but using the gust velocities for V_C) and in § 25.345.
- (C) The limit rolling conditions specified in § 25.349 and the limit unsymmetrical conditions specified in §§ 25.367 and 25.427(b) and (c).
- (D) The limit yaw maneuvering conditions specified in Special Condition No. 2.
- (E) The limit ground loading conditions specified in §§ 25.473 and 25.491.
- (ii) For static strength substantiation, each part of the structure must be able to withstand the loads specified in subparagraph (2)(i) of this paragraph, multiplied by a factor of safety depending on the probability of being in this failure state. The factor of safety is defined in Figure 2.

Figure 2
Factor of Safety for Continuation of Flight



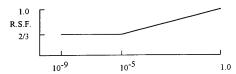
- Q_j —Probability of being in failure condition j
- $Q_i=(T_i)(P_i)$ where:
- T_j =Average time spent in failure condition j (in hours)
- $\label{eq:pj} \begin{array}{l} P_j \text{=} Probability of occurrence of failure} \\ mode j \text{ (per hour)} \end{array}$

Note: If P_j is greater than 10^{-3} per flight hour, then a 1.5 factor of safety must be applied to all limit load conditions specified in Subpart C.

(iii) For residual strength substantiation as defined in § 25.571(b), structures affected by failure of the system and with damage in combination with the system failure, a reduced factor may be applied to the loads specified in

subparagraph (2)(i) of this paragraph. However, the residual strength level must not be less than the 1-g flight load, combined with the loads introduced by the failure condition, plus two-thirds of the load increments of the conditions specified in subparagraph (2)(i) of this paragraph, applied in both positive and negative directions (if appropriate). The residual strength factor (R.S.F.) is defined in Figure 3.

Figure 3 Residual Strength Factor



Q_j—Probability of being in failure condition j

 $Q_j=(T_j)(P_j)$ where:

Graphing where.

T_j=Average time spent in failure condition j (in hours)

P_i=Probability of occurrence of failure

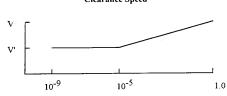
mode j (per hour)

Note: If P_j is greater than 10^{-3} per flight hour, then a residual strength factor of 1.0 must be used.

(iv) If the loads induced by the failure condition have a significant effect on fatigue or damage tolerance, then their effects must be taken into account.

(v) Freedom from flutter, divergence, and control reversal must be shown up to a speed determined from Figure 4. Flutter clearance speeds V' and V'' may be based on the speed limitation specified for the remainder of the flight, using the margins defined by § 25.629(b).

Figure 4
Clearance Speed



Q_j=Probability of being in failure condition _i

V'=Clearance speed as defined by § 25.629(b)(2).

V"=Clearance speed as defined by § 25.629(b)(1).

 $Q_i = (T_i)(P_i)$ where:

T_j=Average time spent in failure condition j (in hours)

P_j=Probability of occurrence of failure mode j (per hour)

Note: If P_j is greater than 10^{-3} per flight hour, then the flutter clearance speed must not be less than V''.

(vi) Freedom from flutter, divergence, and control reversal must also be shown up to V' in Figure 4 above, for any probable system failure condition combined with any damage required or selected for investigation by § 25.571(b).

(vii) If the mission analysis method is used to account for continuous turbulence, all the systems failure conditions associated with their probability must be accounted for in a rational or conservative manner in order to ensure that the probability of exceeding the limit load is not higher than the value prescribed in Appendix G of 14 CFR part 25.

(3) Consideration of certain failure conditions may be required by other sections of 14 CFR part 25, regardless of calculated system reliability. Where analysis shows the probability of these failure conditions to be less than 10^{-9} , criteria other than those specified in this paragraph may be used for structural substantiation to show continued safe flight and landing.

(d) Warning considerations. For upper rudder control system failure detection and warning, the following apply:

(1) The system must be checked for failure conditions, not extremely improbable, that degrade the structural capability below the level required by part 25 or significantly reduce the reliability of the remaining system. The crew must be made aware of these failures before flight. Certain elements

of the control system, such as mechanical and hydraulic components, may use special periodic inspections, and electronic components may use daily checks, in lieu of warning systems, to achieve the objective of this requirement. These certification maintenance requirements must be limited to components that are not readily detectable by normal warning systems and where service history shows that inspections will provide an adequate level of safety.

(2) The existence of any failure condition, not extremely improbable, during flight that could significantly affect the structural capability of the airplane, and for which the associated reduction in airworthiness can be minimized by suitable flight limitations, must be signaled to the flight crew. For example, failure conditions which result in a factor of safety between the airplane strength and the loads of 14 CFR part 25, Subpart C, below 1.25, or flutter margins below V", must be signaled to the crew during the flight.

(3) Dispatch with known failure conditions. If the airplane is to be dispatched in a known upper rudder control system failure condition that affects structural performance, or affects the reliability of the remaining system to maintain structural performance, then the provisions of this special condition must be met for the dispatched condition and for subsequent failures. Operational and flight limitations may be taken into account.

Issued in Renton, Washington, on May 1, 1996

Darrell M. Pederson,

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

[FR Doc. 96-2086 Filed 5-13-96; 8:45 am] BILLING CODE 4910-13-M