

credit union or the creditors of such credit union, or that is a fraudulent transfer under applicable law.

(f) The Board will not seek to avoid an otherwise legally enforceable securitization agreement or participation agreement executed by a federally-insured credit union solely because such agreement does not meet the "contemporaneous" requirement of sections 207(b)(9) and 208(a)(3) of the Federal Credit Union Act.

(g) This section may be repealed by the NCUA upon 30 days notice and opportunity for comment provided in the **Federal Register**, but any such repeal or amendment will not apply to any transfers of financial assets made in connection with a securitization or participation that was in effect before such repeal or modification. For purposes of this paragraph, a securitization would be in effect on the earliest date that the most senior level of beneficial interests is issued, and a participation would be in effect on the date that the parties executed the participation agreement.

4. Add § 709.11 to part 709 to read as follows:

§ 709.11 Treatment by conservator or liquidating agent of collateralized public funds.

An agreement to provide for the lawful collateralization of funds of a federal, state, or local governmental entity or of any depositor or member referred to in section 207(k)(2)(A) of the Act will not be deemed to be invalid under sections 207(b)(9) and 208(a)(3) of the Act solely because such agreement was not executed contemporaneously with the acquisition of collateral or with any changes, increases, or substitutions in the collateral made in accordance with such agreement, provided the following conditions are met:

(a) The agreement was undertaken in the ordinary course of business, not in contemplation of insolvency, and with no intent to hinder, delay or defraud the credit union or its creditors;

(b) The secured obligation represents a bona fide and arm's length transaction;

(c) The secured party or parties are not insiders or affiliates of the credit union;

(d) The grant or creation of the security interest was for adequate consideration; and,

(e) The security agreement evidencing the security interest is in writing, was approved by the credit union's board of directors, and has been continuously an official record of the credit union from the time of its execution.

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BILLING CODE 7535-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM174; Special Conditions No. 25-164-SC]

Special Conditions: Boeing Model 737-700 IGW; Interaction of Systems and Structures.

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Boeing 737-700IGW airplane as modified by Aviation Partners Supplemental Type Certificate (STC). The modified airplane will have a novel or unusual design feature involving installation of winglets on the wing tips of the airplane which require the use of an existing system to limit yawing maneuvers at higher speeds thereby reducing the design loads for the winglets. The applicable airworthiness regulations for the Boeing 737-700IGW do not contain adequate or appropriate safety standards for systems which alleviate loads on structures. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the applicable airworthiness standards.

DATES: The effective date of these special conditions is August 30, 2000. Comments must be received on or before October 30, 2000.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Aircraft Certification Service, Attention: Rules Docket (ANM-114), Docket No. NM174, 1601 Lind Avenue SW., Renton, Washington 98055-4056; or delivered in duplicate to the Transport Airplane Directorate at the above address. Comments must be marked: Docket No. NM174. 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: James Haynes, FAA, Transport Airplane Directorate, Aircraft Certification Service, Airframe/Cabin Safety Branch, ANM-115, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2131; facsimile (425) 227-1320.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and

opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the approval design and thus delivery of the affected aircraft. In addition, the substance of these special conditions has been subject to the public comment process in several prior instances with no substantive comments received. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

Interested persons are invited to submit 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 special conditions 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. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this request must include a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NM174." The postcard will be date stamped and returned to the commenter.

Background

On January 15, 1998, Aviation Partners applied for an STC to install winglets on the wingtips of the Boeing Model 737-700IGW airplane listed in Type Certificate No. A16WE. These winglets must be designed to aerodynamic loads associated with the yawing maneuver conditions of 14 CFR 25.351. Aviation Partners will make use of the load relief during yawing maneuvers provided by an existing system on the airplane that limits rudder authority thereby reducing the design loads for the winglets.

The Boeing Model 737-700IGW is an increased gross weight version of the Boeing Model 737-700 airplane commonly known as the Boeing Business Jet (BBJ). The Model 737-700IGW is a hybrid model which combines the Model 737-700 fuselage with the Model 737-800 wing and landing gear. The airplane is intended for private use such as the business or

VIP markets. The airplane uses a crew of two and the passenger capacity depends on the interior design which will vary by customer. Aviation Partners is further modifying the Boeing 737-700IGW by installing blended winglets to improve performance.

The Boeing 737-700IGW airplane, has an existing rudder pressure limiter (RPL) system that limits the rudder authority at high speeds when full authority is not needed. This system is part of the Boeing type design for all the 737NG (new generation) airplanes and is not changed by the Aviation Partners modifications, which mainly installs blended winglets. At low airspeeds where full rudder authority is needed to provide directional control with an engine failed, full hydraulic pressure is available to both actuator pistons within the main rudder power control unit (PCU). However, above 137 knots calibrated airspeed (KCAS), the RPL system reduces the rudder authority by limiting pressure to one of the systems that control the rudder. When functioning properly, this effectively reduces the design loads on the winglets when applying the yawing maneuvers prescribed by § 25.351. The existing rules adequately cover the design for the case with the RPL system functioning properly and the safety factor of 1.5 as prescribed by § 25.303, is applied to these design loads. However, when the system is failed, the airplane can be subjected to higher rudder displacements, greater yawing conditions, and larger loads on the winglets. Since the regulations do not provide specific safety factors to use for design in this system failure state, these special conditions are necessary.

The RPL system for the modified Boeing Model 737-700IGW airplane, although not specifically designed for this purpose, will alleviate the design loads for the winglets when it functions properly. Special conditions which provide factors of safety for system failure cases have been previously issued for many airplane models that have load alleviation systems (i.e. systems specifically designed to alleviate loads) and these same special conditions are issued for use on the Aviation Partners modified Boeing Model 737-700IGW airplane.

Type Certification Basis

Under the provisions of § 21.101, Aviation Partners must show that the Boeing Model 737-700IGW, as changed, continues to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A16WE, or the applicable regulations in effect on the date of

application for the change. 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. A16WE are as follows:

Part 25, as amended by Amendments 25-1 through 25-77. In addition, the certification basis includes certain special conditions unrelated to these special conditions, later elected amendments for certain sections, and reversion to earlier amendments for certain sections. Sections 25.351 "Yawing conditions" and 25.303 "Factor of safety," which are relevant to these special conditions, are elected at amendment level 25-86 and 25-77 respectively.

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 Boeing Model 737-700IGW 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.

In addition to the applicable airworthiness regulations and special conditions, the Boeing Model 737-700IGW 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; and the FAA must issue a finding of regulatory adequacy pursuant to § 611 of Public Law 92-574, the "Noise Control Act of 1972."

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

Novel or Unusual Design Features

The Boeing Model 737-700IGW as modified by Aviation Partners will incorporate the following novel or unusual design features:

Winglets will be installed on the wing tips which must be designed for the yaw maneuver conditions of § 25.351. Aviation Partners will take advantage of an existing rudder limiting system on the airplane that will limit the required design loads to reduced levels. The regulations do not provide adequate criteria governing the safety margins required for systems that affect design loads when they fail. Previously, special conditions have been issued for new model airplanes which have systems which are specifically designed for the purpose of alleviating design loads. In the case of the Aviation Partners winglet

installation, the existing rudder limiting system on the Boeing Model 737-700IGW was not specifically designed for the purpose of alleviating the design loads, but it will provide such relief and Aviation Partners will take advantage of it in the structural design of the winglets. These special conditions prescribe structural design factors of safety for the winglets to be applied to loads produced at the time of failure of the rudder limiting system and for loads occurring during continued operation with the system failed.

Conclusion

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

The substance of these special conditions has been subjected to the notice and comment period in several prior instances and has been derived without substantive change from those previously issued. It is unlikely that prior public comment would result in a significant change from the substance contained herein. For this reason, and because a delay would significantly affect the certification of the Aviation Partners modified Boeing Model 737-700IGW airplane, which is imminent, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions upon issuance. The FAA is requesting comments to allow interested persons to submit views that may not have been submitted in response to the prior opportunities for comment described above. Under standard practice, the effective date of final special conditions is 30 days after the date of publication in the **Federal Register**; however, because of the above reasons, the FAA finds that good cause exists to make these special conditions effective upon issuance.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation Safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is 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 Boeing Model

737-700IGW airplanes modified by Aviation Partners.

I. *Interaction of Systems and Structures.* The following criteria must be used for showing compliance for the Aviation Partners winglet modification to the Boeing Model 737-700IGW airplane. The criteria apply to the structural design of the winglets under the conditions of normal operation and failures of the rudder pressure limiter system that affects the yawing maneuver conditions.

(a) The criteria defined herein only address the direct structural consequences of the system responses and performances and cannot be considered in isolation but should be included in the overall safety evaluation of the airplane. These criteria may in some instances duplicate standards already established for this evaluation. Specific criteria that define acceptable limits on handling characteristics or stability requirements when operating in the system degraded or inoperative mode are not provided in this special condition.

(b) Depending upon the specific characteristics of the airplane, additional studies may be required that go beyond the criteria provided in this special condition in order to demonstrate the capability of the airplane to meet other realistic conditions such as alternative gust or maneuver descriptions for an airplane equipped with a load alleviation system.

(c) The following definitions are applicable to this special condition.

Structural performance: Capability of the airplane to meet the structural requirements of part 25. Flight

limitations: Limitations that can be applied to the airplane flight conditions following an in-flight occurrence and that are included in the flight manual (e.g., speed limitations, avoidance of severe weather conditions, etc.).

Operational limitations: Limitations, including flight limitations, that can be applied to the airplane operating conditions before dispatch (e.g., fuel, payload and Master Minimum Equipment List limitations).

Probabilistic terms: The probabilistic terms (probable, improbable, extremely improbable) used in this special condition are the same as those used in § 25.1309.

Failure condition: The term failure condition is the same as that used in § 25.1309, however this special condition applies only to system failure conditions that affect the structural performance of the airplane (e.g., system failure conditions that induce loads, change the response of the airplane to inputs such as gusts or pilot actions, or lower flutter margins).

II. *Effects of Systems on Structures.* The following criteria will be used in determining the influence of a system and its failure conditions on the airplane structure.

(a) System fully operative. With the system fully operative, the following apply:

(1) Limit loads must be derived in all normal operating configurations of the system from all the limit conditions specified in Subpart C of part 25, taking into account any special behavior of such a system 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 part 25 (static strength, residual strength), using the specified factors to derive ultimate loads from the limit loads defined above. The effect of nonlinearities must be investigated beyond limit conditions to ensure the behavior of the system presents 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 will not allow it to exceed those limit conditions.

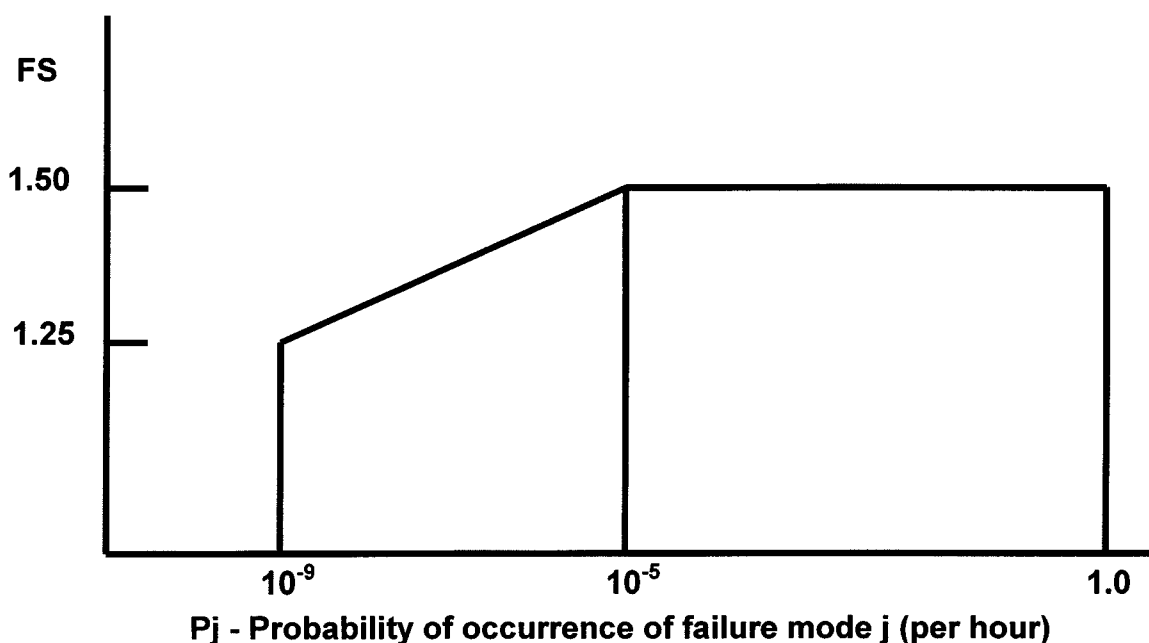
(3) The airplane must meet the aeroelastic stability requirements of § 25.629.

(b) System in the failure condition. For any system failure condition 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.

(i) For static strength substantiation, these loads multiplied by an appropriate factor of safety that is related to the probability of occurrence of the failure are ultimate loads to be considered for design. The factor of safety (F.S.) is defined in Figure 1.

Figure 1
Factor of safety at the time of occurrence



(ii) For residual strength substantiation, the airplane must be able to withstand two thirds of the ultimate loads defined in subparagraph (b)(1)(i).

(iii) Freedom from aeroelastic instability must be shown up to the speeds defined in § 25.629(b)(2). For failure conditions that result in speed increases beyond V_c/M_c , freedom from aeroelastic instability must be shown to increased speeds, so that the margins intended by § 25.629(b)(2) are maintained.

(iv) Failures of the system that result in forced structural vibrations (oscillatory failures) must not produce

loads that could result in 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) The loads derived from the following conditions at speeds up to V_c , or the speed limitation prescribed for the remainder of the flight must be determined:

(A) The limit symmetrical maneuvering conditions specified in § 25.331 and in § 25.345.

(B) The limit gust and turbulence conditions specified in § 25.341 and in § 25.345.

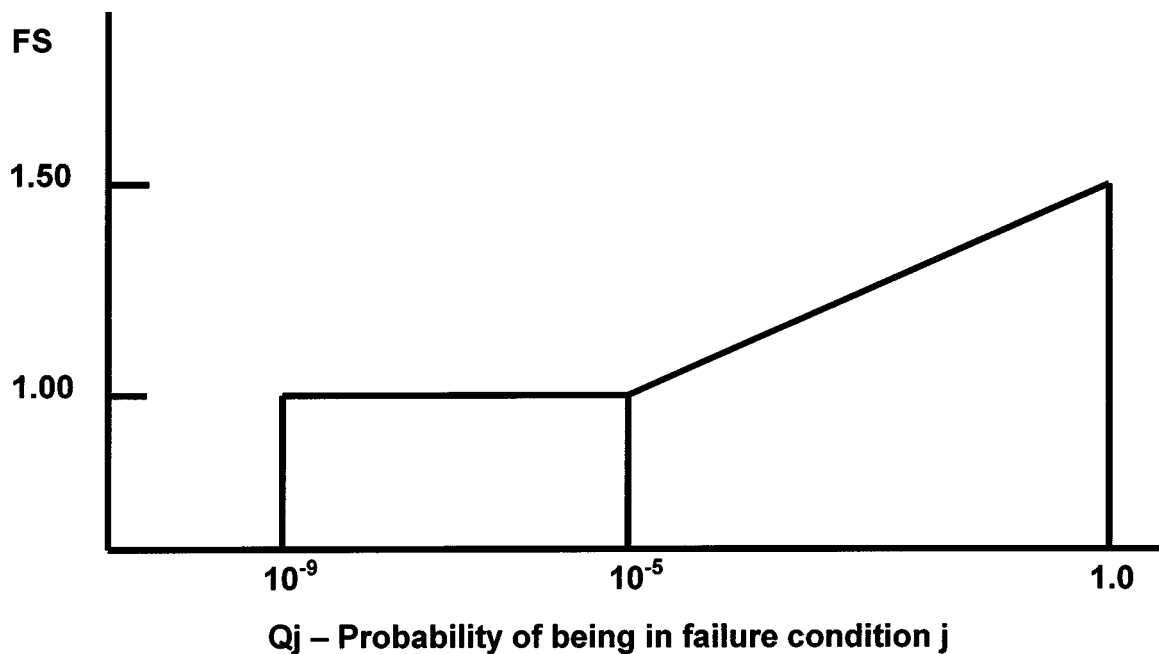
(C) The limit rolling conditions specified in § 25.349 and the limit unsymmetrical conditions specified in § 25.367 and § 25.427(b) and (c).

(D) The limit yaw maneuvering conditions specified in § 25.351.

(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 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



$Q_j = (T_j)(P_j)$ 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 a 1.5 factor of safety must be

applied to all limit load conditions specified in Subpart C.

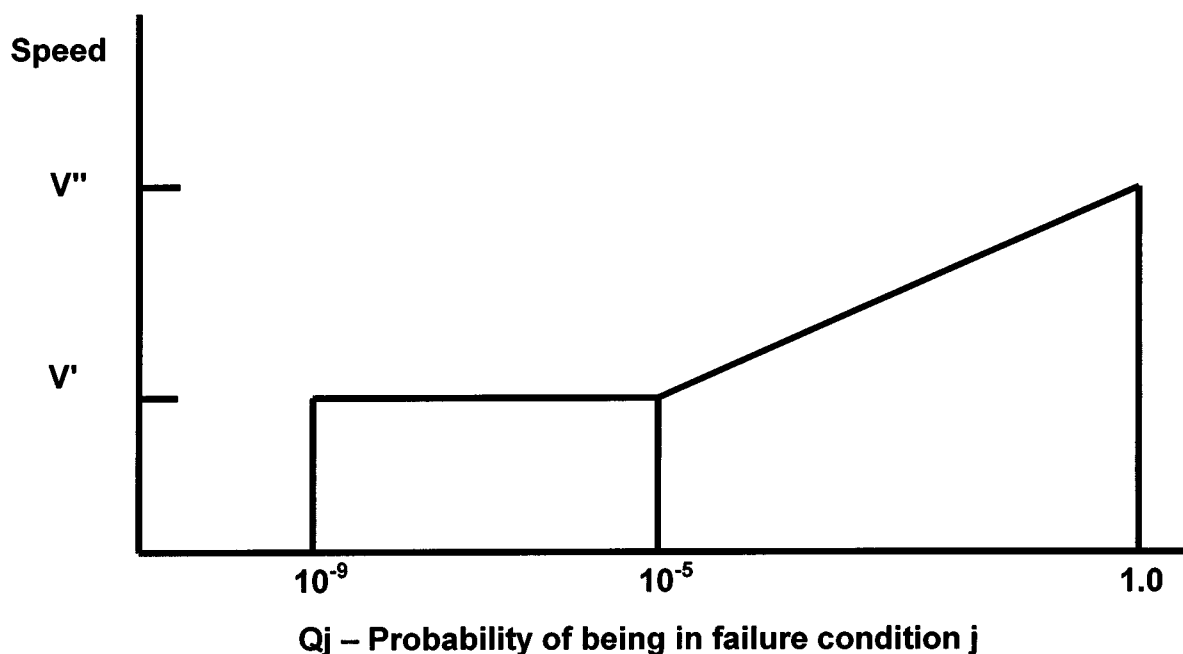
(iii) For residual strength substantiation, the airplane must be able to withstand two thirds of the ultimate loads defined in subparagraph (b)(2)(ii).

(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 aeroelastic instability must be shown up to a speed determined from Figure 3. 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 3
Clearance speed



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

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

$Q_j = (T_j)(P_j)$ 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 aeroelastic instability must also be shown up to V' in Figure 3 above, for any probable system failure condition combined with any damage required or selected for investigation by § 25.571(b).

(3) Consideration of certain failure conditions may be required by other Sections of this 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.

(c) Warning considerations. For 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 flightcrew 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 flightcrew. For example, failure conditions that result in a factor of safety between the airplane strength and the loads of Subpart C of part 25 below 1.25, or flutter margins below V'' , must be signaled to the crew during flight.

(d) Dispatch with known failure conditions. If the airplane is to be dispatched in a known 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. Flight limitations and expected operational limitations may be taken into account in establishing Q_j as the combined probability of being in the dispatched failure condition and the subsequent failure condition for the safety margins in Figures 2 and 3. These limitations must be such that the probability of being in this combined failure state and then subsequently encountering limit load conditions is extremely improbable. No reduction in these safety margins is allowed if the subsequent system failure rate is greater than 10^{-3} per hour.

Issued in Renton, Washington, on August 30, 2000.

Donald L. Riggins,

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

[FR Doc. 00-23174 Filed 9-13-00; 8:45 am]

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