this characteristic by impact and puncture testing, and testing to failure. The applicant may conduct this test with or without any glass coating that may be utilized in the design.

2. *Strength*—In addition to meeting the load requirements for all flight and landing loads, including any of the applicable emergency-landing conditions in subparts C & D of 14 CFR part 25, the glass components that are located such that they are not protected from contact with cabin occupants must not fail due to abusive loading, such as impact from occupants stumbling into, leaning against, sitting on, or performing other intentional or unintentional forceful contact with the glass component. The applicant must assess the effect of design details such as geometric discontinuities or surface finish, including but not limited to embossing and etching.

3. *Retention*—The glass component, as installed in the airplane, must not come free of its restraint or mounting system in the event of an emergency landing, considering both the directional loading and resulting rebound conditions. The applicant must assess the effect of design details such as geometric discontinuities or surface finish, including but not limited to embossing and etching.

4. *Instructions for Continued Airworthiness:* The instructions for continued airworthiness must reflect the method used to fasten the panel to the cabin interior, and must ensure the reliability of the methods used (*e.g.,* life limit of adhesives, or clamp connection). The applicant must define any inspection methods and intervals based upon adhesion data from the manufacturer of the adhesive, or upon actual adhesion-test data, if necessary.

Issued in Renton, Washington, on February 14, 2017.

**Michael Kaszycki,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

[FR Doc. 2017–05330 Filed 3–16–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 25

**[Docket No. FAA–2016–9489; Special Conditions No. 25–649–SC]**

## Special Conditions: Textron Aviation Inc. Model 700 Airplane; Isolation of Airplane Electronic System Security Protection From Unauthorized Internal Access

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

**ACTION:** Final special conditions; request for comments.

**SUMMARY:** These special conditions are issued for the Textron Aviation Inc. (Textron) Model 700 airplane. This airplane will have a novel or unusual design feature when compared to the state of technology envisioned in the airworthiness standards for transport-category airplanes. This design feature is airplane electronic systems and networks that allow access, from aircraft internal sources (*e.g.,* wireless devices, Internet connectivity), to the airplane's previously isolated, internal, electronic components. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. 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 existing airworthiness standards.

**DATES:** This action is effective on Textron on March 17, 2017. We must receive your comments by May 1, 2017.

**ADDRESSES:** Send comments identified by docket number FAA–2016–9489 using any of the following methods:

☐ *Federal eRegulations Portal:* Go to *http://www.regulations.gov/*and follow the online instructions for sending your comments electronically.

☐ *Mail:* Send comments to Docket Operations, M–30, U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

☐ *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

☐ *Fax:* Fax comments to Docket Operations at 202–493–2251.

*Privacy:* The FAA will post all comments it receives, without change, to *http://www.regulations.gov/,* including any personal information the commenter provides. Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the **Federal Register** published on April 11, 2000 (65 FR 19477–19478), as well as at *http://DocketsInfo.dot.gov/.*

*Docket:* Background documents or comments received may be read at *http://www.regulations.gov/* at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Varun Khanna, FAA, Airplane and Flightcrew Interface, ANM–111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone 425–227–1298; facsimile 425–227–1320.

**SUPPLEMENTARY INFORMATION:** The FAA has determined that notice of, and opportunity for prior public comment on, these special conditions is impracticable because these procedures would significantly delay issuance of the design approval, and thus delivery, of the affected airplane.

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 publication in the **Federal Register**.

### Comments Invited

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data.

We will consider all comments we receive by the closing date for comments. We may change these special conditions based on the comments we receive.

### Background

On November 20, 2014, Textron applied for a type certificate for their new Model 700 airplane. The Textron

Model 700 airplane is a twin-engine, transport-category executive airplane with seating for 2 crewmembers and 12 passengers, and a maximum takeoff weight of 38,514 lbs.

**Type Certification Basis**

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, Textron must show that the Model 700 airplane meets the applicable provisions of part 25, as amended by Amendments 25–1 through 25–139, 25–141, and 25–143.

If the Administrator finds that the applicable airworthiness regulations (*i.e.,* 14 CFR part 25) do not contain adequate or appropriate safety standards for the Textron Model 700 airplane because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

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, these special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the Textron Model 700 airplane 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.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.17(a)(2).

**Novel or Unusual Design Features**

The Textron Model 700 airplane will incorporate the following novel or unusual design feature:

Airplane electronic systems and networks that allow access, from airplane internal sources (*e.g.,* wireless devices, Internet connectivity), to the previously isolated airplane electronic assets.

**Discussion**

Networks, both in safety-related and non-safety-related applications, have been implemented in existing commercial-production airplanes. However, network security considerations and functions have played a relatively minor role in the certification of such systems because of the isolation, protection mechanisms, and limited connectivity between these networks.

To provide an understanding of the airplane electronic equipment, systems, and assets, these special conditions use the concept of domains. However, this does not prescribe any particular architecture.

The aircraft-control domain consists of the airplane electronic systems, equipment, instruments, networks, servers, software and hardware components, databases, etc., which are part of the type design of the airplane and are installed in the airplane to enable the safe operation of the airplane. These can also be referred to as flight-safety-related systems, and include flight controls, communication, display, monitoring, navigation, and related systems.

The airline-information-services domain generally consists of functions that the airplane operator manages or controls, such as administrative functions, cabin-support functions, etc.

The passenger-information-services domain consists of all functions required to provide the passengers with information.

The Textron Model 700 airplane design introduces the potential for access to aircraft-control domain and airline-information-services domain by unauthorized persons through the passenger-information-services domain; and the security vulnerabilities related to the introduction of viruses, worms, user mistakes, and intentional sabotage of airplane networks, systems, and databases.

For electronic systems and assets security in these domains, the level of protection provided against security threats should be based on a security-risk assessment, noting that the level of protection could differ between domains and within domains, depending on the security threat. For each security vulnerability and airplane electronic asset, Textron should identify in which domain the asset will be addressed.

In addition, the operating systems for current airplane systems are usually and historically proprietary. Therefore, they are not as susceptible to corruption from worms, viruses, and other malicious actions as are more widely used commercial operating systems, because access to the design details of these proprietary operating systems is limited to the system developer and airplane integrator. Some airplanes are equipped with operating systems that are widely used and commercially available from third-party software suppliers. The security vulnerabilities of these operating systems may be more widely known than are the vulnerabilities of proprietary operating systems that the avionics manufacturers currently use.

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 existing airworthiness standards.

**Applicability**

As discussed above, these special conditions are applicable to the Textron Model 700 airplane. Should Textron apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well.

**Conclusion**

This action affects only a certain novel or unusual design feature on one model of airplane. It is not a rule of general applicability.

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. Therefore, because a delay would significantly affect the certification of the airplane, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions upon publication in the **Federal Register**. 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.

**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 Textron Model 700 airplanes.

1. The applicant must ensure that the design provides isolation from, or airplane electronic-system security protection against, access by unauthorized sources internal to the airplane. The design must prevent inadvertent and malicious changes to,

and all adverse impacts upon, airplane equipment, systems, networks, or other assets required for safe flight and operations.

2. The applicant must establish appropriate procedures to allow the operator to ensure that continued airworthiness of the airplane is maintained, including all post-type-certification modifications that may have an impact on the approved electronic-system security safeguards.

Issued in Renton, Washington, on February 10, 2017.

**Michael Kaszycki,**

*Assistant Manager, Transport Airplane Directorate, Aircraft Certification Service.*

[FR Doc. 2017–05333 Filed 3–16–17; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 25

**[Docket No. FAA–2016–6137; Special Conditions No. 25–644–SC]**

## Special Conditions: The Boeing Company Model 787–10 Airplane; Aeroelastic Stability Requirements, Flaps-Up Vertical Modal-Suppression System

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

**ACTION:** Final special conditions.

**SUMMARY:** These special conditions are issued for the Boeing Company (Boeing) Model 787–10 airplane. This airplane will have a novel or unusual design feature when compared to the state of technology envisioned in the airworthiness standards for transport-category airplanes. This design feature is a flaps-up vertical modal-suppression system, which is in lieu of traditional methods of improving airplane flutter characteristics. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. 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 existing airworthiness standards.

**DATES:** Effective April 17, 2017.

**FOR FURTHER INFORMATION CONTACT:** Wael Nour, FAA, Airframe and Cabin Safety Branch, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone 425–227–2143; facsimile 425–227–1320.

**SUPPLEMENTARY INFORMATION:**

### Background

On July 30, 2013, Boeing applied for an amendment to Type Certificate No. T00021SE to include the new Model 787–10 airplane. This twin-engine, transport-category airplane is a stretched-fuselage derivative of the 787–9, with maximum seating capacity of 440 passengers. The 787–10 has a maximum takeoff weight of 560,000 lbs.

### Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.101, Boeing must show that the Model 787–10 airplane meets the applicable provisions of the regulations listed in Type Certificate No. T00021SE or the applicable regulations in effect on the date of application for the change, except for earlier amendments as agreed upon by the FAA.

In addition, the certification basis includes other regulations, special conditions, and exemptions that are not relevant to these proposed special conditions. Type Certificate No. T00021SE will be updated to include a complete description of the certification basis for this airplane model.

If the Administrator finds that the applicable airworthiness regulations (*i.e.,* 14 CFR part 25) do not contain adequate or appropriate safety standards for the Model 787–10 airplane because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

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, these special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and special conditions, the Model 787–10 airplane 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.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type certification basis under § 21.101.

### Novel or Unusual Design Features

The Model 787–10 airplane will incorporate the following novel or unusual design feature:

A flaps-up vertical modal suppression system.

### Discussion

The Boeing Model 787–10 will add a new flaps-up vertical modal-suppression (F0VMS) system to the Normal mode of the primary flight-control system (PFCS). The F0VMS system is needed to satisfy the flutter-damping margin requirements of § 25.629 and the means-of-compliance provisions in Advisory Circular (AC) 25.629–1B. This system will be used in lieu of typical methods of improving the flutter characteristics of an airplane, such as increasing the torsional stiffness of the wing or adding wingtip ballast weights.

The F0VMS system is an active modal-suppression system that will provide additional damping to an already stable, but low-damped, 3Hz symmetric wing, nacelle, and body aeroelastic mode of the airplane. This feedback-control system will maintain adequate damping margins to flutter. The F0VMS system accomplishes this by oscillating the elevators, and, when needed, the flaperons.

Because Boeing's flutter analysis shows that the 3Hz mode is stable and does not flutter, the F0VMS system is not an active flutter-suppression system, but, rather, a damping-augmentation system. At this time, the FAA is not prepared to accept an active flutter-suppression system that suppresses a divergent flutter mode in the operational or design envelope of the airplane.

This will be the first time an active modal-suppression system will be used for § 25.629 compliance. The use of this new active modal-suppression system for flutter compliance is novel or unusual when compared to the technology envisioned in the current airworthiness standards. Consequently, special conditions are required in consideration of the effects of this new system on the aeroelastic stability of the airplane, both in the normal and failed state, to maintain the level of safety intended by § 25.629.

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 existing airworthiness standards.

### Discussion of Comments

Notice of Proposed Special Conditions No. 25–16–05–SC for the