**[4910-13]**

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR part 25**

**Docket No. FAA-2013-0890; Notice No. 25-13-10-SC**

**Special Conditions: Airbus, Model A350-900 series airplane; Ground Pivoting Loads**

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

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

**SUMMARY:** This action proposes special conditions for Airbus Model A350-900 series airplanes. These airplanes will have a novel or unusual design feature(s) associated with a braking system that affects the airplane's pivoting behavior**.** 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:** Send your comments on or before **[insert a date 45 days after date of publication in the Federal Register].**

**ADDRESSES:** Send comments identified by docket number **FAA-2013-0890** 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, D.C., 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, D.C., 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 the Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, D.C., between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Todd Martin, FAA, Airframe/Cabin Safety, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98057-3356; telephone (425) 227-1178; facsimile (425) 227-1320.

## SUPPLEMENTARY INFORMATION:

### 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 proposed special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

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

### Background

On August 25, 2008, Airbus applied for a type certificate for their new Model A350-900 series airplane. Later, Airbus requested and the FAA approved an extension to the application for FAA type certification to June 28, 2009. The Model A350-900 series airplane has a conventional layout with twin wing-mounted Rolls-Royce Trent engines. It features a twin aisle 9-abreast economy class layout, and accommodates side-by-side placement of LD-3 containers in the cargo compartment. The basic Model A350-900 series configuration will accommodate 315 passengers in a standard two-class arrangement. The design cruise speed is Mach 0.85 with a Maximum Take-Off Weight of 602,000 lbs. Airbus proposes the Model A350-900 series airplane to be certified for extended operations (ETOPS) beyond 180 minutes at entry into service for up to a 420-minute maximum diversion time.

The Airbus Model A350-900 series airplane is equipped with a braking system that affects the airplane's pivoting behavior. During pivoting the braking system inhibits braking on some wheels. Title 14 Code of Federal Regulations (14 CFR) 25.503 and European Aviation

Safety Agency (EASA) Certification Specification (CS) section 25.503, each specify limit loads due to pivoting, however, system effects are not taken into account.

## Type Certification Basis

Under Title 14, Code of Federal Regulations (14 CFR) 21.17, Airbus must show that the Model A350-900 series meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25-1 through 25-128.

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 A350-900 series because of a novel or unusual design feature, special conditions are prescribed under § 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 or similar novel or unusual design feature, the proposed special conditions would also apply to the other model under § 21.101.

In addition to the applicable airworthiness regulations and proposed special conditions, the Model A350-900 series 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 under § 611 of Public Law 92-574, the "Noise Control Act of 1972."

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

## Novel or Unusual Design Features

The Airbus Model A350-900 series airplane will incorporate the following novel or unusual design features: a braking system that affects the airplane’s pivoting behavior.

## Discussion

Within the Aviation Rulemaking Advisory Committee, the Loads and Dynamics Harmonization Working Group developed criteria for determining pivoting loads. The group recommended, for airplanes with more than two main landing gear units, a rational pivoting maneuver that takes into account the effects of the braking system and tire characteristics, in lieu of the current requirement. Although the Airbus Model A350-900 series airplane has two main landing gear units, EASA and the FAA propose to apply the same criteria on this airplane.

## Applicability

As discussed above, these proposed special conditions apply to Airbus Model A350-900 series airplanes. Should Airbus apply later for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the proposed special conditions would apply to that model as well.

## Conclusion

This action affects only certain novel or unusual design features on the Airbus Model A350-900 series airplanes. It is not a rule of general applicability.

## 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 Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Airbus Model A350-900 series airplanes in lieu of § 25.503:

1. The main landing gear and supporting structure must be designed for the loads induced by pivoting during ground maneuvers.

(a) The following rational pivoting maneuvers must be considered:

(i) Towing at the nose gear at the critical towing angle with no brakes applied, including cases with torque links disconnected; and separately,

(ii) Application of symmetrical or unsymmetrical forward thrust to aid pivoting, with or without braking by pilot action on the pedals.

(b) The airplane is assumed to be in static equilibrium, with the loads being applied at the ground contact points.

(c) The limit vertical load factor must be 1.0, and:

(i) For wheels with brakes applied, the coefficient of friction must be 0.8,

(ii) For wheels with brakes not applied, the ground tire reactions must be based on reliable tire data.

Issued in Renton, Washington, on September 12, 2013

/s/

Jeffrey E. Duven
Acting Manager, Transport Airplane Directorate
Aircraft Certification Service

[FR Doc. 2013-25398 Filed 10/28/2013 at 8:45 am; Publication Date: 10/29/2013]