required for safe flight and landing. Bombardier may exclude unrecoverable loss of all engines when showing compliance with this requirement.

2. Regardless of any electrical generation and distribution system recovery capability shown under paragraph 1 of these special conditions, sufficient electrical system capability must be provided to:

a. Allow time to descend, with all engines inoperative, at the speed that provides the best glide distance, from the maximum operating altitude to the top of the engine restart envelope, and

b. Subsequently allow multiple start attempts of the engines and auxiliary power unit (APU). The design must provide this capability in addition to the electrical capability required by existing part 25 requirements related to operation with all engines inoperative.

3. The airplane emergency electrical power system must be designed to supply:

a. Electrical power required for immediate safety, which must continue to operate without the need for crew action following the loss of the normal electrical power, for a duration sufficient to allow reconfiguration to provide a non-time-limited source of electrical power.

b. Electrical power required for continued safe flight and landing for the maximum diversion time.

4. If Bombardier uses APU-generated electrical power to satisfy the requirements of these special conditions, and if reaching a suitable runway for landing is beyond the capacity of the battery systems, then the APU must be able to be started under any foreseeable flight condition prior to the depletion of the battery or the restoration of normal electrical power, whichever occurs first. Flight test must demonstrate this capability at the most critical condition.

a. Bombardier must show that the APU will provide adequate electrical power for continued safe flight and landing.

b. The operating limitations section of the airplane flight manual (AFM) must incorporate non-normal procedures that direct the pilot to take appropriate actions to activate the APU after loss of normal engine-driven generated electrical power.

5. As part of showing compliance with these special conditions, the tests to demonstrate loss of all normal electrical power must also take into account the following:

a. The assumption that the failure condition occurs during night instrument meteorological conditions (IMC) at the most critical phase of the flight, relative to the worst possible electrical power distribution and equipment-loads-demand condition.

b. After the un-restorable loss of normal engine generator power, the airplane engine restart capability is provided and operations continued in IMC.

c. The airplane is demonstrated to be capable of continued safe flight and landing. The length of time must be computed based on the maximum diversion time capability for which the airplane is being certified. Bombardier must account for airspeed reductions resulting from the associated failure or failures.

d. The airplane must provide adequate indication of loss of normal electrical power to direct the pilot to the non-normal procedures, and the operating limitations section of the AFM must incorporate non-normal procedures that will direct the pilot to take appropriate actions.

Issued in Renton, Washington, on May 15, 2015.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2015–12698 Filed 5–26–15; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA–2015–0455; Special Conditions No. 25–584–SC]

Special Conditions: Bombardier Aerospace, Models BD–500–1A10 and BD–500–1A11; Electronic Flight Control System: Lateral-Directional and Longitudinal Stability and Low-Energy Awareness

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Bombardier Aerospace Models BD–500–1A10 and BD–500–1A11 series airplanes. These airplanes 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 fly-by-wire electronic flight control system that provides an electronic interface between the pilot's flight controls and the flight control surfaces for both normal and failure states. The system generates the actual surface commands that provide for stability augmentation and control about all three airplane axes. 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 July 13, 2015.

FOR FURTHER INFORMATION CONTACT: Joe Jacobsen, FAA, Airplane and Flight Crew Interface Branch, ANM–111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057–3356; telephone 425–227–2011; facsimile 425–227–1320.

SUPPLEMENTARY INFORMATION:

Background

On December 10, 2009, Bombardier Aerospace applied for a type certificate for their new Models BD–500–1A10 and BD–500–1A11 series airplanes (hereafter collectively referred to as ''CSeries''). The CSeries airplanes are swept-wing monoplanes with an aluminum alloy fuselage, sized for 5-abreast seating. Passenger capacity is designated as 110 for the Model BD–500–1A10 and 125 for the Model BD–500–1A11. Maximum takeoff weight is 131,000 pounds for the Model BD–500–1A10 and 144,000 pounds for the Model BD–500–1A11.

The CSeries flight control system design incorporates normal load factor limiting on a full time basis that will prevent the pilot from inadvertently or intentionally exceeding the positive or negative airplane limit load factor. The FAA considers this feature to be novel and unusual in that the current regulations do not provide standards for maneuverability and controllability evaluations for such systems.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, Bombardier Aerospace must show that the CSeries airplanes meet the applicable provisions of 14 CFR part 25 as amended by Amendments 25–1 through 25–129.

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 CSeries airplanes 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 CSeries airplanes 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, 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 CSeries airplanes will incorporate the following novel or unusual design feature: Fly-by-wire electronic flight control system that provides an electronic interface between the pilot's flight controls and the flight control surfaces for both normal and failure states. The system generates the actual surface commands that provide for stability augmentation and control about all three airplane axes.

Discussion

In the absence of positive lateral stability, the curve of lateral control surface deflections against sideslip angle should be in a conventional sense and reasonably in harmony with rudder deflection during steady heading sideslip maneuvers.

Since conventional relationships between stick forces and control surface displacements do not apply to the ''load factor command'' flight control system on the CSeries airplanes, Bombardier should evaluate the longitudinal stability characteristics by assessing the airplane handling qualities during simulator and flight test maneuvers appropriate to the operation of the airplane. Bombardier may accomplish this by using the Handling Qualities Rating Method presented in appendix 5 of Advisory Circular (AC) 25–7C, *Flight Test Guide for Certification of Transport Category Airplanes,* dated October 16, 2012, or they may propose an acceptable alternative method. Important considerations are as follows:

(a) Adequate speed control without creating excessive pilot workload;

(b) Acceptable high- and low-speed protection; and

(c) Provision of adequate cues to the pilot of significant speed excursions beyond V_{MO}/M_{MO} and low-speed awareness flight conditions.

The airplane should provide adequate awareness cues to the pilot of a low-energy (*i.e.,* a low-speed, low-thrust, or low-height) state to ensure that the airplane retains sufficient energy to recover when flight control laws provide neutral longitudinal stability significantly below the normal operating speeds. This may be accomplished as follows:

(a) Adequate low-speed/low-thrust cues at low altitude may be provided by a strong positive static stability force gradient (1 pound per 6 knots applied through the sidestick); or

(b) Low-energy awareness may be provided by an appropriate warning with the following characteristics:

(i) It should be unique, unambiguous, and unmistakable.

(ii) It should be active at appropriate altitudes and in appropriate configurations (*i.e.,* at low altitude, in the approach and landing configurations).

(iii) It should be sufficiently timely to allow recovery to a stabilized flight condition inside the normal flight envelope while maintaining the desired flight path and without entering the flight control's angle-of-attack protection mode.

(iv) It should not be triggered during normal operation, including operation in moderate turbulence, for recommended maneuvers at recommended speeds.

(v) It should not be cancelable by the pilot other than by achieving a higher-energy state.

(vi) There should be an adequate hierarchy among the warnings so that the pilot is not confused and led to take inappropriate recovery action if multiple warnings occur.

Bombardier should use simulator and flight tests in the whole take-off and landing altitude range for which certification is requested to evaluate global energy awareness and non-nuisance of low-energy cues. This would include all relevant combinations of weight, center-of-gravity position, configuration, airbrakes position, and available thrust, including reduced and de-rated take-off thrust operations and engine failure cases. Bombardier should conduct a sufficient number of tests to assess the level of energy awareness and the effects of energy management errors.

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. 25–15–04–SC for the Bombardier CSeries airplanes was published in the **Federal Register** on March 5, 2015 (80 FR 11958). No comments were received, and the special conditions are adopted as proposed.

Applicability

As discussed above, these special conditions are applicable to the Bombardier BD–500–1A10 and BD–500–1A11. Should Bombardier Aerospace 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 certain novel or unusual design features on two model series of 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 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 Bombardier Aerospace Models BD–500–1A10 and BD–500–1A11 series airplanes.

1. Electronic Flight Control System: Lateral-Directional and Longitudinal Stability and Low-Energy Awareness. In lieu of the requirements of §§ 25.171, 25.173, 25.175, and 25.177:

(a) The airplane must be shown to have suitable static lateral, directional, and longitudinal stability in any condition normally encountered in service, including the effects of atmospheric disturbance. The showing of suitable static lateral, directional, and longitudinal stability must be based on the airplane handling qualities, including pilot workload and pilot compensation, for specific test procedures during the flight test evaluations.

(b) The airplane must provide adequate awareness to the pilot of a low-energy (low-speed/low-thrust/low-height) state when fitted with flight control laws presenting neutral longitudinal stability significantly below the normal operating speeds.

''Adequate awareness'' means warning information must be provided to alert the crew of unsafe operating conditions and to enable them to take appropriate corrective action.

(c) The static directional stability (as shown by the tendency to recover from a skid with the rudder free) must be positive for any landing gear and flap position and symmetrical power condition, at speeds from 1.13 V_{SR1}, up to V_{FE}, V_{LE}, or V_{FC}/M_{FC} (as appropriate).

(d) The static lateral stability (as shown by the tendency to raise the low wing in a sideslip with the aileron controls free), for any landing-gear and wing-flap position and symmetric-power condition, may not be negative at any airspeed (except that speeds higher than V_{FE} need not be considered for wing-flaps-extended configurations nor speeds higher than V_{LE} for landing-gear-extended configurations) in the following airspeed ranges:

(i) From 1.13 V_{SR1} to V_{MO}/M_{MO}.

(ii) From V_{MO}/M_{MO} to V_{FC}/M_{FC}, unless the divergence is—

(1) Gradual;

(2) Easily recognizable by the pilot; and

(3) Easily controllable by the pilot.

(e) In straight, steady sideslips over the range of sideslip angles appropriate to the operation of the airplane, but not less than those obtained with one half of the available rudder control movement (but not exceeding a rudder control force of 180 pounds), rudder control movements and forces must be substantially proportional to the angle of sideslip in a stable sense; and the factor of proportionality must lie between limits found necessary for safe operation. This requirement must be met for the configurations and speeds specified in paragraph (c) of this section.

(f) For sideslip angles greater than those prescribed by paragraph (e) of this section, up to the angle at which full rudder control is used or a rudder control force of 180 pounds is obtained, the rudder control forces may not reverse, and increased rudder deflection must be needed for increased angles of sideslip. Compliance with this requirement must be shown using straight, steady sideslips, unless full lateral control input is achieved before reaching either full rudder control input or a rudder control force of 180 pounds; a straight, steady sideslip need not be maintained after achieving full lateral control input. This requirement must be met at all approved landing gear and wing-flap positions for the range of operating speeds and power conditions appropriate to each landing gear and wing-flap position with all engines operating.

Issued in Renton, Washington, on May 15, 2015.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2015–12699 Filed 5–26–15; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2015–1737; Directorate Identifier 2015–CE–014–AD; Amendment 39–18164; AD 2015–11–01]

RIN 2120–AA64

Airworthiness Directives; Slingsby Aviation Ltd. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for Slingsby Aviation Ltd. Models T67M260 and T67M260–T3A airplanes. This AD results from mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as failure of a brake master cylinder pivot pin. We are issuing this AD to require actions to address the unsafe condition on these products.

DATES: This AD is effective June 16, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 16, 2015.

We must receive comments on this AD by July 13, 2015.

ADDRESSES: You may send comments by any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Fax:* (202) 493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Marshall Aerospace and Defence Group, The Airport, Newmarket Road, Cambridge, CB5 8RX, UK; telephone: +44 (0) 1223 399856; fax: +44 (0) 7825365617; email: *mark.bright@marshalladg.com;* Internet: *www.marshalladg.com.* You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329–4148. It is also available on the Internet at *http://www.regulations.gov* by searching for locating Docket No. FAA–2015–1737.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2015–1737; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4165; fax: (816) 329–4090; email: *jim.rutherford@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD No.: 2015–0065–E, dated April 24, 2015, to correct an unsafe condition for the specified products. The MCAI states:

> An occurrence was reported where pivot pin Part Number (P/N) T67M–45–539, of rudder pedal assembly #4, installed on the right hand (RH) side of the aeroplane (RH seat, RH pedal) failed during taxi. This caused the rudder pedal mechanism to detach from the brake master cylinder.
>
> This condition, if not detected and corrected, could cause the rudder linkages to rotate out of their normal orientation, possibly resulting in jammed rudder controls and consequent loss of control of the aeroplane.
>
> To address this potential unsafe condition, Slingsby Advanced Composites Ltd, trading as Marshall Aerospace and Defence Group (hereafter called 'Marshall' in this AD) issued Service Bulletin (SB) SBM200 to provide inspection instructions.