

- (1) Flight distances;
- (2) Flight durations;
- (3) Route complexity;
- (4) Weight;
- (5) Center of gravity;
- (6) Density altitude;
- (7) Outside air temperature;
- (8) Airspeed;
- (9) Wind;
- (10) Weather;
- (11) Operation at night, if requested;
- (12) Energy storage system capacity;

and

- (13) Aircraft to pilot ratio.

(c) Tests must include the most adverse combinations of the conditions and configurations in paragraph (b) of this section.

(d) Tests must show a distribution of the different flight profiles and routes representative of the type of operations identified in the CONOPS.

(e) Tests must be conducted in conditions consistent with the expected environmental conditions identified in the CONOPS, including electromagnetic interference (EMI) and high intensity radiated fields (HIRF).

(f) Tests must not require exceptional piloting skill or alertness.

(g) Any UAS used for testing must be subject to the same worst-case ground handling, shipping, and transportation loads as those allowed in service.

(h) Any UA used for testing must use AE that meet, but do not exceed, the minimum specifications identified under D&R.105. If multiple AE are identified, the applicant must demonstrate each configuration.

(i) Any UAS used for testing must be maintained and operated in accordance with the ICA and UA Flight Manual. No maintenance beyond the intervals established in the ICA will be allowed to show compliance with this section.

(j) If cargo operations or external-load operations are requested, tests must show, throughout the flight envelope and with the cargo or external-load at the most critical combinations of weight and center of gravity, that—

- (1) The UA is safely controllable and maneuverable; and
- (2) The cargo or external-load are retainable and transportable.

D&R.305 Probable Failures

The UA must be designed such that a probable failure will not result in a loss of containment or control of the UA. This must be demonstrated by test.

(a) Probable failures related to the following equipment, at a minimum, must be addressed:

- (1) Propulsion systems;
- (2) C2 link;
- (3) Global Positioning System (GPS);
- (4) Flight control components with a single point of failure;

- (5) Control station; and
- (6) Any other AE identified by the applicant.

(b) Any UA used for testing must be operated in accordance with the UA Flight Manual.

(c) Each test must occur at the critical phase and mode of flight, and at the highest aircraft-to-pilot ratio.

D&R.310 Capabilities and Functions

(a) All of the following required UAS capabilities and functions must be demonstrated by test:

(1) Capability to regain command and control of the UA after the C2 link has been lost.

(2) Capability of the electrical system to power all UA systems and payloads.

(3) Ability for the pilot to safely discontinue the flight.

(4) Ability for the pilot to dynamically re-route the UA.

(5) Ability to safely abort a takeoff.

(6) Ability to safely abort a landing and initiate a go-around.

(b) The following UAS capabilities and functions, if requested for approval, must be demonstrated by test:

(1) Continued flight after degradation of the propulsion system.

(2) Geo-fencing that contains the UA within a designated area, in all operating conditions.

(3) Positive transfer of the UA between control stations that ensures only one control station can control the UA at a time.

(4) Capability to release an external cargo load to prevent loss of control of the UA.

(5) Capability to detect and avoid other aircraft and obstacles.

(c) The UA must be designed to safeguard against inadvertent discontinuation of the flight and inadvertent release of cargo or external load.

D&R.315 Fatigue

The structure of the UA must be shown to withstand the repeated loads expected during its service life without failure. A life limit for the airframe must be established, demonstrated by test, and included in the ICA.

D&R.320 Verification of Limits

The performance, maneuverability, stability, and control of the UA within the flight envelope described in the UA Flight Manual must be demonstrated at a minimum of 5% over maximum gross weight with no loss of control or loss of flight.

Issued in Washington, DC, on February 16, 2022.

Ian Lucas

*Manager, Policy Implementation Section,
Policy and Innovation Division, Aircraft
Certification Service.*

[FR Doc. 2022-03867 Filed 2-24-22; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

**[Docket No. FAA-2020-1041; Special
Conditions No. 25-805-SC]**

Special Conditions: Dassault Aviation Model Falcon 6X Airplane; Side Stick Controllers—Controllability and Maneuverability.

AGENCY: Federal Aviation
Administration (FAA), DOT.

ACTION: Final special conditions; request
for comments.

SUMMARY: These special conditions are issued for the Dassault Aviation (Dassault) Model Falcon 6X 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 side-stick controllers for pitch and roll control. 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 Dassault on February 25, 2022. Send comments on or before April 11, 2022.

ADDRESSES: Send comments identified by Docket No. FAA-2020-1041 using any of the following methods:

- *Federal eRegulations Portal:* Go to <https://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: Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in title 14, Code of Federal Regulations (14 CFR) 11.35, the FAA will post all comments received without change to <https://www.regulations.gov/>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about these special conditions.

Confidential Business Information: Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to these special conditions contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to these special conditions, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and the indicated comments will not be placed in the public docket of these special conditions. Send submissions containing CBI to the Information Contact below. Comments the FAA receives, which are not specifically designated as CBI, will be placed in the public docket for this rulemaking.

Docket: Background documents or comments received may be read at <https://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: Troy Brown, Performance and Environment Section, AIR–625, Technical Innovation Policy Branch, Policy and Innovation Division, Aircraft Certification Service, Federal Aviation Administration, 1801 S. Airport Rd., Wichita, KS 67209–2190; telephone and fax 405–666–1050; email troy.a.brown@faa.gov.

SUPPLEMENTARY INFORMATION: The substance of these special conditions has been published in the **Federal Register** for public comment in several prior instances with no substantive comments received. Therefore, the FAA

finds, pursuant to § 11.38(b), that new comments are unlikely, and notice and comment prior to this publication are unnecessary.

Comments Invited

The FAA invites 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.

The FAA will consider all comments received by the closing date for comments. The FAA may change these special conditions based on the comments received.

Background

On July 1, 2012, Dassault applied for a type certificate for its new Model Falcon 5X airplane. However, Dassault has decided not to release an airplane under the model designation Falcon 5X, instead choosing to change that model designation to Falcon 6X.

In February of 2018, due to engine supplier issues, Dassault extended the type certificate application date for its Model Falcon 5X airplane under new Model Falcon 6X. This airplane is a twin-engine business jet with seating for 19 passengers, and has a maximum takeoff weight of 77,460 pounds.

Type Certification Basis

Under the provisions of 14 CFR 21.17, Dassault must show that the Model Falcon 6X airplane meets the applicable provisions of part 25, as amended by amendments 25–1 through 25–146.

If the Administrator finds that the applicable airworthiness regulations (e.g., 14 CFR part 25) do not contain adequate or appropriate safety standards for the Dassault Model Falcon 6X 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 Dassault Model Falcon 6X 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 Dassault Model Falcon 6X airplane will incorporate the following novel or unusual design feature:

Side-stick controllers for pitch and roll control.

Discussion

Current part 25 airworthiness regulations account for conventional wheel-and-column airplane controls. Regulatory requirements pertaining to conventional wheel-and-column controls, such as pilot strength and controllability, are not directly applicable to side-stick controls. In addition, pilot-control authority may be uncertain because the side sticks are not mechanically interconnected to controlled surfaces, as are conventional wheel and column controls.

Current FAA regulations do not specifically address the use of side-stick controllers for pitch and roll control. The unique features of the side stick must therefore be demonstrated through flight and simulator tests to have suitable handling and control characteristics when considering the following:

1. The handling-qualities tasks and requirements of the Dassault Falcon Model 6X airplane Special Conditions and other 14 CFR part 25 requirements for stability, control, and maneuverability, including the effects of turbulence.

2. *General ergonomics:* Armrest comfort and support, local freedom of movement, displacement angle suitability, and axis harmony.

3. Inadvertent input in turbulence.

4. Inadvertent pitch-roll crosstalk.

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 Dassault Model Falcon 6X airplane. Should Dassault 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.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

Authority Citation

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(f), 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 Dassault Aviation Model Falcon 6X airplane.

1. *Pilot strength:* In lieu of the control force limits shown in § 25.143(d) for pitch and roll, and in lieu of specific pitch force requirements of §§ 25.143(i)(2), 25.145(b), 25.173(c), 25.175(b), and 25.175(d), it must be shown that the temporary and maximum prolonged force levels for the side stick controllers are suitable for all expected operating conditions and configurations, whether normal or non-normal.

2. *Pilot-control authority:* The electronic side-stick-controller coupling design must provide for corrective and/or overriding control inputs by either pilot with no unsafe characteristics. Annunciation of the controller status must be provided, and must not be confusing to the flightcrew.

3. *Pilot control:* It must be shown by flight tests that the use of side-stick controllers does not produce unsuitable pilot-in-the-loop control characteristics when considering precision path control/tasks and turbulence. In addition, pitch and roll control force and displacement sensitivity must be compatible, so that normal inputs on one control axis will not cause significant unintentional inputs on the other.

4. *Autopilot quick-release control location:* In lieu of compliance with 25.1329(d), autopilot quick-release (emergency) controls must be on both side-stick controllers. The quick-release means must be located so that flight crew can readily and easily use the release mechanism.

Issued in Kansas City, Missouri, on February 17, 2022.

Patrick R. Mullen,

Manager, Technical Innovation Policy Branch, Policy and Innovation Division, Aircraft Certification Service.

[FR Doc. 2022-03866 Filed 2-24-22; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0149; Project Identifier MCAI-2022-00121-Q; Amendment 39-21960; AD 2022-05-09]

RIN 2120-AA64

Airworthiness Directives; MARS A.S. Parachutes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain MARS A.S. emergency parachutes. This AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI identifies the unsafe condition as the length of the ripcord between the pins being too long, which could cause a malfunction of the emergency parachute. This AD requires removing emergency parachutes with certain manufacture dates or serial numbers from service. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective March 14, 2022.

The FAA must receive comments on this AD by April 11, 2022.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- *Federal eRulemaking Portal:* Go to <https://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:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact MarS a.s., Okružní II 239, 569 43 Jevíčko, Czech Republic; phone: +420 461 353 841; email: mars@marsjev.cz; website: <https://www.marsjev.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0149; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the MCAI, any comments received, and other information. The street address for the Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT:

Darren Gassetto, COS Program Manager, Boston ACO Branch, Compliance & Airworthiness Division, FAA, 1200 District Avenue, Burlington, MA 01803; phone: (516) 228-7323; email: 9-AVS-AIR-BACO-COS@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD 2022-0018-E, dated January 28, 2022 (referred to after this as “the MCAI”), to address an unsafe condition on certain MARS A.S. ATL-88/90-1B (commercially known as ATL-15 SL) emergency parachutes. The MCAI states:

During the yearly inspection of one of the affected emergency parachutes, it has been found that the length of the ripcord between the pins was too large and, in some cases, only one of 2 loops of the parachute could be opened when the manual ripcord was pulled. Subsequent inspection revealed that the dimensions of the static line extension were out of production tolerances. It is expected that the manufacturer will develop a modification to restore the airworthiness of affected emergency parachutes.

This condition, if not corrected, could cause a malfunction of the emergency parachute.

To address this unsafe condition EASA issued Emergency AD 2022-0017-E to require removal from service of the affected emergency parachutes.

Since that [EASA] AD was issued, it was determined that the Applicability of that [EASA] AD was incorrect.

For the reasons described above, this [EASA] AD retains the requirements of EASA Emergency AD 2022-0017-E, which is superseded, but with a different Applicability.

This [EASA] AD is considered to be an interim measure and further [EASA] AD action may follow.

You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0149.