and provide evidence to support your answers.

7. How should total fraction exposure data be compared to inhalable fraction exposure measurements? Please explain your answer and provide evidence to support your answer.

8. Should surface area action levels be established, or should DOE consider controlling the health risk of surface levels by establishing a low airborne action level that precludes beryllium settling out on surfaces, and administrative controls that prevent the buildup of beryllium on surfaces? If surface area action levels are established, what should be the DOE surface area action levels? If a low airborne action level should be established in lieu of the surface area action level, what should that airborne action level be? What, if any, additional administrative controls to prevent the buildup on surfaces should be established? Please explain each of your answers and provide evidence to support your answers.

9. Should warning labels be required for the transfer, to either another DOE entity or to an entity to whom this rule does not apply, of items with surface areas that are free of removable surface levels of beryllium but which may contain surface contamination that is inaccessible or has been sealed with hard-to-remove substances, e.g., paint? Please explain your answer and provide evidence to support your answer.

10. Should the Department establish both surface level and aggressive air sampling criteria (modeled after the U.S. Environmental Protection Agency’s aggressive air sampling criteria to clear an area after asbestos abatement) for releasing areas in a facility, or should the Department consider establishing only the aggressive air sampling criteria? Please explain your answers and provide evidence to support your answers.

11. Currently, after the site occupational medicine director has determined that a beryllium worker should be medically removed from exposure to beryllium, the worker must consent to the removal. Should the Department continue to require the worker’s consent for medical removal, or require mandatory medical removal? Please explain your answers.

Issued in Washington, DC, on December 20, 2010.

Glenn S. Podonsky,
Chief, Health, Safety and Security Office,

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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 must also issue a finding of regulatory adequacy pursuant to section 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).

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 features, the special conditions would also apply to the other model under provisions of § 21.101.

Novel or Unusual Design Features

The GVI is equipped with a novel or unusual design feature: A high incidence protection system that replaces the stall warning system during normal operating conditions, prohibits the airplane from stalling, limits the angle of attack at which the airplane can be flown during normal low speed operation, and cannot be overridden by the flight crew. The system’s application of this angle of attack limit impacts the stall speed determination, stall characteristics, the stall warning demonstration, and the longitudinal airplane handling characteristics. The current regulations, including §§ 25.103, 25.145, 25.201, 25.203, 25.207 and 25.1323, do not address this type of protection feature.

Discussion of Proposed Special Conditions

Special conditions are proposed to address this novel or unusual design feature of the GVI. These special conditions, which include airplane performance requirements, will establish a level of safety equivalent to the current regulations for reference stall speeds, stall warning, stall characteristics, and miscellaneous other minimum reference speeds.

Applicability

As discussed above, these proposed special conditions are applicable to the high incidence protection system on the GVI. Should Gulfstream apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design features, these proposed special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features of the GVI. 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 the GVI airplanes.

1. Definitions. For terminology that does not appear in the regulations, the following definitions apply to these proposed special conditions:

(a) Electronic Flight Control System (EFCS)—The electronic and software command and control elements of the flight control system.

(b) High Incidence Protection Function—An airplane level function that automatically limits the maximum angle of attack that can be attained to a value below that at which an aerodynamic stall would occur.

(c) Alpha-Limit—The maximum angle of attack at which the airplane stabilizes with the high incidence protection function operating and the longitudinal control held on its aft stop.

(d) Vmin—The minimum stabilized flight speed in calibrated airspeed obtained when the airplane is decelerated at an entry rate not exceeding 1 knot/sec until the longitudinal pilot control is on the aft stop with the high incidence protection function operating normally.

(e) Vmin1g—Vmin corrected to 1g conditions. The minimum calibrated airspeed at which the airplane can develop a lift force normal to the flight path and equal to its weight when at an angle of attack not greater than that determined for Vmin.

2. Capability and Reliability of the High Incidence Protection System—In lieu of §§ 25.103, 25.145, 25.201, 25.203, 25.207 and 25.1323 the following special conditions are proposed for capability and reliability requirements:

(a) It must not be possible during pilot-induced maneuvers to encounter a stall, and handling characteristics must be acceptable as required by paragraphs 5 and 6 of this proposed special condition.

(b) The airplane must be protected against stalling due to the effects of environmental conditions such as wind shear and gusts at low speeds as required by paragraph 7 of this proposed special condition.

(c) The ability of the high incidence protection function to accommodate any reduction in stalling angle of attack resulting from flight in the atmospheric icing conditions of 14 CFR part 25, appendix C, must be verified.

(d) The reliability of the high incidence protection function and the effects of failures must be acceptable in accordance with §25.1309.

(e) The high incidence protection function must not impede maneuvering for pitch angles up to the maximum required for normal maneuvering including an all-engines operating takeoff plus a suitable margin to allow for satisfactory speed control.

3. Minimum Steady Flight Speed and Reference Stall Speed—In lieu of the requirements of §25.103, the following special condition is proposed:

(a) Vmin—The minimum steady flight speed, for the airplane configuration under consideration and with the high incidence protection function operating, is the final stabilized calibrated airspeed obtained when the airplane is decelerated at an entry rate not exceeding 1 knot per second until the longitudinal pitch control is on its stop.

(b) The minimum steady flight speed, Vmin, must be determined with:

1. The high incidence protection function operating normally.

2. Idle thrust.

3. All combinations of flap settings and landing gear positions.

4. The weight used when VSR is being used as a factor to determine compliance with a required performance standard.

5. The most unfavorable center of gravity allowable.

6. The airplane trimmed for straight flight at a speed selected by the applicant, but not less than 1.13 VSR and not greater than 1.3 VSR.

7. The settings of the high incidence protection function, stall warning system, and stall identification system (if applicable) set at the low angle of attack tolerance limit, unless the production tolerances are acceptably small so as to produce insignificant changes in performance determinations.

(c) Vmin1g—Vmin corrected to 1g conditions, which is the minimum calibrated airspeed at which the airplane can develop a lift force normal to the flight path and equal to its weight when at an angle of attack not greater than that determined for Vmin. Vmin1g is defined as follows:
\[ V_{\text{min}} g = \frac{V_{\text{min}}}{\sqrt{n_{2v}}} \]

Where:

- \( n_{2v} \): load factor normal to the flight path at \( V_{\text{min}} \)

(d) The reference stall speed, \( V_{SR} \), is a calibrated airspeed selected by the applicant. \( V_{SR} \) may not be less than a 1g stall speed. \( V_{SR} \) is expressed as:

\[ V_{SR} = \frac{V_{CL_{\text{MAX}}}}{\sqrt{n_{2v}}} \]

Where:

- \( V_{CL_{\text{MAX}}} \): is the calibrated airspeed obtained when the load factor-corrected lift coefficient

\[ \frac{n_{2v} W}{q S} \]

is first a maximum during the maneuver prescribed in paragraph (a) of this special condition.

\( n_{2v} \): Load factor normal to the flight path at \( V_{CL_{\text{MAX}}} \)

\( W \): Airplane gross weight

\( S \): Aerodynamic reference wing area

\( q \): Dynamic pressure

\( (\cdot) \): is used as a factor to determine compliance with a required performance standard.

(e) \( V_{SR} \) must be determined with the following conditions:

1. Engines idling, or, if that resultant thrust causes an appreciable decrease in stall speed, not more than zero thrust at the stall speed.
2. The airplane in other respects (such as flaps and landing gear) in the condition existing in the test or performance standard in which \( V_{SR} \) is being used.
3. The weight used when \( V_{SR} \) is being used as a factor to determine compliance with a required performance standard.
4. The center of gravity position that results in the highest value of reference stall speed.
5. The airplane trimmed for straight flight at a speed selected by the applicant, but not less than 1.13 \( V_{SR} \) and not greater than 1.3 \( V_{SR} \).
6. The high incidence protection function disabled, or adjusted to a high enough incidence to allow full development of the maneuver to the angle of attack corresponding to \( V_{SR} \).
7. From the stabilized trim condition, apply the longitudinal control to decelerate the airplane so that the speed reduction does not exceed one knot per second.
8. The flight characteristics at the angle of attack corresponding to \( V_{SR} \) must be suitable in the traditional sense at forward and aft center of gravity in straight and turning flight at IDLE power.

(g) If \( V_{SR} \) is chosen equal to \( V_{MIN,1g} \), an equivalent safety finding to the intent of §25.103 may be considered to have been met. The applicant may choose \( V_{SR} \) to be less than \( V_{MIN,1g} \) but not less than \( V_{SL1g} \) if compensating factors are provided to ensure safe characteristics.

4. Stall Warning
(a) Normal Operation—If the conditions of paragraph 2 of this proposed special condition are satisfied, a level of safety equivalent to that intended by §25.207, Stall warning, will have been met.
(b) Failure Cases—Following failures of the high incidence protection function not shown to be extremely improbable, if the function no longer satisfies paragraphs 2(a), 2(b), and 2(c) of this proposed special condition, stall warning must be provided in accordance with §25.207. The stall warning should prevent inadvertent stall in the following conditions:
1. Power off straight stall approaches to a speed 5 percent below the warning onset.
2. Turning flight stall approaches at least at 1.5g load factor normal to the flight path at an entry rate of at least 2 knots per second when recovery is initiated not less than one second after the warning onset.
3. 5 High Incidence Handling Demonstrations—In lieu of the requirements of §25.201, the following special conditions are proposed:
   (a) Maneuvers to the limit of the longitudinal control, in the nose up direction, must be demonstrated in straight flight and in 30 degree banked turns under the following conditions:
      1. High incidence protection function operating normally.
      2. Power off.
   (b) At a power level necessary to maintain level flight at 1.5 \( V_{SR1} \), where \( V_{SR1} \) is the reference stall speed with the flaps in the approach position, the landing gear retracted, and with the aircraft at its maximum landing weight. The flaps position to be used to determine this power setting is that position in which the stall speed, \( V_{SR1} \), does not exceed 110% of the stall speed, \( V_{SR0} \), with the flaps in the most extended landing position.
   (c) In each condition required by paragraph (a) of this section, it must be possible to meet the applicable requirements of §25.203 defined in paragraph 6 of this proposed special condition with:
      1. Flaps, landing gear, and deceleration devices in any likely combination of positions not prohibited.
      2. Deceleration devices include spoilers and other drag devices when used as air brakes, and thrust reversers.
High incidence maneuver demonstrations with deceleration devices deployed should be carried out with power off except where power is normally applied during operations (e.g., use of extended airbrakes during landing).
   (3) Representative weights within the range for which certification is requested.
   (4) The most adverse center of gravity.
   (5) The airplane trimmed for straight flight at the speed prescribed in paragraph 3(e)(5) of this proposed special condition.
   (6) The settings of the high incidence protection function, stall warning system, and stall identification system (if applicable) set at the high angle of attack tolerance limit, unless the production tolerances are acceptably small so as to produce insignificant changes in performance determinations.
   (c) The following procedures must be used to show compliance with §25.203 as amended by paragraph 6 of this proposed special condition:
   1. Starting at a speed sufficiently above the minimum steady flight speed to ensure that a steady rate of speed reduction can be established, apply the longitudinal control so that the speed reduction does not exceed one knot per second until the control reaches the stop.
   2. The longitudinal control must be maintained at the stop until the airplane has reached a stabilized flight condition and then recovered by normal recovery techniques.
   (3) The requirements for turning flight maneuver demonstrations must also be met with accelerated rates of entry to the incidence limit, up to the maximum rate achievable.
6. Characteristics in High Incidence Maneuvers—In lieu of the requirements of §25.203, the following special condition is proposed:
(a) Throughout maneuvers with a rate of deceleration of not more than 1 knot per second, both in straight flight and in 30 degree banked turns, the airplane’s characteristics must be as follows:
   (1) No abnormal airplane nose-up pitching.
   (2) No uncommanded nose-down pitching (which is indicative of stall). However, reasonable attitude changes associated with stabilizing the incidence at alpha limit as the longitudinal control reaches the stop is acceptable. Any reduction of pitch attitude associated with stabilizing the incidence at the alpha limit should be achieved smoothly and at a low pitch rate, so it is not likely to be mistaken for natural stall identification.
(3) No uncommanded lateral or directional motion, and the pilot must retain good lateral and directional control by conventional use of the cockpit controls throughout the maneuver.

(4) The airplane must not exhibit buffeting of a magnitude or severity that would act as a deterrent to completing the maneuver specified in §25.201(a) as amended by this proposed special condition.

(b) In maneuvers with increased rates of deceleration, some degradation of characteristics associated with a transient excursion beyond the stabilized alpha-limit is acceptable. However, the airplane must not exhibit dangerous characteristics or characteristics associated with a flight of deceleration, some degradation of characteristics associated with a temporary excursion beyond the stabilized alpha-limit is acceptable.

(c) It must always be possible to reduce incidence by conventional use of the longitudinal control.

(d) The rate at which the airplane can be maneuvered from trim speeds associated with scheduled operating speeds, such as \( V_{2} \) and \( V_{Ref} \) up to alpha-limit, should not be unduly damped or significantly slower than can be achieved on conventionally controlled transport airplanes.

7. Atmospheric Disturbances—Operation of the high incidence protection function must not adversely affect aircraft control during expected levels of atmospheric disturbances, nor impede the application of recovery procedures in case of wind shear. Simulator tests and analysis may be used to evaluate such conditions, but must be validated by limited flight testing to confirm handling qualities at critical loading conditions.

8. Longitudinal Control—In lieu of §25.1323(c)(1) and (c)(2), the following special conditions are proposed:

(a) \( V_{MO} \) to \( V_{min} \) with the flaps retracted; and

(b) \( V_{min} \) to \( V_{FE} \) with flaps in the landing position.

Issued in Renton, Washington, on December 13, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.

[FR Doc. 2010–32326 Filed 12–22–10; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

14 CFR Part 39


RIN 2120–AA64

Airworthiness Directives; The Boeing Company Model 777–200, –200LR, –300, and –300ER Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (NPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for certain Model 777–200, –200LR, –300, and –300ER series airplanes. The original NPRM would have required doing an inspection to identify the part number of the motor operated valve (MOV) actuators of the main and center fuel tanks; replacing certain MOV actuators with new MOV actuators; and measuring the electrical resistance of the bond from the adapter plate to the airplane structure, and doing corrective actions if necessary. The original NPRM also would have required revising the Airworthiness Limitations section of the Instructions for Continued Airworthiness. The original NPRM resulted from fuel system reviews conducted by the manufacturer. This action revises the original NPRM by adding airplanes to the applicability. This action also revises the original NPRM by removing the requirement for revising the Airworthiness Limitations section of the Instructions for Continued Airworthiness. We are proposing this supplemental NPRM to prevent electrical current from flowing through an MOV actuator into a fuel tank, which could create a potential ignition source inside the fuel tank. This condition, in combination with flammable fuel vapors, could result in a fuel tank explosion and consequent loss of the airplane.

DATES: We must receive comments on this supplemental NPRM by January 18, 2011.

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

- 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 proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H–65, Seattle, Washington 98124–2207; telephone 206–544–5000, extension 1; fax 206–766–5680; e-mail me.boecon@boeing.com; Internet https://www.myboeingfleet.com. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425–227–1221.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov; 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 proposed 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.


SUPPLEMENTARY INFORMATION: