conservation standards can and should be assigned energy conservation standards. DOE also seeks information and comment regarding the possible consolidation of NEMA Design A and Design B motors into one equipment class and NEMA T- and U-frame motors into one equipment class for the purpose of its analysis and energy conservation standards.

1. DOE requests comment on the preliminary conclusions included in Table 1 and Table 2.
2. DOE seeks comment on whether the analyses performed for motors that currently have standards can be extended to those electric motors listed in Table 1 and Table 2.
3. DOE seeks information regarding whether any of the motor types listed in Table 1 and Table 2 have any unique design features that affect the cost or efficiency of the motor compared to general purpose motors.

a. If the cost-efficiency relationship for a comparable general purpose motor cannot be applied to the motor type in question, DOE requests information on the relationship between cost and efficiency.

b. DOE requests information on whether a scaling relationship can be used to extend the cost-efficiency relationship of a general purpose motor to the motor type in question.
4. DOE requests comment on the market share of each of these motor types listed in Table 1 and Table 2.
5. DOE requests comment on the potential energy saved by including each motor type listed in Table 1 and Table 2 in the standards rulemaking.
6. DOE seeks information on methods for testing the motors listed in Table 1 and Table 2, and how they may differ from the current test procedures for electric motors. If a new test procedure is needed, DOE requests information on the reasons why such a new procedure is needed and the current availability and applicability of any test procedures or test methods. DOE also seeks confirmation of the accuracy of its understanding with respect to the testing of vertical shaft motors.
7. DOE seeks information on any other types of definite purpose or special purpose motors not listed in Table 1 and Table 2 that DOE should consider including in this rulemaking.

8. DOE seeks comment on the possible consolidation of NEMA Design A and Design B motors into one equipment class, and NEMA T- and U-frame motors into one equipment class.

a. What are the possible differences in achievable efficiency between Design A and Design B motors?
b. What are the respective market shares of Design A and Design B motors?
c. What are the possible differences in achievable efficiency between U-frame and T-frame motors?
d. What are the respective market shares of U-frame and T-frame motors?

Issued in Washington, DC, on March 24, 2011.

Kathleen B. Hogan,

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BILLING CODE 4450–01–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM451; Notice No. 25–11–10–SC]

Special Conditions: Bombardier Model BD–700–1A10 and BD–700–1A11 Airplanes, Head-Up Display (HUD) With Video Synthetic Vision System (SVS)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes. These airplanes, as modified by Bombardier Inc., will have a novel or unusual design features associated with a SVS that displays video imagery on the HUD. 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: We must receive your comments by April 19, 2011.

ADDRESSES: You must mail two copies of your comments to: Federal Aviation Administration, Transport Airplane Directorate, Attn: Rules Docket (ANM–113), Docket No. NM451, 1601 Lind Avenue, SW., Renton, Washington 98057–3356. You may deliver two copies to the Transport Airplane Directorate at the above address. You must mark your comments: Docket No. NM451. You can inspect comments in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.


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 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 file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel concerning these special conditions. You can inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the ADDRESSES section of this preamble between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive on or before the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

If you want us to acknowledge receipt of your comments on this proposal, include with your comments a self-addressed, stamped postcard on which you have written the docket number. We will stamp the date on the postcard and mail it back to you.

Background
On January 26, 2007, Transport Canada Civil Aviation (TCCA), on behalf of Bombardier Inc., located in Montreal Canada, applied to the New York Aircraft Certification Office (NYACO) for FAA approval of a type-design change on the Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes. Per Type Certificate Data Sheet (TCDS) T00003NY, those aircraft models are known under the marketing designation of Global Express and Global 5000, respectively. The change is to introduce the Rockwell-Collins avionics suite to replace the existing Honeywell Primus 2000EP avionics suite. It includes the installation of a SVS that displays video imagery.

Video display on the HUD constitutes new and novel technology for which the
FAA has no certification criteria. Title 14, Code of Federal Regulations (14 CFR) 25.773 does not permit visual distortions and reflections that could interfere with the pilot’s normal duties and was not written in anticipation of such technology. Other applications for certification of such technology are anticipated in the near future and magnify the need to establish FAA safety standards that can be applied consistently for all such approvals. Special conditions are therefore proposed as prescribed under the provisions of §21.16.

Type Certification Basis

Under the provisions of 14 CFR 21.101, Bombardier Inc. must show that the Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes, as changed, continue to meet the applicable airworthiness regulations and special conditions, the Bombardier Model BD–700–1A10 and BD–700–1A11 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.

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 14 CFR 21.101.

Novel or Unusual Design Features

The Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes will incorporate the following novel or unusual design features:

An SVS that displays video imagery on a HUD.

Discussion

For many years the FAA has approved, on transport category airplanes, the use of HUD that display flight symbology, without a significant visual obscuration of the outside view. When the FAA began to evaluate the display of enhanced vision system (EVS) imagery on the HUD, significant potential to obscure the outside view became apparent, contrary to the requirements of 14 CFR 25.773. This rule does not permit distortions and reflections in the pilot-compartment view that can interfere with normal duties, and the rule was not written in anticipation of such technology. The video image potentially interferes with the pilot’s ability to see the natural scene in the center of the forward field of view. Therefore, the FAA issued special conditions for such HUD/EVS installations to ensure that the level of safety required by §25.773 would be met even when the image might partially obscure the outside view. While many of the characteristics of EVS and SVS video differ in some ways, they have one thing in common; the potential for interference with the outside view through the airplane windshield. The FAA proposes special conditions for new and novel technologies to achieve equivalent levels of safety.

Nevertheless, the SVS may be capable of meeting the required level of safety when considering the combined view of the image and the outside scene visible to the pilot through the image. It is essential that the pilot can use this combination of image and natural view of the outside scene as safely and effectively as the pilot-compartment view currently available without the SVS image.

Because §25.773 does not provide for any alternatives or considerations for such a new and novel system, the FAA establishes safety requirements that assure an equivalent level of safety and effectiveness of the pilot-compartment view as intended by that rule. The purpose of this special condition is to provide the unique pilot-compartment-view requirements for the SVS installation.

Applicability

As discussed above, these special conditions are applicable to the Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes. Should Bombardier Inc. apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features on Bombardier Model BD–700–1A10 and BD–700–1A11 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, and 44704.

The Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type-certification basis for Bombardier Model BD–700–1A10 and BD–700–1A11 airplanes.

1. During any phase of flight in which it is to be used, the SVS imagery on the HUD must not degrade flight safety or interfere with the effective use of outside visual references for required pilot tasks.

2. To avoid unacceptable interference with the safe and effective use of the...
pilot-compartment view, the SVS must meet the following requirements:

a. The SVS design must minimize unacceptable display characteristics or artifacts (e.g., terrain shadowing against a dark background) that obscure the desired image of the scene, impair the pilot’s ability to detect and identify visual references, mask flight hazards, distract the pilot, or otherwise degrade task performance or safety.

b. Control of SVS image display brightness must be sufficiently effective in dynamically changing background (ambient) lighting conditions to avoid pilot distraction, impairment of the pilot’s ability to detect and identify visual references, masking of flight hazards, or to otherwise degrade task performance or safety. If automatic control for image brightness is not provided, it must be shown that a single, manual setting is satisfactory for the range of lighting conditions encountered during a time-critical, high-workload phase of flight (e.g., low-visibility approach).

c. A readily accessible control must be provided that permits the pilot to immediately deactivate and reactivate display of the SVS image on demand, without having to remove hands from the flight controls and throttles.

d. The SVS image on the HUD must not impair the pilot’s use of guidance information, or degrade the presentation and pilot awareness of essential flight information displayed on the HUD, such as alerts, airspeed, attitude, altitude and direction, approach guidance, windshear guidance, TCAS resolution advisories, or unusual-attitude recovery cues.

e. The SVS image and the HUD symbols, which are spatially referenced to the pitch scale, outside view, and image, must be scaled and aligned (i.e., conformal) to the external scene. In addition, the SVS image and the HUD symbols—when considered singly or in combination—must not be misleading, cause pilot confusion, or increase workload. Airplane attitudes or crosswind conditions may cause certain symbols (e.g., the zero-pitch line or flight-path vector) to reach field-of-view limits, such that they cannot be positioned conformally with the image and external scene. In such cases, these symbols may be displayed but with an altered appearance that makes the pilot aware that they are no longer displayed conformally (for example, “ghosting”). The combined use of symbology and runway image may not be used for path monitoring when path symbology is no longer conformal.

f. A HUD system used to display SVS images must, if previously certified, continue to meet all of the requirements of the original approval.

3. The safety and performance of the pilot tasks associated with the use of the pilot-compartment view must be not be degraded by the display of the SVS image. These tasks include the following:

a. Detection, accurate identification and maneuvering, as necessary, to avoid traffic, terrain, obstacles, and other flight hazards.

b. Accurate identification and utilization of visual references required for every task relevant to the phase of flight.

c. Appropriate limitations must be stated in the Operating Limitations section of the Airplane Flight Manual to prohibit the use of the SVS for functions that have not been found to be acceptable.

Issued in Renton, Washington, on March 18, 2011.

K.C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2011–7414 Filed 3–29–11; 8:45 am]
BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52


Approval and Promulgation of Implementation Plans; Oklahoma; Regional Haze State Implementation Plan; Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Best Available Retrofit Technology Determinations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Announcement of public hearing.

SUMMARY: On March 22, 2011, EPA published a proposal in the Federal Register to approve and disapprove portions of State Implementation Plan (SIP) revisions submitted by the State of Oklahoma and promulgate a Federal Implementation Plan (FIP) to address the Clean Air Act requirement for best available retrofit technology (BART) for sulfur dioxide (SO2) emissions and to prevent emissions from Oklahoma sources from interfering with other states’ measures to protect visibility. See 76 FR 16168. Our proposal can be accessed online at http://www.regulations.gov (Docket No. EPA–R06–OAR–2010–0190). In the notice we announced an open house and public hearing for the proposal to be held Wednesday, April 13, 2011, in Oklahoma City, Oklahoma. We have scheduled an additional open house and public hearing to be held in Tulsa, Oklahoma on Thursday, April 14, 2011.

The Oklahoma City open house and public hearing is scheduled to be held on Wednesday April 13, 2011, at the Metro Technology Centers, Springlake Campus, Business Conference Center, Meeting Rooms H and I, 1900 Springlake Drive, Oklahoma City, Oklahoma 73111, (405) 424–8324. The Metro Technology Centers Springlake Campus is located at the intersection of Martin Luther King Ave. and Springlake Drive between NE. 36th and NE. 50th just south of the Oklahoma City Zoo and Kirkpatrick Center. Parking for the