

4. In § 537.110 the section heading is revised, the existing text is designated as paragraph (a), and paragraph (b) is added to read as follows:

§ 537.110 Records and Reports.

* * * * *

(b) Before January 1st of each year, each agency must submit a written report to the Office of Personnel Management stating when the agency made student loan repayments on behalf of an employee during the previous fiscal year. Each report must include:

- (1) The number of employees selected to receive this benefit;
- (2) The job classifications of the employees selected to receive benefits under this part; and
- (3) The cost to the Federal government for providing benefits under this part.

[FR Doc. 01-6514 Filed 3-15-01; 8:45 am]

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DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

10 CFR Part 430

[Docket Number EE-RM/TP-97-440]

RIN 1904-AA46

Energy Conservation Program for Consumer Products: Test Procedures for Central Air Conditioners and Heat Pumps

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Proposed rule; extension of comment period and rescheduling of public hearing.

SUMMARY: On January 22, 2001, the Department of Energy published a notice of proposed rulemaking (NOPR) (66 FR 6768) to revise the test procedures for central air conditioners and heat pumps. The notice of proposed rulemaking announced that the closing date for receiving public comments would be March 23, 2001. The Air-Conditioning and Refrigeration Institute (ARI) requested that the comment period be extended to allow additional time for understanding the lengthy revisions to the test procedures. The Department agrees to this extension of the comment period to May 23, 2001. The NOPR also announced that a public workshop (hearing) would be held on February 7, 2001. ARI requested that this date be changed to allow more time

for preparation. The public workshop is now scheduled for March 29, 2001.

The proposed rule stated that there would be a workshop in the spring of 2001 to discuss modifications to the test procedure to encourage the use of thermostatic expansion valves (TXVs), and to discuss a standard mixed system rating method. This workshop will be held immediately following the proposed test procedure rulemaking workshop, in the same room, on the afternoon of the same date (March 29). The outcome of this second workshop will have no effect on this proposed test procedure rulemaking.

DATES: Comments must be received on or before May 23, 2001. The public workshop (hearing) on the proposed test procedure rulemaking will be held on March 29, 2001, in Washington, DC. The workshop on TXVs and mixed system rating methods will immediately follow, on the same date. Please send requests to speak at the workshop so that we receive them by 4 p.m., March 20, 2001. The Department must also receive ten (10) copies of statements to be given at the public workshop no later than 4 p.m., March 21, 2001, and we request that you provide a computer diskette (WordPerfect 8) of each statement at that time.

ADDRESSES: Please submit written comments and requests to speak at the public hearing to: Michael Raymond, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Hearings and Dockets, Test Procedures for Central Air Conditioners Including Heat Pumps, Docket No. EE-RM-97-440, EE-41, Room 1J-018, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121. You may send an email to: michael.raymond@ee.doe.gov. The hearing will be at the U.S. Department of Energy, Forrestal Building, Room 1E-245, 1000 Independence Avenue, SW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Michael Raymond at (202) 586-9611, E-mail: michael.raymond@ee.doe.gov, or Eugene Margolis, Esq., (202) 586-9507, E-mail: Eugene.Margolis@HQ.DOE.GOV.

Issued in Washington DC, on March 12, 2001.

Abraham E. Haspel,

Acting Director, Office of Energy Efficiency and Renewable Energy.

[FR Doc. 01-6570 Filed 3-15-01; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM185; Notice No. 25-01-02-SC]

Special Conditions: Enhanced Vision System (EVS) for Gulfstream Model G-V Airplane

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This notice proposes special conditions for Gulfstream Model G-V airplanes. These airplanes, as modified by Gulfstream Aerospace Corporation, will have novel or unusual design features associated with a head-up display (HUD) system modified to display forward-looking infrared (FLIR) imagery. The regulations applicable to pilot compartment view 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 provided by the existing airworthiness standards.

DATES: Comments must be received on or before April 30, 2001.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attention: Rules Docket (ANM-114), Docket No. NM185, 1601 Lind Avenue SW., Renton, Washington 98055-4056; or delivered in duplicate to the Transport Airplane Directorate at that address. All comments must be marked: Docket No. NM185. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Dale Dunford, FAA, Transport Standards Staff, ANM-111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (425) 227-2239; fax (425) 227-1100; e-mail: dale.dunford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of these proposed special conditions by submitting such written data, views, or arguments, as they may desire. Communications should identify the

regulatory docket number (NM185) and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator. These proposed special conditions may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to these proposed special conditions must include with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NM185." The postcard will be date-stamped and returned to the commenter.

Background

On February 13, 1998, Gulfstream Aerospace Corporation, 4150 Donald Douglas Drive, Long Beach, California 90808, applied for a supplemental type certificate (STC) to modify Gulfstream Model G-V airplanes. The Model G-V is a small transport category airplane. The Model G-V airplanes are powered by two BMW—Rolls Royce Mark BR700-710A1-10 engines, and have a maximum takeoff weight of 90,500 pounds. This airplane operates with a two-pilot crew and can hold up to 19 passengers.

The modification incorporates the installation of an Enhanced Vision System (EVS). This system consists of a previously approved Honeywell 2020 head-up display (HUD) system that is modified to display forward-looking infrared (FLIR) imagery provided by a Kollsman FLIR assembly. The EVS is novel or unusual technology for which the FAA has no certification criteria. Title 14, Code of Federal Regulations (14 CFR) § 25.773 ("Pilot compartment view"), prohibits visual distortions, glare, and reflections that could interfere with the pilot's normal duties. That regulation was not written in anticipation of an imagery display that could interfere with the pilot's forward field of view. Because § 25.773 does not provide for any alternatives or considerations for such a novel or unusual system as the EVS, the FAA finds it necessary to establish safety requirements that ensure an equivalent level of safety and effectiveness of the pilot compartment view as intended by the regulation.

To maintain an equivalent level of safety with § 25.773, the fundamental principle must be that the combination of what the pilot can see in the FLIR image, and what can be seen through and around the image display, must be as safe and effective as the view without the EVS image. 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.

Type Certification Basis

Under the provisions of § 21.101 ("Designation of applicable regulations"), Gulfstream Aerospace Corporation must show that the Gulfstream Model G-V airplanes, as changed, comply with the regulations in the U.S. type certification basis established for the Model G-V airplane. The U.S. type certificate basis established for the Model G-V airplane is established in accordance with § 21.21 ("Issue of type certificate * * *") and § 21.17 ("Designation of applicable regulations"), and the type certification application date. The U.S. type certification basis for this model airplane is listed in Type Certificate Data Sheet No. A12EA.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25, as amended) do not contain adequate or appropriate safety standards for the Gulfstream Model G-V airplanes modified by Gulfstream Aerospace Corporation because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16 ("Special conditions").

In addition to the applicable airworthiness regulations and special conditions, these Gulfstream Model G-V airplanes must comply with the fuel vent and exhaust emission requirements of part 34 and the noise certification requirements of part 36.

Special conditions, as appropriate, are issued in accordance with § 11.19 ("What is a final rule?"), after public notice, as required by § 11.38 ("What public comment procedures does FAA follow for Special Conditions?"), and become part of the type certification basis in accordance with § 21.101(b)(2).

Special conditions are initially applicable to the model for which they are issued. Should Gulfstream Aerospace Corporation apply at a later date for a supplemental type certificate to modify any other model included on the same type certificate to incorporate the same novel or unusual design feature, these special conditions would

also apply to the other model under the provisions of § 21.101(a)(1).

Novel or Unusual Design Features

The EVS is novel or unusual technology because it places a raster * infrared image in the center of the pilot's regulated "pilot compartment view," which must be free of interference, distortion, and glare that would adversely affect the performance of the pilot's normal duties. (*A "raster" image is typically a set of horizontal lines composed of individual pixels, used to form an image on a CRT or other screen.) The EVS/HUD system displays a raster image from a forward-looking infrared (FLIR) camera on the previously approved Honeywell HUD 2020 system. The EVS image is displayed with HUD symbology and overlays the forward outside view. Fundamentally, the combination of information seen by the pilot in the EVS image, and the visual information seen by the pilot through and around the image, must be as safe and effective as the pilot's view without EVS.

Operationally, during an instrument approach, the EVS image is intended to supplement the pilot's ability to detect and identify "visual references for the intended runway," which are listed and required by § 91.175(c)(3) ("Takeoff and landing under IFR") to continue the approach below decision height. It may be possible to demonstrate whether, in certain conditions, the EVS can provide an image of such references, perhaps even better than the references can be seen through the window by the pilot without EVS. However, systems such as EVS, which use the infrared wavelength, sense the scene with distinctly different characteristics than a pilot's eyes do. An infrared sensor responds to apparent temperature differences in the scene and does not respond to contrasting colors and brightness like the pilot's eyes would. Visual features can appear significantly different to a pilot in the infrared image than they would with normal vision.

While displaying the infrared image, the EVS also will partially interfere with the pilot's natural outside view. There is the potential for the image to improve the pilot's ability to detect and identify items of interest, yet, at the same time, the potential for it to interfere with the pilot compartment view. Section 25.773(a)(2) states:

Each pilot compartment must be free of glare and reflection that could interfere with the normal duties of the minimum flight crew.

The EVS image is displayed in the field of view required by § 25.773, and may potentially interfere with the pilot's

ability to see the actual outside scene through the forward window, particularly in the center of the forward field of view.

The EVS raster image has more potential for interference with the pilot compartment view than stroke symbols also displayed on the HUD. Stroke symbology illuminates a small fraction of the total display area of the HUD. Without the raster image, the pilot can easily see around the symbology and the outside view is not unacceptably compromised. However, unlike stroke symbology, the EVS image illuminates most of the total display area of the HUD (approximately 30 degrees horizontally and 20 degrees vertically) with much greater potential interference with the pilot compartment view. The pilot cannot see around the raster image, but must see the outside scene through it.

Additionally, unlike the pilot's external view, the EVS image is monochrome and two-dimensional, without depth cues. The quality of the EVS image and the level of EVS infrared sensor performance could depend significantly on the atmospheric and external light source conditions. Gain settings of the sensor, and brightness or contrast settings of the HUD, can significantly affect image quality. Certain system characteristics can create distracting and confusing display artifacts. Finally, because this is a sensor-based system that is intended to provide a conformal perspective corresponding with the outside scene, the potential for misalignment must be considered.

Hence, criteria for each of the following need to be addressed:

- An acceptable degree of interference of the window or "window and HUD" view;
- Potential image misalignment;
- Distortion; and
- The potential for pilot confusion or misleading information.

Section 25.773 did not anticipate this type of technology, and the regulation currently is not considered to be adequate to address the specific issues related to an enhanced vision system. Therefore, the FAA has determined that, in addition to the requirements of 14 CFR part 25, special conditions are needed to address requirements particular to the installation of an EVS.

Discussion

Gulfstream Aerospace Corporation intends for the EVS to present an enhanced view that would aid the pilot, during the approach:

- To see and recognize external visual references that are required by § 91.175(c), and

- To visually monitor the integrity of the approach, as described in FAA Order 6750.24D ("Instrument Landing System and Ancillary Electronic Component Configuration and Performance Requirements," dated March 1, 2000).

Based on this functionality, users would seek to obtain operational approval to conduct approaches when the Runway Visual Range (RVR) is as low as 1,200 feet, including approaches to Type I runways. Gulfstream does not intend for the EVS imagery to be used either as a means of flight guidance, or as the substitution for the outside view while maneuvering the airplane during approach, landing, rollout, or takeoff.

The FAA considers that EVS may be found acceptable for the following functions:

- Presenting an enhanced view that would aid the pilot during the approach.
- Displaying an image that the pilot can use to detect and identify the "visual references for the intended runway" required by § 91.175(c)(3) to continue the approach with vertical guidance to 100 feet height above touchdown (HAT).

However, the FAA finds that it would not be appropriate to reduce the ceiling and visibility minima of the instrument approach procedure being used based on the use of EVS.

Further, the FAA certification of EVS is limited as follows:

- The infrared-based EVS image will not be certified as a means to satisfy the requirements for descent below 100 feet HAT.
- The infrared-based EVS image will not be certified as a means to establish that flight visibility is consistent with the visibility condition prescribed in the standard instrument approach being used [see § 91.175(c)(2)].
- The EVS imagery, alone, will not be certified either as flight guidance, or as a substitution for the outside view for maneuvering the airplane during approach, landing, rollout, or takeoff.
- The EVS may be used as a supplemental device during any phase of flight or operation in which its safe use has been established.

Although the EVS image projected on the HUD can interfere with the pilot compartment view, contrary to § 25.773, the FAA finds that an equivalent level of safety to that requirement may be possible with the combined view of the image and the outside scene that the pilot is able to see through the image. An EVS image may reduce the clear

outside view of portions of the visual field, and yet, at the same time, may provide an enhanced image of that scene. The pilot must be able to use this combination of information seen in the image, and the natural view of the outside scene seen through the image, as safely and effectively as the pilot would use a § 25.773-compliant pilot compartment view without an EVS image. This is the fundamental objective of the proposed special conditions. Compliance with these special conditions and other airworthiness requirements of part 25 does not constitute operational approval for use of EVS.

The FAA intends to develop guidance material for use of the EVS that will cover operations, pilot qualification, and training.

The FAA also intends to apply certification criteria, not as special conditions, for compliance with other Federal Aviation Regulations, including § 25.1301 ("Equipment: Function and installation") and § 25.1309 ("Equipment, systems, and installations"). These criteria address certain image characteristics, installation, demonstration, and system safety.

Image characteristics criteria include:

- Resolution,
- Luminance,
- Luminance uniformity,
- Low level luminance,
- Contrast variation,
- Display quality,
- Display dynamics (for example, jitter, flicker, update rate, and lag), and
- Brightness controls.

Installation criteria address:

- Visibility and access to EVS controls, and
- Integration of EVS in the cockpit.

The EVS demonstration criteria address the flight and environmental conditions that need to be covered.

The FAA also intends to apply certification criteria relevant to high intensity radiated fields (HIRF) and lightning protection.

A copy of these proposed means of compliance criteria may be obtained by sending a request to the following e-mail address: 9-ANM-EVS-CRITERIA@faa.gov.

Applicability

As discussed above, these proposed special conditions would apply to Gulfstream Model G-V airplanes modified by Gulfstream Aerospace. Should Gulfstream Aerospace apply at a later date for a supplemental type certificate to modify any other model included on the same type certificate to incorporate the same novel or unusual

design feature, these special conditions would apply to that model as well under the provisions of § 21.101(a)(1).

Conclusion

This action affects only certain novel or unusual design features on the Gulfstream Model G–V airplanes modified by Gulfstream Aerospace. It is not a rule of general applicability and affects only the applicant who applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these proposed 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 proposes the following special conditions as part of the supplemental type certification basis for the Gulfstream Model G–V airplanes modified by Gulfstream Aerospace:

1. The EVS imagery on the HUD must not degrade the safety of flight, nor interfere with the effective use of outside visual references for required pilot tasks, during any phase of flight in which it is to be used.

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

2.a. The EVS design must minimize unacceptable display characteristics or artifacts (for example, noise, “burlap” overlay, running water droplets) 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.

2.b. Control of EVS display brightness must be sufficiently effective, in dynamically changing background (ambient) lighting conditions, to prevent full or partial blooming of the display that would distract the pilot, impair the pilot’s ability to detect and identify visual references, mask flight hazards, or 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.

2.c. A readily accessible control must be provided that permits the pilot to immediately deactivate and reactivate display of the EVS image on demand.

2.d. The EVS image on the HUD must not impair the pilot’s use of guidance information nor 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, and unusual attitude recovery cues.

2.e. The EVS image must be sufficiently aligned and conformal to both the external scene and conformal HUD symbology so as not to be misleading, cause pilot confusion, or increase workload.

2.f. A HUD system modified to display EVS images must continue to meet all 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 not be degraded by the display of the EVS image. Pilot tasks that must not be degraded by the EVS image include:

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

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

4. The use of EVS will not reduce the ceiling and visibility minima of the instrument approach procedure being used. The EVS may be found acceptable for the following functions:

4.a. Presenting an image that would aid the pilot during the approach.

4.b. Displaying an image that the pilot can use to detect and identify the “visual references for the intended runway” required by § 91.175(c)(3) to continue the approach with vertical guidance to 100 feet height above touchdown (HAT). Appropriate limitations must be included in the Operating Limitations section of the Airplane Flight Manual to prohibit the use of the EVS for functions not found to be acceptable.

Issued in Renton, Washington, on March 8, 2001.

Vi L. Lipski,

*Manager, Transport Airplane Directorate,
Aircraft Certification Service.*

[FR Doc. 01-6531 Filed 3-15-01; 8:45 am]

BILLING CODE 4910-13-U

POSTAL SERVICE

39 CFR Part 111

Proposed Domestic Mail Manual Changes for First-Class Mail, Standard Mail, and Bound Printed Matter Flats

AGENCY: Postal Service.

ACTION: Proposed rule.

SUMMARY: The Postal Service is seeking comments on the following proposed mail preparation changes to the Domestic Mail Manual (DMM): Packages of First-Class Mail Presorted rate flats and automation rate flats that are part of the same mailing job would be required to be co-trayed according to the standards in M910; Packages of Standard Mail Presorted rate flats and automation rate flats that are part of the same mailing job would be required to be co-sacked according to the standards in M910; Standard Mail Enhanced Carrier Route and 5-digit flats would be required to be sacked or palletized using the labeling list L001 scheme sort. This includes the scheme sorts included in the optional preparation methods in M920, M930, and M940; and Bound Printed Matter Carrier Route and 5-digit flats would be required to be sacked or palletized using the labeling list L001 scheme sort.

DATES: Comments must be received on or before April 13, 2001.

ADDRESSES: Send written comments to the Manager, Mail Preparation and Standards, US Postal Service, 1735 N Lynn Street, Rm 3025, Arlington, VA 22209–6038. Written comments may be submitted via fax at 703–292–4058. Copies of all written comments are available via fax or mail by calling Anne Emmerth at the number listed below.

FOR FURTHER INFORMATION CONTACT:
Anne Emmerth, 703–292–3641,
aemmerth@email.usps.gov.

SUPPLEMENTARY INFORMATION: The Postal Service is seeking comments on proposed changes to the Domestic Mail Manual (DMM) that would change mail preparation standards for flats. The changes themselves are outlined below by class of mail; the proposed DMM language follows at the end of this proposed rule. The proposed implementation date for these standards is September 1, 2001.

Generally, these changes are intended to align mail preparation more closely with the way that the Postal Service transports and processes flat-sized mail. The co-traying requirements for First-Class Mail flats and the co-sacking requirements for Standard Mail flats should result in fewer less-than-full trays and sacks and an overall reduction in the number of trays and sacks prepared by mailers and processed by the Postal Service. For Presorted rate Standard Mail, with sack-based rates, this may also result in lower postage rates for some mail that will move to a finer sack presort level. Requiring the use of labeling list L001 for sacked carrier route Standard Mail and Bound Printed Matter flats also will result in