

**Cross-Reference to Subpart H of Part 1201**

This amendment also includes a change to 5 CFR 1209.3, "Application of 5 CFR part 1201," to include a statement that requests for attorney fees and consequential damages in connection with appeals under part 1209 are governed by subpart H of part 1201.

**Citations**

All citations to MSPB decisions are to West Publishing Company's *Merit Systems Protection Board Reporter* (M.S.P.R.). This publication is available in many law libraries and some public libraries. It is also available in the MSPB Library, 1120 Vermont Avenue, NW, 8th Floor, Washington, DC, which is open to the public between 1:00 and 5:00 PM, Monday through Friday (excluding Federal holidays).

The Board is publishing this rule as an interim rule pursuant to 5 U.S.C. 1204(h).

**List of Subjects in 5 CFR Part 1209**

Administrative practice and procedure, Civil rights, Government employees.

Accordingly, the Board amends 5 CFR part 1209 as follows:

**PART 1209—[AMENDED]**

1–2. The authority citation for part 1209 continues to read as follows:

**Authority:** 5 U.S.C. 1204, 1221, 2302(b)(8), and 7701.

3. Section 1209.3 is amended by adding at the end of the existing text the following sentence:

**§ 1209.3 Application of 5 CFR part 1201.**

\* \* \* The Board will apply the provisions of subpart H of part 1201 regarding awards of attorney fees and consequential damages under 5 U.S.C. 1221(g) to appeals governed by this part.

4. Section 1209.4 is amended by removing "or" at the end of paragraph (a)(9), by redesignating paragraph (a)(10) as (a)(11) and revising it, and by adding a new paragraph (a)(10) to read as follows:

**§ 1209.4 Definitions.**

(a) \* \* \*

(10) A decision to order psychiatric testing or examination; or

(11) Any other significant change in duties, responsibilities, or working conditions.

\* \* \*

5. Part 1209 is amended by adding subpart E to read as follows:

**Subpart E—Referrals to the Special Counsel****§ 1209.13 Referral of findings to the Special Counsel.**

When the Board determines in a proceeding under this part that there is reason to believe that a current Federal employee may have committed a prohibited personnel practice described at 5 U.S.C. 2302(b)(8), the Board will refer the matter to the Special Counsel to investigate and take appropriate action under 5 U.S.C. 1215.

Dated: April 1, 1997.

**Robert E. Taylor,**  
*Clerk of the Board.*

[FR Doc. 97–8644 Filed 4–8–97; 8:45 am]

BILLING CODE 7400–01–U

**DEPARTMENT OF JUSTICE****Immigration and Naturalization Service; Executive Office for Immigration Review****8 CFR Part 3**

[INS 1788–96; AG Order No. 2071–97]

RIN 1115–AE47

**Immigration and Naturalization Service and Executive Office for Immigration Review; Inspection and Expedited Removal of Aliens; Detention and Removal of Aliens; Conduct of Removal Proceedings; Asylum Procedures; Correction**

**AGENCY:** Immigration and Naturalization Service and Executive Office for Immigration Review.

**ACTION:** Correction to interim regulation.

**SUMMARY:** This document contains a correction to the interim regulation, published Thursday, March 6, 1997 (62 FR 10312), relating to inspection and expedited removal of aliens, detention and removal of aliens, conduct of removal proceedings, and asylum procedures.

**EFFECTIVE DATE:** April 9, 1997.

**FOR FURTHER INFORMATION CONTACT:** Margaret M. Philbin, (703) 305–0470 (not a toll free call).

**SUPPLEMENTARY INFORMATION:****Background**

The interim regulation that is the subject of these corrections amends the regulations of the Immigration and Naturalization Service and Executive Office for Immigration Review to implement the provisions of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 governing

expedited and regular removal proceedings, handling of asylum claims, and other activities involving the apprehension, determination, hearing of claims and ultimately the removal of inadmissible and deportable aliens. This rule also incorporates a number of changes which are part of the Administration's reinvention and regulation streamlining effort. On April 1, 1997, a correction notice (62 FR 15362, FR Doc. 97–8105) was published correcting those technical errors contained in the interim regulation. This notice corrects an additional technical error contained in the interim regulation.

**Need for Correction**

As published, the interim regulation contained errors which were in need of clarification.

**Correction of Publication**

Accordingly, the publication on March 6, 1997, of the interim regulation (INS No. 1788–96; AG Order No. 2071–97), which was the subject of FR Doc. 97–5250, is corrected as follows:

**§ 3.23 [Corrected]**

1. On page 10333, in the first column, in § 3.23(b)(1), the reference to "§ 208.22(f)" at the end of paragraph (b)(1) introductory text is removed and is replaced with a reference to "§ 208.22(e)".

**Rosemary Hart,**

*Federal Register Liaison Officer.*

[FR Doc. 97–8984 Filed 4–8–97; 8:45 am]

BILLING CODE 4410–87–M

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 25**

[Docket No. NM–132, Special Conditions No. 25–ANM–124]

**Special Conditions: Lockheed Martin Aerospace Corp. Model L382J Airplane**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final special conditions.

**SUMMARY:** These special conditions are for the Lockheed Martin Aerospace Corp. Model L382J airplane. This airplane will have a novel or unusual design feature(s) associated with the installation of a dual head up display (HUD) to be used as a primary flight display (PFD) for all regimes of normal operation. The HUD will satisfy the basic requirements of § 25.1321 and serve as the primary source of flight

director command information. These special conditions contain the additional safety standards which the Administrator considers necessary to establish a level of safety equivalent to that established by the airworthiness standards of Part 25 of the Federal Aviation Regulations (FAR).

**EFFECTIVE DATE:** May 9, 1997.

**FOR FURTHER INFORMATION CONTACT:** Dale Dunford, FAA, Flight Test and Systems Branch, ANM-111, Transport Standards Staff, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW, Renton, Washington 98055-4056; telephone 206-227-2239.

**SUPPLEMENTARY INFORMATION:**

**Background**

On August 2, 1992, Lockheed Martin Aerospace Co. applied for an amendment to their Type Certificate No. A1SO to include their new Model L382J. The Model L382J is a derivative of the L382B/E/G currently approved under Type Certificate No. A1SO, and features a new engine (with approximately the same rated horsepower, but heavily flat-rated) and propeller, both of which are controlled by a full authority digital engine control. Additionally, the flight deck is substantially modified by the installation of four liquid crystal flight displays, dual head-up displays, and Mil-Std 1553 data buses. The flight engineer position is deleted, requiring automation of some functions as well as redesign of the front and overhead panels. Some structure has been modified but the aerodynamics of the airplane are essentially unchanged. The latest Part 25 requirement will be used for all significantly modified portions of the Model 382J (as compared to the present L382), and, for the unmodified portions of the airplane, the applicable certification standard will be the Part 25 rules that were effective on February 1, 1965.

The existing rule, § 25.1321, did not anticipate the design features, symbology, chromatic limitations, and pilot view constraints associated with most HUDs. This particular HUD application is the first attempt to qualify the HUD as a PFD. Current head down displays (HDD) provide all primary and other information without requiring the flightcrew to transition from one lighting and information display format to another and are very tolerant of pilot head position regarding acquiring primary flight data. This HUD application would require the flight crewmember using the HUD to limit head position in order to ensure the ability to acquire the necessary flight

information and to frequently transition to a different lighting condition and display format to acquire flight mode and navigation information. These proposed special conditions provide all the necessary requirements to determine acceptability of the HUD as a PFD. A proof of concept effort is required to substantiate that for the particular application there are no unsafe features.

**Type Certification Basis**

Under the provisions of § 21.101, Lockheed Martin Aerospace Corp. must show that the Model L382J meets the applicable provisions of the regulations incorporated by reference in Type Certificate No. A1SO or the applicable regulations in effect on the date of application for the changes to the Model L382. In addition, the certification basis includes certain special conditions and later amended sections of Part 25 that are not relevant to these proposed special conditions.

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 Model L382J because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions, as appropriate, are issued in accordance with § 11.49 of the FAR after public notice, as required by §§ 11.28 and 11.29(b), 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 the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature the special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

**Novel or Unusual Design Features**

The Model L382J will incorporate a novel or unusual design feature which is a dual head up display of primary flight information in a monochromatic format using appropriate symbology that may be different from similar information provided in the head down display.

As discussed above, these special conditions are applicable to the L382J. Should Lockheed Martin Aerospace Corp. 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 under the provisions of § 21.101(a)(1).

**Discussion of Comments**

Notice of Proposed Special Conditions No. SC-96-5-NM for the Lockheed Martin Aerospace Corp. Model L382J Airplane, was published in the **Federal Register** on September 17, 1996. One commenter submitted comments.

The Civil Aviation Authority of the United Kingdom submitted comments on the Notice of Proposed Special Condition for the L382J Dual Head-up Display (HUD) installation for use as primary flight displays (PFD) for all phases of flight.

The commenter suggests that paragraphs 1.e. and 2.b. imply a supplementary HUD, because of the requirement for the pilot to transfer attention between the HUD and the head down instrumentation. The commenter requests clarification of the intended function of the HUD, since this requirement to refer to other displays seems inconsistent with the intended function of the HUD as a PFD. The commenter also states that with such a requirement for this transfer in pilot attention, the scan task workload is significantly increased and should be separately assessed.

The FAA believes that pilot scan transitions between the HUD and instrument panel are a natural, necessary pilot function which must be accommodated and is not inconsistent with its use as a PFD. A PFD does not provide all information required by the pilot in the normal performance of duties. The pilot must also refer to other displays for awareness of navigation, communication, engine, and other system elements of information. The PFD HUD is not always the sole source of primary flight information in the cockpit, and FAA experience has shown that there are occasions when, though the HUD is proven fully functional, the pilot prefers to use the instrument panel PFD. Two prime cases are recovery from unusual attitudes, and when the sun is near the horizon, directly behind the HUD. The FAA recognizes there is a potential for scan transitions between the PFD HUD and instrument panel to lead to delays, hazardous misinterpretation, and excessive cognitive workload if the designs of these instruments are not mutually compatible. Therefore, the FAA includes this compatibility requirement in the special condition and intends to evaluate the integrated HUD/instrument panel design for task performance, workload and pilot error potential.

The commenter states that the HUD could not be approved as a PFD under the provisions of JAR 25.1303 and ACJ

25.1303. JAR 25.1303 requires that the presentation of instruments be "clear and unambiguous", and ACJ 25.1303 specifies that the primary attitude display should distinguish between "earth and sky" by the use of contrasting shades or colors. The commenter states that there is strong evidence that a monochrome HUD cannot provide for adequate recognition and recovery from unusual attitudes, and that the pilot must therefore use the color PFD on the instrument panel for this purpose. Hence, the HUD cannot be a PFD.

The FAA notes that there are some differences between the FAR and JAR language and associated advisory materials. In particular, the portion of JAR 25.1303 quoted by the commenter is not found in corresponding FAA documents. The FAA agrees with the fundamental concern expressed by the commenter, and in paragraph 1.d. of the special condition requires that all information be presented in a clear and unambiguous manner. However, the FAA is not convinced that color is an essential display feature of a PFD, and that the ACJ 25.1303 specification for the use of contrasting shades and colors for the primary attitude display is not found in FAA advisory materials. FAA AC 25-11, Transport Category Electronic Display Systems, states that the primary purpose of display color is to separate information, to make the display easier to interpret with less time, workload, and error. However, the document advises that symbol size, shape and location are also useful for this purpose, and the AC recommends that at least two of these features be employed for the display of critical information. The FAA believes that the PFD must be clear and unambiguous, but is willing to evaluate alternatives to the use of color in a monochrome PFD HUD.

With regard to the ability to use the PFD to recognize and recover from unusual attitudes, the FAA shares the concern of the commenter and specifies in paragraph 1.g. of the special condition that the HUD be demonstrated to be adequate for this purpose. In the past, the FAA has required unusual attitude recovery functionality of some transport HUD installations.

Compensating special features, in addition to the artificial horizon and pitch scale, were provided in these monochrome HUD designs, which the FAA evaluated in flight and found sufficient. Therefore, the FAA believes that with careful evaluation, a HUD PFD may be found suitable for the critical function of unusual attitude recognition and recovery. The FAA also

acknowledges that many pilots may prefer the color PFD for unusual attitude recovery, as well as other flight conditions referred to above, therefore we have included the requirement to accommodate transition between the displays in paragraph 1.e.

The commenter states that a monochrome HUD cannot satisfy the color coding criteria of AC 25-11 which specify the identification of system limits and warnings with the color red.

The FAA agrees that the monochrome HUD cannot comply with color coding criteria found in AC 25-11, because no color coding is employed. The FAA, as stated previously, does not believe that the use of color is absolutely required. An FAA policy memorandum, entitled Low and High Speed Awareness Cues for Linear Tape Displays, issued by the Transport Airplane Directorate on September 12, 1996, states that other techniques, such as cross-hatching, may be used in a monochromatic HUD to provide the required distinction between zones of different meaning.

The other purpose of the color coding criteria is to prevent the use of hazardously misleading variations to the standard color coding, in particular the use of red, amber and green. Since the monochrome display does not assign any meaning to colors, it does not violate this intent of the coding criteria. As stated before, the FAA intends to evaluate the monochrome HUD for unsatisfactory delays, errors or workload in the interpretation of the displayed information. For example, the FAA intends to evaluate the monochrome display to provide equivalent cues for high and low speed awareness in accordance with §§ 25.1303 and 25.1541. Beyond this, the FAA is willing to entertain specific recommendations for monochrome display criteria.

The commenter states that for the dual HUD installation, the simultaneous use of both HUDs should not be permitted and a means to prevent simultaneous use should be provided. The commenter states that the HUD is so compelling that pilots will not scan other instruments as required for safe flight.

The FAA agrees that the crew must monitor cockpit instrumentation to maintain awareness of aircraft system status and flight parameters and to detect the onset of unsafe conditions. The FAA believes this monitoring function to be central to the pilot's airmanship responsibilities and training. A myopic concentration on a single task or instrument would be contrary to competent, disciplined performance of pilot duties, but the

FAA does not have enough data to support the contention that the use of a HUD causes unsatisfactory pilot monitoring of aircraft systems. The use of a HUD, whether PFD or not, does not inherently prevent or hinder the pilot from scanning other instruments and displays.

The commenter states that during the cruise phase of flight, the pilot might be seated at a relaxed sitting position, away from the Design Eye Position, and unable to detect an upset condition with the HUD. This may prevent the approval of the HUD as a PFD.

The HUD, in most cases, is not as tolerant of variant head positions as other cockpit displays. The proposed special condition requires that the HUD be installed so that the Eyebow is laterally and vertically centered on the cockpit Design Eye Position (DEP). According to §§ 25.773 and 25.777, the DEP is the optimum, secure seating position from which the pilot can see the instruments and the outside view, and operate the airplane controls. The pilot responsible for flying the airplane must be properly seated at or near the DEP in order to monitor the displays and operate the controls. If that pilot is using the HUD as a PFD, then the relaxed seating position normally used by pilots in the cruise phase may not be satisfactory if the minimum monocular Field of View is not visible.

The special condition states minimum HUD eye box dimensions, in paragraph 2.g., and also states that a larger eyebow may be required for a PFD HUD. The HUD must also not place unreasonable, or physiologically burdensome limitations on head position when used extensively on long flights. Given these requirements, the FAA believes it is reasonable to require the pilot to be properly seated to perform his/her duties, even if the permissible displacements from the DEP are more limiting for use of the HUD than for use of head down displays.

The commenter states that since the head down displays would often be used to display only navigation/engine information, the pilots would not be able to cross monitor each other's primary flight information. The commenter states that this is not acceptable.

The FAA does not have a specific requirement that one pilot always be able to view the other pilot's primary flight display. The FAA requires that the display of hazardously misleading data and the loss of all indications of certain primary flight parameters be sufficiently improbable. The ability to view the other pilot's primary flight data can be a useful technique to detect misleading

information and to monitor airplane progress during some phases of flight. But there are other techniques including automatic parameter comparisons and annunciation of miscompares and excessive deviations. In some airplanes, a pilot may be able to temporarily select the other pilot's information for display. Therefore, the FAA does not believe that a head down PFD for each pilot must always be displayed.

The commenter states that a monochrome HUD PFD would be significantly cluttered and that the level of clutter must be carefully assessed.

The FAA is also concerned, wants clutter to be minimized (paragraph 1.d.), and intends to carefully assess the level of clutter in the HUD. Clutter is a concern both for the pilot's ability to see through the display to the outside view, and the pilot's ability to quickly and accurately pick out the desired/essential information from the clutter.

The commenter concludes that the application of Head Up Displays as stand alone Primary Flight Displays should not be approved because the monochrome HUD does not meet all current certification criteria for PFD. Therefore, the commenter states that a dual HUD installation must be supported by an installation of dual conventional, color, head down PFDs, simultaneously displayed to each pilot.

The FAA acknowledges the commenter's concerns and intends evaluate whether, and if so how, the dual-HUD installation should be supported by the head down display of primary flight data. The FAA intends to evaluate the adequacy of design features that provide automatic and on-demand selection of the PFD mode on the head down displays.

## Conclusion

This action affects only certain novel or unusual design features on one model of airplanes. It is not a rule of general applicability, and it affects only the manufacturer who applied to the FAA for approval of these features on the airplane.

## List of Subjects in 14 CFR Part 25

Air transportation, Aircraft, Aviation safety, Safety.

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 for the Lockheed Martin Aerospace Corp. L382J airplanes.

### 1. Display Requirements

a. The HUD must provide adequate information to permit rapid evaluation of the airplane's flight state and position during all phases of flight. This must be shown to be adequate for manually controlling the airplane, and for monitoring the performance of the automatic flight control system. The monochrome HUD must be compliant with the display criteria contained in Advisory Circular 25–11, except for the color criteria. The HUD system adequacy for use while manually controlling the airplane shall be demonstrated and evaluated according to the rating levels outlined below. This task oriented evaluation must consider all normal, abnormal and emergency operations, with single and multiple failures not shown to be extremely improbable and is extended to all HUD display formats, unless use of specific formats is prohibited for specific phases of flight. The rating levels for this evaluation are:

(1) Satisfactory: Full performance criteria can be met with routine pilot effort and attention.

(2) Adequate: Adequate for continued safe flight and landing; full or specified reduced performance can be met, but with heightened pilot effort and attention.

(3) Controllable: Inadequate for continued safe flight and landing, but controllable for return to a safe flight condition, safe flight envelope and/or reconfiguration so that the handling qualities are at least adequate.

The pilot workload and compensation will be allowed to progressively vary with failure state, atmospheric disturbance level and flight envelope. Specifically, within the normal flight envelope, the ratings must not be less than adequate in moderate atmospheric disturbance for probable failures, and must not be less than adequate in light atmospheric disturbance for improbable failures.

b. The current mode of the flight guidance/automatic flight control system, shall be clearly annunciated in the HUD unless it is displayed elsewhere in close proximity to the HUD field of view and shown to be equivalently conspicuous. Likewise, other essential information and alerts which are related to displayed information and may require immediate pilot action must be displayed for instant recognition. Such information includes malfunctions of primary data sources, guidance and control, and

excessive deviations which require a go around.

c. If a wind shear detection system, a ground proximity warning system (GPWS), or a traffic alert and collision avoidance system (TCAS) is installed, then the guidance, warnings, and annunciations required to be a part of these systems, and normally required, as part of the approved design, to be in the pilot's primary field of view, must be displayed on the HUD.

d. Symbols must appear clean-shaped, clear, and explicit. Lines must be narrow, sharp-edged, and without halo or aliasing. Symbols must be stable with no discernible flicker or jitter.

e. For all phases of flight, the HUD must update the positions and motions of primary control symbols with sufficient rates and latencies to support satisfactory manual control performance.

f. The HUD display must present all information in a clear and unambiguous manner. Display clutter must be minimized. The HUD symbology must not excessively interfere with pilots' forward view, ability to visually maneuver the airplane, acquire opposing traffic, and see the runway environment. Some data elements of primary flight displays are essential or critical, and must not be removed by any declutter function. Changes in the display format and primary flight data arrangement should be minimized to prevent confusion and to enhance the pilots' ability to interpret vital data.

g. The content, arrangement and format of the information must be sufficiently compatible with the head down displays to preclude pilot confusion, misinterpretation, or excessive cognitive workload. Immediate transition between the two displays, whether required by navigation duties, failure conditions, unusual airplane attitudes, or other reasons, must not present difficulties in data interpretation or delays/interruptions in the crew's ability to manually control the airplane or to monitor the automatic flight control system.

h. The HUD display must be demonstrated to be adequate for airplane recovery from unusual attitudes. This capability must be shown for all foreseeable modes of upset, including crew mishandling, autopilot failure (including "slowovers"), and turbulence/gust encounters.

### 2. Installation Requirements

a. The arrangement of HUD display controls must be visible to and within reach of the pilot from any normal seated position. The position and

movement of the controls must not lead to inadvertent operation. The HUD controls must be adequately illuminated for all normal background lighting conditions, and must not create any objectionable reflections on the HUD or other flight instruments.

b. The display brightness must be satisfactory in the presence of dynamically changing background (ambient) lighting conditions. If automatic control is not provided, it must be shown that a single setting is satisfactory. When the brightness level is altered, the relative luminance of each displayed symbol, character, or data shall vary smoothly. In no case shall any selectable brightness level allow any information to be invisible while other data remains discernible. There shall be no objectionable brightness transients when transitioning between manual and automatic control. The HUD data shall be visible in lighting conditions from 0 fL to 10,000 fL. If certain lighting conditions prevent the crew to adequately seeing and interpreting HUD data (for example, flying directly toward the sun), accommodation must be provided to permit the crew to make a ready transition to the head down displays.

c. To the greatest extent practicable, the HUD controls must be integrated with other controls, including the flight director, to minimize the crew workload associated with HUD operation and to ensure flightcrew awareness of engaged flight guidance modes.

d. The installation of the HUD system must not interfere or restrict other installed equipment such as emergency oxygen masks, headsets, or microphones. The installation of the HUD must not adversely affect the emergency egress provisions for the flightcrew, or significantly interfere with crew access. The system also must not hinder the crew's movement while conducting any flight procedures.

e. The installation of the HUD system must not present the crew with any objectionable glare or reflection in any lighting conditions. This is equally applicable from glare or reflections visible on the HUD system itself, or that originating from the HUD system and visible in other areas such as the windshield. The installation of the HUD system must not significantly obstruct either pilot's external field of view when both combiners are deployed. The external view requirements of § 25.773 must be retained with both combiners deployed.

f. The HUD system must be designed and installed to prevent the possibility of pilot injury in the event of an accident or any other foreseeable

circumstance such as turbulence encounter, hard landing, bird strike, etc. The installation of the HUD, including overhead unit and combiner, must comply with the head injury criteria of § 25.562, Amendment 25-64.

g. The design eyebox shall be laterally and vertically centered around the respective pilot's design eye position, and must be large enough that the minimum monocular field of view is visible at the following minimum displacements from the cockpit Design Eye Position:

Lateral: 1.5 inches left and right  
Vertical: 1.0 inches up and down  
Longitudinal: 2.0 inches fore and aft

These requirements must be met for pilots from 5'2" to 6'3" tall, while seated with seat belts fastened and with the pilot positioned at the design eye position (ref. § 25.777(c)). Larger eyebox dimensions may be required for meeting operational requirements for use as a full time primary flight display.

h. The HUD system combiner must not create any objectionable distortion of the pilot's external view. The optical qualities (accommodation, luminance, vergence) of the HUD shall be uniform across the entire field of view. When viewed by both eyes from any off-center position within the eyebox, non-uniformities shall not produce perceivable differences in binocular view. Notwithstanding compliance with these minimum eyebox dimensions, the HUD eyebox must be large enough to adequately serve as a primary flight display without inducing adverse effects on pilot vision and fatigue.

### 3. System Requirements

a. The HUD system must be shown to perform its intended function as a primary flight display during all phases of flight. The normal operation of the HUD system cannot adversely affect, or be adversely affected by other airplane systems. Malfunctions of the HUD system which cause loss of all primary flight information, including that displayed on HUDs and head down instruments, shall be extremely improbable.

b. The criticality of the HUD system's function to display flight and navigation data, including the potential to display hazardous misleading information, must be assessed according to §§ 25.1309 and 25.1333, Advisory Circular (AC) 25-11 paragraph 4.a., and AC 25.1309-1A. All alleviating flightcrew actions that are considered in the HUD safety analysis must be validated during testing for incorporation in the airplane flight

manual procedures section or for inclusion in type-specific training.

c. Since the display of hazardous misleading information on more than one primary flight display must be extremely improbable, HUD system software which generates, displays or affects the generation or display of primary flight information shall be developed to Level A requirements, as specified by RTCA Document DO-178B, "Software Considerations in Airborne Systems and Equipment Certification."

d. The HUD system must monitor the position of the combiner and provide a warning to the crew when the combiner position is such that conformal symbols will be hazardous misaligned.

e. The HUD system must be shown adequate for airplane control and guidance during an engine failure during any phase of flight.

f. There must be no adverse physiological effects of long term use of the HUD system, such as fatigue or eye strain, that cause the pilot to have to revert to the HDD. Use of the HUD system also cannot require excessive cognitive workload or unreasonable limitations on head position.

g. The HUD system must be shown to comply with the high intensity radiated fields certification requirements specified in another special condition, not yet finalized.

Issued in Renton, Washington, on March 24, 1997.

**Stewart R. Miller,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-100.*

[FR Doc. 97-9152 Filed 4-8-97; 8:45 am]

BILLING CODE 4910-13-P

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. 97-ACE-5]

#### Removal of Class D Airspace, Marshall Army Airfield, Ft. Riley, KS

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Direct final rule; request for comments.

**SUMMARY:** This action removes the Class D airspace area at Marshall Army Airfield, Ft. Riley, KS. The Control Tower at Marshall Army Airfield is not in operation and will not be operational in the foreseeable future.

**DATES:** Effective date: 0901 UTC July 17, 1997.