



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0992; Product Identifier 2019-NM-197-AD; Amendment 39-21016; AD 2019-25-17]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Final rule; request for comments.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER (Model 737 NG) series airplanes (although the scope of the AD requirements is limited to operation at specific runways in the U.S., Colombia, and Guyana). This AD requires revising the airplane flight manual (AFM) to prohibit selection of certain runways for airplanes equipped with certain software. This AD was prompted by reports of display electronic unit (DEU) software errors on airplanes with a selected instrument approach to a specific runway. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

**Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0992; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** David Sumner, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3538; email: [David.Sumner@faa.gov](mailto:David.Sumner@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA received reports earlier this year of three incidents of display electronic unit (DEU) software errors on Model 737 NG airplanes flying into runway PABR in Barrow, Alaska. All six display units (DUs) blanked with a selected instrument approach to a runway with a 270-degree true heading, and all six DUs stayed blank until a different runway was selected. The Integrated Standby Flight Display (ISFD) and Heads-Up-Display (HUD) remained operational during this failure of the primary flight displays. The investigation has traced the behavior to a combination of common display system (CDS) block point (BP) 15 software in the DEUs and U12 or later software in the flight management computer (FMC). The investigation revealed that the problem occurs when this combination of software is installed and a susceptible runway with a 270-degree true heading is selected for instrument approach. Not all runways with a 270-degree true heading are susceptible; only seven runways worldwide, as identified in this AD, have latitude and longitude values that cause the blanking behavior. If CDS BP15 software and FMC U12 or later software are installed, all six DUs can blank when a susceptible runway with a 270-degree true heading is selected. The FAA has confirmed that the faulty version of DEU software has already been removed from all airplanes conducting scheduled airline service into the affected airports. This AD is intended to address unscheduled diversions and Boeing Business Jet (BBJ) flights into the affected airports. This condition, if not addressed, could prevent continued safe flight and landing.

### **FAA's Determination**

The FAA is issuing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **AD Requirements**

This AD requires revising the AFM to prohibit selection of certain runways for airplanes equipped with certain software.

Although all Model 737 NG airplanes are affected, the scope of the AD requirements is limited to operation at specific runways in the U.S., Colombia, and Guyana, as identified in this AD.

### **Interim Action**

The FAA considers this AD interim action. The manufacturer is currently developing a software update that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, the FAA might consider additional rulemaking.

### **FAA's Justification and Determination of the Effective Date**

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the combination of CDS BP15 software and FMC U12 or later software installed can result in all six DUs blanking when a susceptible runway with 270 degree true heading is selected; this condition can prevent continued safe flight and landing. The compliance time for the required action is shorter than the time necessary

for the public to comment and for publication of the final rule. Therefore, the FAA finds good cause that notice and opportunity for prior public comment are impracticable. In addition, for the reasons stated above, the FAA finds that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, the FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2019-0992 and Product Identifier 2019-NM-197-AD at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this final rule. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

The FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this final rule.

### **Regulatory Flexibility Act**

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

## Costs of Compliance

The FAA estimates that this AD affects 1,739 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
AFM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$147,815

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs" describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has

delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2019-25-17 The Boeing Company:** Amendment 39-21016 ; Docket No. FAA-2019-0992; Product Identifier 2019-NM-197-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category.

Note 1 to paragraph (c): The scope of the AD requirements is limited to operation at the seven runways identified in figure 1 to paragraph (g) of this AD.

**(d) Subject**

Air Transport Association (ATA) of America Code 31, Indicating/recording system.

**(e) Unsafe Condition**

This AD was prompted by reports of display unit (DU) software errors on airplanes with a selected instrument approach to a specific runway. The FAA is issuing this AD to address the potential for all six DUs to blank, which can prevent continued safe flight and landing.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) AFM Revision**

Within 14 days after the effective date of this AD, revise the Miscellaneous Limitations section of the existing airplane flight manual (AFM) to include the



information in figure 1 to paragraph (g) of this AD. This may be done by inserting a copy of figure 1 to paragraph (g) of this AD into the Miscellaneous Limitations section of the existing AFM.

**Figure 1 to paragraph (g) – AFM revision**

<b>Common Display System</b>	<b>(Required by AD 2019-25-17)</b>
The following is applicable only if configured with CDS BP15 and FMC U12 or later. Do not select the following runways in the FMC ARRIVALS page, as it may result in blanking of all six display units:	
82V RW26	Pine Bluffs, Wyoming, USA
KBJJ RW28	Wayne County, Ohio, USA
KCIU RW28	Chippewa County, Michigan, USA
KCNM RW26	Cavern City, New Mexico, USA
PABR RW25	Barrow, Alaska, USA
SKLM RW28	La Mina, La Guajira, Colombia
SYCJ RW29	Cheddi Jagan, Georgetown, Guyana

**(h) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(i) Related Information**

For more information about this AD, contact David Sumner, Aerospace Engineer, Systems and Equipment Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3538; email: David.Sumner@faa.gov.

**(j) Material Incorporated by Reference**

None.

Issued on December 20, 2019.

Michael Kaszycki, Acting Director,  
System Oversight Division,  
Aircraft Certification Service.

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