

effective date of this AD, install a transient suppression diode, part number (P/N) 69-58806-4, in the wire bundle (W264) of the refueling valve-to-float switch of each fuel tank, in accordance with the service bulletin.

(b) For Groups 2, 3, and 4 airplanes, as identified in Boeing Service Bulletin 737-28-1115, dated March 4, 1999: Within 12 months after the effective date of this AD, replace the existing transient suppression diode, P/N 69-58806-1 or 69-58806-3, installed in the wire bundle (W264) of the refueling valve-to-float switch of each fuel tank, with an improved diode, P/N 69-58806-4, in accordance with the service bulletin.

(c) Prior to further flight following accomplishment of the actions required by paragraph (a) or (b) of this AD, perform a functional test to verify proper installation of each diode in accordance with Boeing Service Bulletin 737-28-1115, dated March 4, 1999. If any discrepancy is detected during any functional test, prior to further flight, replace the discrepant diode and repeat the functional test, in accordance with the service bulletin.

Spares Paragraph

(d) As of the effective date of this AD, no person shall install a transient suppression diode having P/N 69-58806-1 or 69-58806-3 on any airplane.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(f) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Issued in Renton, Washington, on June 7, 1999.

John J. Hickey,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 99-14934 Filed 6-11-99; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 98-NM-231-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Series Airplanes Equipped With General Electric CF6-80C2 Series Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the superseding of an existing airworthiness directive (AD), applicable to certain Boeing Model 767 series airplanes, that currently requires tests, inspections, and adjustments of the thrust reverser system. That AD also requires installation of a terminating modification, and repetitive follow-on actions. This action would reduce the repetitive intervals for the follow-on actions. This proposal is prompted by reports indicating that several center drive units (CDU's) were returned to the manufacturer of the CDU's because of low holding torque of the CDU cone brake. The actions specified by the proposed AD are intended to ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight.

DATES: Comments must be received by July 29, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-231-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Holly Thorson, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind

Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1357; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 98-NM-231-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-231-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

Discussion

On June 22, 1995, the FAA issued AD 95-13-12, amendment 39-9292 (60 FR 36976, July 19, 1995), as revised by AD 95-13-12 R1, amendment 39-9528 (61 FR 9092, March 7, 1996), applicable to certain Boeing Model 767 series airplanes, to require tests, inspections, and adjustments of the thrust reverser system. That AD also requires installation of a terminating modification, and repetitive operational checks of the electro-mechanical brake and the cone brake of the center drive unit (CDU) following accomplishment of the modification. That action was prompted by the identification of a modification that ensures that the level of safety inherent in the original type

design of the thrust reverser system is further enhanced. The requirements of that AD are intended to prevent possible discrepancies in the thrust reverser control system, which could result in inadvertent deployment of a thrust reverser during flight. The revision of the AD clarifies the requirements of AD 95-13-12 by specifying a revised number of pound-inches of torque that operators should use when performing the torque check of the cone brake of the CDU.

Actions Since Issuance of Previous Rule

Since the issuance of AD 95-13-12 R1, the FAA has received reports indicating that several thrust reverser CDU's were returned to the manufacturer of the CDU's because of low holding torque of the CDU cone brake. This possible failure condition was not included in any previous safety assessment of the thrust reverser by the manufacturer. The returned CDU's had accumulated between 3,400 and 3,600 total flight hours. The cause of the low holding torque is a combination of cone brake wear, overrunning clutch wear, and grease contamination of the cone brake. Such a low torque condition could result in failure of the cone brake of the CDU, which could disable one of the fail safe features of the thrust reverser system that prevent deployment of a thrust reverser during flight.

As a result of this failure condition, the manufacturer has submitted a revised safety analysis of the thrust reverser system and has defined specific intervals for accomplishing functional tests of the CDU cone brake and operational checks of the electro-mechanical brake, which occur more frequently than those defined in AD 95-13-12 R1. The recommended intervals have been published in the Boeing 767 Maintenance Planning Document.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997, which describes procedures for a repetitive functional test of the CDU cone brake on each thrust reverser, and correction of any discrepancy detected. The procedures for the functional test of the cone brake are essentially the same as those described in Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994 (which was referenced as an appropriate source of service information in AD 95-13-12) for Model 767 series airplanes equipped with General Electric CF6-80C2 series engines. However, Boeing Service

Bulletin 767-78A0081, Revision 1, specifies a shorter repetitive interval for the functional test (650 flight hours) than was specified in Boeing Service Bulletin 767-78-0047, Revision 3 (1,000 flight hours).

Explanation of Requirements of Proposed Rule

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, the proposed AD would supersede AD 95-13-12 R1 to continue to require various inspections and functional tests to detect discrepancies of the thrust reverser control and indication system, and correction of any discrepancy found. This proposed AD would reduce the repetitive intervals for the functional test of the CDU cone brake and the operational check of the electro-mechanical brake. The functional test of the CDU cone brake would be required to be accomplished in accordance with the service bulletin described previously, except as discussed below.

Differences Between Service Bulletin and This Proposed AD

Operators should note that Boeing Service Bulletin 767-78A0081, Revision 1, specifies that the functional test of the CDU cone brake described in that service bulletin is not necessary for Model 767 series airplanes that are equipped with thrust reversers modified in accordance with Boeing Service Bulletin 767-78-0063 (or production equivalent). Boeing Model 767 series airplanes having line numbers 475 and higher are equipped with such modified thrust reversers; therefore, the effectivity listing of Boeing Service Bulletin 767-78A0081, Revision 1, includes only Model 767 series airplanes equipped with General Electric Model CF6-80C2 engines having line numbers prior to 475.

This proposed AD, however, would require that the cone brake functional test be performed on Model 767 series airplanes equipped with General Electric Model CF6-80C2 engines regardless of whether they are equipped with thrust reversers modified in accordance with Boeing Service Bulletin 767-78-0063. The FAA has determined that an inspection interval of 1,000 hours time-in-service (for both the CDU cone brake and the electro-mechanical brake) provides a sufficient level of safety for the modified thrust reversers, and that 650 hours time-in-service (for the CDU cone brake) provides a sufficient level of safety for the unmodified thrust reversers, given the

low holding torque condition that has been identified for the CDU cone brake.

Interim Action

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will positively address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

Cost Impact

There are approximately 143 Boeing Model 767 series airplanes equipped with General Electric CF6-80C2 series engines in the worldwide fleet. The FAA estimates that 45 airplanes of U.S. registry would be affected by this proposed AD.

The tests, inspections, and adjustments that are currently required by AD 95-13-12, and retained in this proposed AD, take approximately 30 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact on U.S. operators of the currently required tests, inspections, and adjustments that are retained in this proposed AD is estimated to be \$81,000, or \$1,800 per airplane, per inspection cycle.

The terminating modification currently required by AD 95-13-12, and retained in this proposed AD, take approximately 786 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts will be provided by the manufacturer at no cost to the operator. Based on these figures, the cost impact on U.S. operators of the terminating modification required by this proposed AD is estimated to be \$2,122,200, or \$47,160 per airplane.

The repetitive operational checks required by AD 95-13-12, and retained in this proposed AD, take approximately 2 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact on U.S. operators of the repetitive operational checks required by this proposed AD is estimated to be \$5,400, or \$120 per airplane, per operational check cycle.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the current or proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

The FAA has been advised that the terminating modification has been accomplished in accordance with the

requirements of this AD on 45 U.S.-registered airplanes. Therefore, the future economic cost impact of this rule on U.S. operators is now only the cost associated with the repetitive operational checks required by this AD.

The number of required work hours for each requirement of AD 95-13-12 R1, as indicated above, is presented as if the accomplishment of the actions were to be conducted as "stand alone" actions. However, in actual practice, these actions for the most part will be accomplished coincidentally or in combination with normally scheduled airplane inspections and other maintenance program tasks. Therefore, the actual number of necessary additional work hours will be minimal in many instances. Additionally, any costs associated with special airplane scheduling will be minimal.

Regulatory Impact

The regulations proposed herein would not have substantial direct effects 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. Therefore, in accordance with Executive Order 12612, it is determined that this proposal would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this proposed regulation (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) if promulgated, will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the draft regulatory evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by removing amendment 39-9528 (61 FR 9092, March 7, 1996), and by adding a new airworthiness directive (AD), to read as follows:

Boeing: Docket 98-NM-231-AD. Supersedes AD 95-13-12 R1, Amendment 39-9528.

Applicability: Model 767 series airplanes equipped with General Electric CF6-80C2 series engines, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight, accomplish the following:

Restatement of Requirements of AD 95-13-12 R1, Amendment 39-9528:

(a) Within 30 days after August 18, 1995 (the effective date of AD 95-13-12 R1, amendment 39-9528), perform tests, inspections, and adjustments of the thrust reverser system in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994.

(1) Except as provided by paragraph (a)(2) of this AD, repeat all tests and inspections thereafter at intervals not to exceed 3,000 flight hours until the modification required by paragraph (c) of this AD is accomplished.

(2) Repeat the check of the grounding wire for the Directional Pilot Valve (DPV) of the thrust reverser in accordance with the service bulletin at intervals not to exceed 1,500 flight hours, and whenever maintenance action is taken that would disturb the DPV grounding circuit, until the modification required by paragraph (c) of this AD is accomplished.

(b) If any of the tests and/or inspections required by paragraph (a) of this AD cannot be successfully performed, or if those tests and/or inspections result in findings that are unacceptable in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; accomplish paragraphs (b)(1) and (b)(2) of this AD.

(1) Prior to further flight, deactivate the associated thrust reverser in accordance with Section 78-31-1 of Boeing Document D630T002, "Boeing 767 Dispatch Deviation Guide," Revision 9, dated May 1, 1991; or Revision 10, dated September 1, 1992. After August 18, 1995, this action shall be accomplished only in accordance with Revision 10 of the Boeing document. No more than one reverser on any airplane may be deactivated under the provisions of this paragraph.

(2) Within 10 days after deactivation of any thrust reverser in accordance with this paragraph, the thrust reverser must be repaired in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994. Additionally, the tests and/or inspections required by paragraph (a) of this AD must be successfully accomplished; once this is accomplished, the thrust reverser must then be reactivated.

(c) Within 3 years after August 18, 1995, install a third locking system on the left and right-hand engine thrust reversers in accordance with Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994.

New Requirements of this AD

Note 2: Boeing Service Bulletin 767-78-0063, references General Electric (GE) Service Bulletin 78-135 as an additional source of service information for accomplishment of the third locking system on the thrust reversers. However, the Boeing Service Bulletin does not specify the appropriate revision level, and the GE service bulletin has a new Lockheed Martin title for the same service bulletin: Lockheed Martin Service Bulletin 78-135, Revision 4, dated September 30, 1996. The appropriate revision level for the GE Service Bulletin is Revision 3, dated August 2, 1994. The GE and Lockheed Martin service bulletins are identical, and either may be used for accomplishment of the action described previously.

Note 3: The actions specified in Lockheed Martin Service Bulletin 78-1007, Revision 1, dated March 18, 1997; and Lockheed Martin Service Bulletin 78-1020, Revision 2, dated March 20, 1997; may be accomplished simultaneously in conjunction with Boeing Service Bulletin 767-78-0063 for accomplishment of the installation of the thrust reverser bracket and the thrust reverser lock. (Accomplishment of these two service bulletins together achieves the same results as Lockheed Martin Service Bulletin 78-135, Revision 4, and is acceptable for compliance with Boeing Service Bulletin 767-78-0063.)

(d) Within 1,000 hours time-in-service after the most recent test of the CDU cone brake performed in accordance with paragraph (a) of this AD, or within 650 hours time-in-service after the effective date of this AD, whichever occurs first: Perform a functional test to detect discrepancies of the CDU cone brake on each thrust reverser, in accordance with Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997, or Appendix 1 (including Figure 1), sections 1.A.(2), 2.A., 2.C., and 2.D of this AD.

(1) For Model 767 series airplanes, line numbers up to and including 474, equipped with thrust reversers that have not been

modified in accordance with Boeing Service Bulletin 767-78-0063: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 650 hours time-in-service.

(2) For Model 767 series airplanes, line numbers 475 and subsequent; and Model 767 series airplanes equipped with thrust reversers that have been modified in accordance with Boeing Service Bulletin 767-78-0063: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 1,000 hours time-in-service.

(e) Within 1,000 flight hours after accomplishing the modification required by paragraph (c) of this AD, or within 1,000 flight hours after the effective date of this AD, whichever occurs later: Perform operational checks of the electro-mechanical brake in accordance with Appendix 1 (including Figure 1), sections 1.A.(1), 2.A., 2.B., and 2.D of this AD. Repeat the operational checks thereafter at intervals not to exceed 1,000 flight hours.

Terminating Action

(f) Accomplishment of the modification and periodic operational checks required by paragraphs (c), (d), and (e) of this AD constitutes terminating action for the tests, inspections, and adjustments required by paragraph (a) of this AD.

Alternative Methods of Compliance

(g)(1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(g)(2) Alternative methods of compliance, approved previously in accordance with AD 95-13-12, amendment 39-9292, are approved as alternative methods of compliance with this AD.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(h) Special flight permits may be issued in accordance with §§ 21.197 and 21.199 of the

Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Appendix 1—Thrust Reverser Electro-Mechanical Brake and CDU Cone Brake Test

1. General

A. This procedure contains steps to do two checks:

- (1) A check of the holding torque of the electro-mechanical brake.
- (2) A check of the holding torque of the CDU cone brake.

2. Electro-Mechanical Brake and CDU Cone Brake Torque Check (Fig. 1)

A. Prepare to do the checks:

- (1) Open the fan cowl panels.

B. Do a check of the torque of the electro-mechanical brake:

- (1) Do a check of the running torque of the thrust reverser system:

(a) Manually extend the thrust reverser six inches and measure the running torque.

- (1) Make sure the torque is less than 10 pound-inches.

(2) Do a check of the electro-mechanical brake holding torque:

- (a) Make sure the thrust reverser translating cowl is extended at least one inch.

(b) Make sure the CDU lock handle is released.

(c) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip.

Note: This will lock the electro-mechanical brake.

(d) With the manual drive lockdown cover removed from the CDU, install a 1/4-inch extension tool and dial-type torque wrench into the drive pad.

Note: You will need a 24-inch extension to provide adequate clearance for the torque wrench.

(e) Apply 90 pound-inches of torque to the system.

(1) The electro-mechanical brake system is working correctly if the torque is reached before you turn the wrench 450 degrees (1-1/4 turns).

(2) If the flexshaft turns more than 450 degrees before you reach the specified torque, you must replace the long flexshaft between the CDU and the upper angle gearbox.

(3) If you do not get 90 pound-inches of torque, you must replace the electro-mechanical brake.

(f) Release the torque by turning the wrench in the opposite direction until you read zero pound-inches.

(1) If the wrench does not return to within 30 degrees of initial starting point, you must replace the long flexshaft between the CDU and upper angle gearbox.

(3) Fully retract the thrust reverser.

C. Do a check of the CDU cone brake:

(1) Pull up on the manual release handle to unlock the electro-mechanical brake.

(2) Pull the manual brake release lever on the CDU to release the cone brake.

Note: This will release the pre-load tension that may occur during a stow cycle.

(3) Return the manual brake release lever to the locked position to engage the cone brake.

(4) Remove the two bolts that hold the lockdown plate to the CDU and remove the lockdown plate.

(5) Install a 1/4-inch drive and a dial type torque wrench into the CDU drive pad.

CAUTION: DO NOT USE MORE THAN 100 POUND-INCHES OF TORQUE WHEN YOU DO THIS CHECK. EXCESSIVE TORQUE WILL DAMAGE THE CDU.

(6) Turn the torque wrench to try to manually extend the translating cowl until you get at least 15-pound inches.

Note: The cone brake prevents movement in the extend direction only. If you try to measure the holding torque in the retract direction, you will get a false reading.

(a) If the torque is less than 15-pound-inches, you must replace the CDU.

D. Return the airplane to its usual condition:

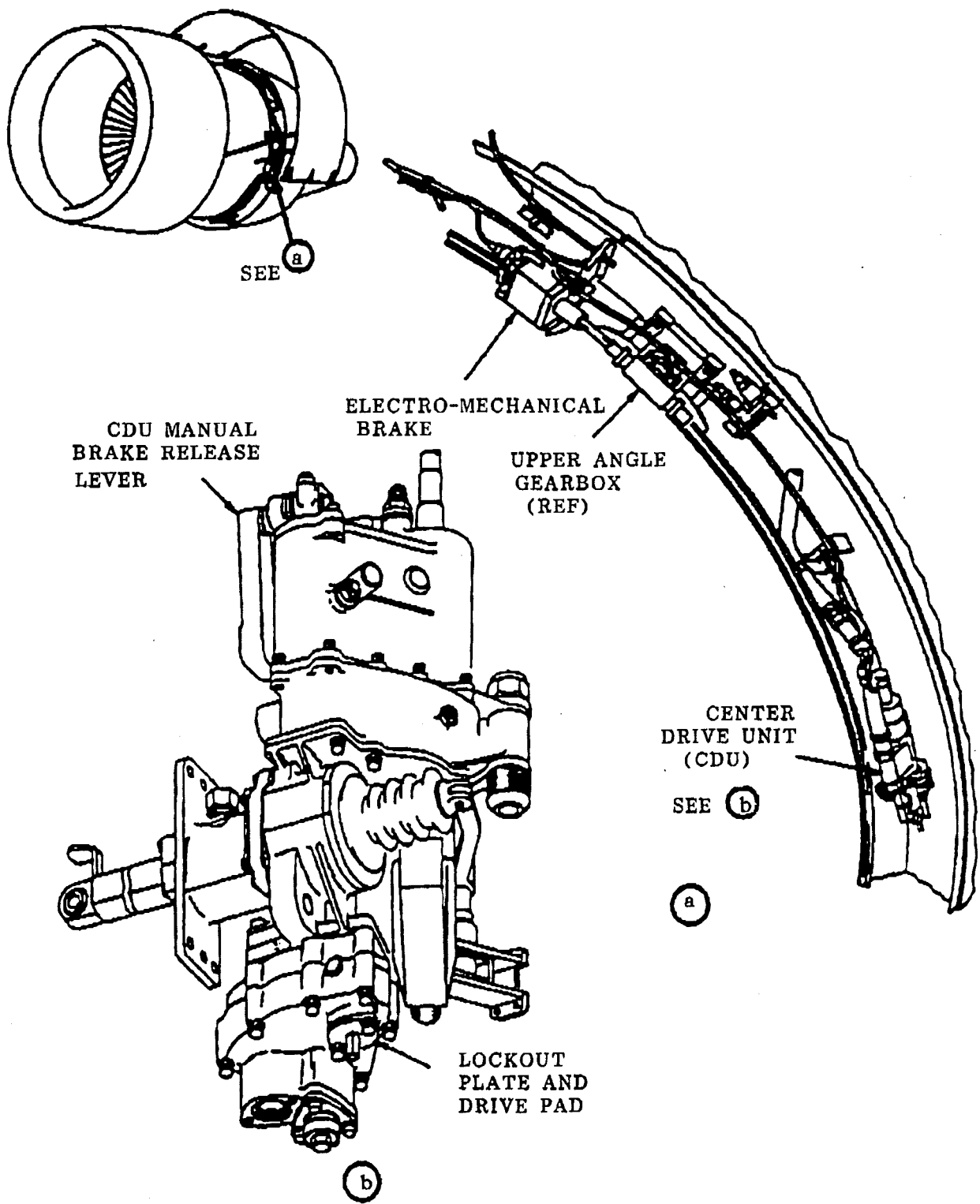
(1) Fully retract the thrust reverser (unless already accomplished).

(2) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip (unless already accomplished).

Note: This will lock the electro-mechanical brake.

(3) Close the fan cowl panels.

BILLING CODE 4910-13-P



Electro-Mechanical Brake and CDU Cone Brake Torque Check
Figure 1

Issued in Renton, Washington, on June 4, 1999.

Vi L. Lipski,

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

[FR Doc. 99-14818 Filed 6-11-99; 8:45 am]

BILLING CODE 4910-13-C