

PŘÍKAZ K ZACHOVÁNÍ LETOVÉ ZPŮSOBILOSTI

CAA-AD-T-088/2002

Datum vydání: 17. září 2002

LETOUN - "FLIGHT CONTROL MODUL" (FCM) - VÝMĚNA

Týká se: letadel Boeing 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -800 a -900; certifikovaných v kterékoliv kategorii.

Datum účinnosti: ihned po obdržení

Provést v termínech: Jak je popsáno v FAA E AD 2002-19-51, od data účinnosti tohoto PZZ.

Postup provedení prací: Dle v FAA E AD 2002-19-51 (příloha tohoto PZZ).

Poznámky: Provedení tohoto PZZ musí být zapsáno do letadlové knihy. Případné dotazy týkající se tohoto PZZ adresujte na ÚCL sekce technická - Ing. Toman. Pokud to vyžaduje povaha tohoto PZZ, musí být zapracován do příslušné části dokumentace pro obsluhu, údržbu a opravy letadla. Tento PZZ byl vypracován na základě FAA E AD 2002-19-51.

Ing. Pavel MATOUŠEK
Ředitel sekce technické
Úřad pro civilní letectví

2002-19-51 BOEING: Docket No. 2002-NM-241-AD.

Applicability: All Model 737-100, -200, -200C, -300, -400, -500, -600, -700, -700C, -800, and -900 series airplanes; 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 (l) 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 prevent operation with one failed flight control module (FCM), which could result in reduced controllability of the airplane, or with two failed FCMs, which could result in loss of control of the airplane, accomplish the following:

Inspection

(a) For Model 737-600, -700, -700C, -800, and -900 series airplanes, having line numbers 1136 through 1230 inclusive: Before further flight after receipt of this AD, do an inspection to determine the serial number (S/N) of both flight control modules (FCM), having part number (P/N) 65-44891-7.

Neither FCM with S/N 8726 or Greater Installed

(b) If neither FCM has S/N 8726 or greater, no further action is required by this AD, except for the requirements specified in paragraphs (j) and (k) of this AD.

FCM(s) with S/N 8726 or Greater Installed

(c) If one FCM has S/N 8726 or greater, the airplane may continue to be operated, but within 24 hours after accomplishing the inspection required by paragraph (a) of this AD, do the actions specified in paragraphs (e) through (g) of this AD.

(d) If both FCMs have S/N 8726 or greater, do the actions specified in either paragraph (d)(1) or (d)(2) of this AD.

(1) Before further flight, replace one of the FCMs with a serviceable FCM, having P/N 65-44891-7 with a S/N less than 8726. Thereafter, the airplane may continue to be operated, but within 24 hours after accomplishing the inspection required by paragraph (a) of this AD, do the action specified in paragraphs (e) through (g) of this AD.

(2) Before further flight, replace both FCMs with serviceable FCMs having P/N 65-44891-7 with a S/N less than 8726. Thereafter, no further action is required by this AD, except for the requirements specified in paragraphs (j) and (k) of this AD.

(e) If required by paragraph (c), (d)(1), or (m) of this AD: Revise the Normal Procedures Section of the FAA-approved Airplane Flight Manual (AFM) to include the following (this may be accomplished by inserting this AD into the AFM):

"Pre-Flight Flight Control Module (FCM) Checks:

These checks can be performed any time after the Electric Hydraulic Pump A and B Switches are positioned ON and prior to Engine Start. Ensure ground personnel are clear of all control surfaces. If Minimum Equipment List (MEL) dispatch with one or both autopilot channels inoperative is planned, it is acceptable not to perform the check on the inoperative channel(s).

Flight Control Switch Check

1. Ensure FLT CONTROL A & B switches are ON
2. FLT CONTROL A Switch OFF
- Verify Flight Controls LOW PRESSURE Light illuminates within 2 seconds.
3. FLT CONTROL A Switch ON
- Verify Flight Control LOW PRESSURE Light extinguishes.
4. FLT CONTROL B Switch OFF
- Verify Flight Controls LOW PRESSURE Light illuminates within 2 seconds.
5. FLT CONTROL B Switch ON
- Verify Flight Controls LOW PRESSURE Light extinguishes.

NOTE: Failure of the Flight Control LOW PRESSURE Light to illuminate within 2 seconds may indicate a failure of the related flight control module.

Autopilot Check

1. Ensure IRUs are in the NAV mode
2. A/P ENGAGE Switch CMD A
- Wait 10 seconds, and verify light remains ON
3. Disengage A autopilot
4. A/P ENGAGE Switch CMD B
- Wait 10 seconds, and verify light remains ON
5. Disengage B autopilot
6. To fail this test, one autopilot will fail to engage and the other will fail to stay engaged.

NOTE: Failure of the autopilots to engage as described in Step 6. may indicate a failure of a flight control module.

WARNING: If either Pre-Flight FCM Checks fails, do not takeoff until the failed module has been replaced."

(f) If required by paragraph (c), (d)(1), or (m) of this AD: Revise the Limitations Section of the FAA-approved AFM to include the following statement (this may be accomplished by inserting this AD into the AFM):

"If a flight control module (FCM), having P/N 65-44891-7 with S/N 8726 or greater is installed, the "Pre-Flight Flight Control Module (FCM) Checks" specified in the Normal Procedures of this AFM must be accomplished before each flight. If either Pre-Flight FCM Checks fails, do not takeoff until the failed module has been replaced. "

(g) If required by paragraph (c), (d)(1), or (m) of this AD: Revise the Non-Normal Procedures Section of the FAA-approved AFM to include the following (this may be accomplished by inserting this AD into the AFM):

"Flight Control Module (FCM) Failure:

Note: If the module fails in flight, neither A nor B autopilot will engage. Other indications include possible increased in flight control forces (similar to manual reversion) and possible yaw damper disengagement.

Failure of a second module in flight could result in serious degradation of airplane controllability, including high control forces.

If a failure is suspected in flight:

- Plan to land at the nearest suitable airport
 - Crosswind capability may be reduced
- Do not turn off any flight control switches
- Plan a flaps 15 landing
- Use VREF 15 + 5 or VREF ICE + 5"

Note 2: The Limitations, Non-Normal Procedures, and Normal Procedures specified by paragraphs (e) through (g) of this AD are required to be implemented only for airplanes on which suspect FCMs have been installed. However, individual pilots may operate other airplanes on which those suspect FCMs have not been installed, and that are not subject to those limitations and procedures. Therefore, to avoid any confusion or misunderstanding, it is important that airlines have communication mechanisms in place to ensure that pilots are aware, for each flight, whether the Limitations, Non-Normal Procedures, and Normal Procedures apply.

Failures Detected During "Flight Control Check"

(h) If any failure is detected during any "Pre-Flight Flight Control Module (FCM) Checks" specified in paragraph (e) of this AD, before further flight, replace the affected FCM with a serviceable FCM, having P/N 65-44891-7 with a S/N less than 8726.

Reporting Requirement

(i) Submit a report of inspection findings to the Boeing Renton Airline Support Manager, Craig Blankenstein, 2925 South 112th Street, Seattle, Washington 98168; fax (206) 544-9698; at the applicable time specified in paragraph (i)(1) or (i)(2) of this AD. (The report must include the airplane line number and FCM P/N and S/N.) Information collection requirements contained in this AD have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(1) For airplanes on which the inspection required by paragraph (a) of this AD is accomplished after receipt of this AD: Submit the report within 10 days after performing the inspection required by paragraph (a) of this AD.

(2) For airplanes on which the inspection required by paragraph (a) of this AD has been accomplished before receipt of this AD: Submit the report within 10 days after receipt of this AD.

Part Installation

(j) For all airplanes: After receipt of this AD, no person shall install an FCM having P/N 65- 44891-7 with a S/N 8726 or greater, on any airplane.

(k) After receipt of this AD, no person shall install a compensator, P/N 10-605603-3, on any FCM having P/N 65-44891-7.

Alternative Methods of Compliance

(l) 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. 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 3: 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

(m) Special flight permits may be issued in accordance with sections 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, provided that the airplane is operated per the requirements of paragraphs (e) through (g) of this AD, and that there are no known FCM failures upon dispatch.

Effective Date

(n) **AD 2002-19-51, issued on September 13, 2002, becomes effective upon receipt.**

Contact Information

For further information contact: Kenneth W. Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2673; fax (425) 227-1181.