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No. CF-89-06

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to Canadian Aviation Regulation (CAR) 593. Pursuant to CAR 605.84 and the further details of CAR Standard 625, Appendix H, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with CAR 605.84 and the above- referenced Standard.

This AD has been issued by the Continuing Airworthiness Division (AARDG), Aircraft Certification Branch, Transport Canada, Ottawa, telephone (613) 952-4357.

CF-89-06 MITSUBISHI

Applies to all Mitsubishi MU-2B, MU-2B-10, -15, -20, -25, -26, -26A, -30, -35, -36, -36A, -40 and -60 aircraft equipped with any manual electric pitch-trim system and/or any of the following autopilot systems:

- Bendix M-4C or M-4D
- King KFC-300 Automatic Flight Control System (AFCS)
- Sperry SPZ-200 or SPZ-500 AFCS

Compliance is required within 200 hours flight time or five (5) calendar months, whichever occurs first, after the effective date of this directive, unless already accomplished.

There has been a series of accidents involving pitch-trim runaway where the pilot was unable to quickly disconnect the pitch trim because the autopilot must first be disengaged, and the method for doing so was not the same on all aircraft.

To enable quick pitch-trim disconnect, all aircraft are to be standardized to a configuration where a single button on the control wheel disconnects the autopilot at the first detent and disconnects the manual electric pitch-trim when completely depressed. To minimize the possibility of confusion in autopilot/manual electric pitch-trim disconnect/interrupt switch location and function, accomplish the following:

I. Modify the control wheel in the affected aircraft models as follows:

A. For models MU-2B-30 and -35 aircraft manufactured under Japanese Type Certificate A2PC equipped with Bendix M-4C autopilot, in accordance with Mitsubishi Aircraft Industries (MAI) Service Bulletin (SB) No. 206 dated 13 October 1987; or

B. For model MU-2B-35 aircraft equipped with a King KFC-300 AFCS and a Sperry manual/electric pitch-trim system, in accordance with Bendix/King Certification Bulletin No. CB10, KPN 006-0712-00, no revision; or

C. For model MU-2B-36 aircraft equipped with a Sperry SPZ-200 AFCS and a MAI manual/electric pitch-trim system, in accordance with Mitsubishi Heavy Industries (MHI) Kit - Sperry SPZ-200AP Disengagement Drawing, 035A-985006, no revision; or

D. For all other models of MU-2B aircraft equipped with an FAA approved installation of the Bendix M-4C or M-4D autopilots, in accordance with MHI SB No. 066/22-006, dated 18 December 1987.

II. For models MU-2B-35 and -36 aircraft equipped with Bendix autopilots in accordance with STC SA1693SW, and models MU-2B-35, -36A and -60 with Bendix M-4D autopilots installed in accordance with approved MAI data, accomplish the following:

A. Insert additional placard data in the LIMITATION section of the Airplane Flight Manual Supplement (AFMS) as follows:

"COUPLED AUTOPILOT APPROACHES BELOW 125 KCAS OR 300 FEET AGL NOT PERMITTED."

Insertion of a copy of this Airworthiness Directive in the LIMITATIONS section of the AFMS satisfies the requirements of this paragraph.

B. Fabricate and install a permanent red colored placard in full view of the pilot using white coloured letters of a minimum of 0.10 inch in height which state:

"COUPLED AUTOPILOT APPROACHES BELOW 125 KCAS OR 300 FEET AGL NOT PERMITTED."

III. Prior to returning the aircraft to service, accomplish a visual configuration check and system functional ground test on all MU-2B, MU-2B-10, -15, -20, -25, -26, -26A, -30, -35, -36, -36A, -40 and -60 aircraft as follows:

A. Visually verify that:

1. The autopilot disconnect and trim disconnect/interrupt functions are combined on one button which is mounted on the outboard control wheel grip and is so oriented that it is easily activated by the pilot/co-pilot; and
2. The autopilot disconnect and trim disconnect/interrupt button is properly and legibly labeled to indicate function; and
3. The button is red in color; and
4. There are no other red buttons nearby that could be mistaken for the autopilot disconnect; and
5. The autopilot circuit breaker is properly labelled.

B. Perform an operational check of the autopilot disconnect and trim disconnect/interrupt button to confirm the correct functioning by disconnecting/interrupting the autopilot and the trim systems as follows:

1. With the manual electric pitch-trim system armed, press the trim button to cause the manual pitch trim to rotate, then verify that after each of the following operations is performed, the manual pitch-trim wheel stops moving when:

- (a) The disconnect/interrupt switch is fully depressed; or
- (b) The master electric power switch is positioned to "OFF"; or
- (c) The radio master switch is positioned to "OFF", if the aircraft is so configured (not applicable to MU-2B aircraft equipped with Sperry SPZ-500 autopilot); or
- (d) The electric trim circuit breaker is pulled (on some MU-2B aircraft without an electric trim circuit breaker, the autopilot circuit breaker/switch is used to disconnect the system in lieu of the electric trim circuit breaker).

2. With the autopilot system engaged, verify:

- (a) That the autopilot system can be overpowered by pushing or pulling on the control yoke; and
- (b) That, while overpowering the autopilot, the manual pitch-trim wheel stops moving and the autopilot disconnects when each of the following operations is performed:
 - (i) The disconnect/interrupt switch is depressed; or
 - (ii) The autopilot master switch or the radio master switch or the engage/disengage switch on the autopilot controller (as appropriate) is positioned to "OFF" (on some MU-2B aircraft not equipped with an autopilot master switch beside the controller, the radio master switch must be used to disconnect the system in lieu of the autopilot master switch); or

NOTE: For MU-2B aircraft equipped with Sperry SPZ-500 autopilot systems: