CADC SELF TEST

MAINT	RII/INSP

Execution / Start Date:	
End Date:	

CADC SELF TEST

	MAINT	RII/INSP

Nr.	Hardtime	Task	Spec.	Related Documents
1.		F1	REI	AMM 34–10–01 rev 15/07/05 MMS–328 341001 00100 rev 15/05/01

Check: B

Zones:

Access:

NRC YES ❍ NO ❍ IF YES, NUMBER(S): . . . . . .

CADC SELF TEST:

1. OPERATIONAL CHECKOUT

A. Central Air Data Computer Self–Test.

The following is an operational checkout of the Central Air Data Computer & its associated air data flight instruments. Except where specifically stated, all references to switches, controls, indicators & legends apply to the self–test panel on the front of the CADC.

1. Provide electrical power to airplane.
2. Provide communication between flight deck & lower forward lobe.
3. Verify that CADC circuit breaker, located on P5 circuit breaker panel, are closed.
4. Failure Annunciator Check. Check the condition of the three Failure Annunciators. The annunciator are the circular indicating devices on the front panel marked ALT, MACH & IAS. Each annunciator shall display a white center. If the center is red, the failure monitor in the corresponding altitude, Mach or indicated airspeed module has sensed a failure condition during flight or ground run–up.

NOTE: During the following failure monitor checks the external flag excitation is removed. This can be noted by direct observation of the failure flags in the True Airspeed (TAS), Static Air Temperature (SAT) & Machmeter part of the Mach/Airspeed Indicators.

5. Failure Monitor Check (Altitude Module). Set Rotary Selector Switch to ALT MONITOR. The meter needle shall move into the green area on the scale, indicating a failure monitor output of ± 28 volts dc. Set & hold 600 FPM/MONITOR switch to MONITOR. After a delay, meter indication shall drop to ± zero (lower 5 percent of scale), indicating that the failure monitor is operating properly. Release switch. After a delay, meter indication shall return to green area of scale. ALT failure annunciator shall not indicate a failure condition as a result of this test being performed.
6. Failure Monitor Check (Indicated Airspeed Module). Repeat the test described in step 4 above except set Rotary Selector Switch to IAS MONITOR. The IAS failure annunciator shall not indicate a failure condition as a result of this test being performed.
7. Failure Monitor Check (Mach Module). Repeat the test described in step 4 above except set Rotary Selector Switch to M (Mach) MONITOR. The MACH failure annunciator shall not indicate a failure condition as a result of this test being performed.
8. Altitude Readout Checkout.

CAUTION: THE ALT SLEW SWITCH SHALL BE RELEASED WHEN THE MACHMETERS STOP SLEWING TO PREVENT EXCESSIVE CLUTCH WEAR (2 MINUTES MAX).

CADC SELF TEST

MAINT	RII/INSP

9. With CADC Rotary Selector Switch at ALTITUDE READ, press & hold 60 FT/ALT SLEW Switch at ALT SLEW & check following:
   a) Observe that each digitizer lamp eventually illuminates.
   b) Aircraft True Airspeed (TAS) & Static Air Temperature (SAT) indicators will start to slew after ALT SLEW Switch is depressed for 60 seconds.
   c) True Airspeed (TAS) shall increase.
   d) Static Air Temperature (SAT) shall decrease.
   e) The machmeter part of the Mach/Airspeed indicator shall start slewing but will be covered by a flag until 0.40 Mach is reached. Mach meter shall slew up to a reading between 0.47 & 0.50 Mach.
   f) Release switch.
10. Wait 2 minutes before the next step to allow the CADC drive to return to initial position.
11. Altitude Rate Check. Set Rotary Selector Switch to ALT RATE 1. Set & hold 60 FT/ALT SLEW Switch at ALT SLEW. The meter needle shall move into the green area on the scale, indicating that the velocity generator is driving the number 1 altitude rate amplifier properly. Release switch.
12. Indicated Airspeed Module Slew Check. Set Rotary Selector Switch to IAS SLEW. Set IAS–M SLEW/ 5 KN switch at IAS–M SLEW & hold for 10 seconds. The meter needle shall move into the green area on the scale. Release switch. After a delay, the meter needle shall drop to $\pm$ zero.
13. Mach Module Slew Check. Set Rotary Selector Switch to MACH SLEW. Set & hold IAS–M SLEW/ 5 KN switch at IAS–M SLEW. After a delay the meter needle shall first move into the green area on the scale, then drop to $\pm$ zero as the servo loop drives to rebalance. Release switch. After a delay, the meter needle shall again move into the green area on the scale (since removal of the test signal again unbalances the loop) then drop to $\pm$ zero once again as the motor drives the loop to a rebalanced condition.
14. Set Rotary Selector Switch to OFF.