

ATTACHMENT 2

TO

SYSTEMS GROUP CHAIRMAN'S FACTUAL
REPORT

CEN17FA168

Aircraft Test Plan

CEN16FA372 – Aircraft Test Plan:

Aircraft setup:

- a. Install video camera (with audio recording) in cockpit focusing on mode control panel. Make sure AP mode controller, CAWS captions, EFIS tubes, and pilot Master Warning/Caution Captions are visible.
- b. Using the maintenance box, set maintenance switch to AIR.

General information:

- a. The following Cautions and Warnings will be present on the CAWS throughout the tests:
 - a. PAX DOOR warning
 - b. CARGO DOOR warning
 - c. GEN1 OFF caution
 - d. GEN2 OFF caution
 - e. FUEL PRESS caution
 - f. PUSHER caution

Additional CAWS captions may be illuminated depending on the CBs you decide to pull (probe heating etc.). Follow the maintenance technician's recommendations.

- b. Before each test, set all trims to the green range.
- c. Throughout the tests, monitor the autotrim lights on the triple trim indicator (rudder and pitch) to ensure that the AP TRIM caption on the CAWS is associated with the desired trim action, as the green AP TRIM CAWS caption will also illuminate when the AP trims the rudder.
- d. Note that the AP DISENG caution on the CAWS and the associated Master Caution will remain illuminated for 30 sec. after disengagement/disconnect, and then automatically extinguish, unless the AP is re-engaged prior. The AP test will not extinguish the caption.
- e. The AP mode controller disconnect tone is a long beep, which occurs once (e.g. after the AP test).
The AP mode controller trim fail warning is a continuously beeping tone.
The CAWS disconnect tone is a short Gong.
- f. At the end of any test, if the AP is engaged it may be disengaged with the AP DISCONNECT switch on the yoke or with the AP, YD, FD and ALT buttons on the Mode controller. The loud and annoying TRIM warning sound can only be silenced by an AP test.

Test 1

Test 1	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
1.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate . AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
1.2	Pull the Trim Adapter CB	None	None		None		None		???		None	
1.3	Within 10 seconds from 1.2, close the Trim adapter CB	None	None		None		None		None		None	
1.4	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 1	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
1.5	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes. A/P TRIM (red) illuminates		Gong		AP and YD remain shown.		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Continuous AP trim fail warning tone		Master Warning illuminates	
1.6	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. Continuous AP trim fail warning tone. AP caption blinks. YD, FD and ALT extinguish. TRIM (red) caption remains ON		Master Caution illuminates. Master Warning remains illuminated.	

Test 1	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
1.7	Press AP, YD, and ALT on mode controller	AP, YD, FD and ALT engage (verify by manipulating the controls)	A/P DISENG (amber) extinguishes immediately .		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate . TRIM (red) remains illuminated. Continous AP trim fail warning tone.		Master Caution extinguishes when A/P DISENG extinguishes. Master Warning remains illuminated.	
1.8	Pull the control yoke slowly aft	AP and YD remain engaged. Verify by manipulating controls, but no pitch trim action (rudder trim may operate)	None, except AP TRIM (green) caption when rudder auto-trims.		None		AP and YD remain shown		Continous AP trim fail warning tone.		Master Warning remains illuminated.	

Test 2

Test 2	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
2.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
2.2	Pull the Trim Adapter CB	None	None		None		None		None		None	
2.3	Within 10 seconds from 2.2, close the Trim adapter CB	None	None		None		None		None		None	
2.4	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 2	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
2.5	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes . A/P TRIM (red) illuminates		Gong		AP and YD remain shown.		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Continuous AP trim fail warning tone		Master Warning illuminates	
2.6	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. Continuous AP trim fail warning tone. AP caption blinks. YD, FD and ALT extinguish . TRIM (red) caption remains ON		Master Caution illuminates. Master Warning remains illuminated.	

Test 2	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
2.7	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously. AP DISENG caution may still be active until 30 sec expired		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
2.8	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	
2.9	Pull the control yoke slowly aft until AP TRIM (green) caption illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) illuminates. Caption extinguishes when trim activity stops.		None		AP and YD remain shown		None		None	

Test 3

Test 3	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
3.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
3.2	Pull the Trim Adapter CB	None	None		None		None		None		None	
3.3	Wait for more than 30 sec. after 3.2, close the Trim adapter CB	None	15 sec after 3.2, AP TRIM (red) illuminates		15 sec after 3.2, Gong		None		15 sec after 3.2, TRIM (red) caption illuminates. No audio		15 sec after 3.2, Master Warning illuminates	
3.4	Press AP, YD, and ALT on mode controller	AP and YD do engage (verify by manipulating the controls), but no further pitch trim activity can be forced. Rudder may auto-trim.	No change		No change		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 4

Test 4	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
4.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
4.2	Pull the Trim Adapter CB	None	None		None		None		None		None	
4.3	Wait for more than 30 sec. after 4.2	None	15 sec after 4.2, AP TRIM (red) illuminates		15 sec after 4.2, Gong		None		TRIM (red) caption illuminates 15 sec after 4.2. No audio		15 sec after 4.2, Master Warning illuminates	
4.4	Press AP, YD, and ALT on mode controller	AP and YD do not engage (verify by manipulating the controls)	No change		No change		None		No change		No change	

Test 5

Test 5	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
5.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate . AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
5.2	Press Trim Interrupt	None	None		None		None		None		None	
5.3	Within 10 seconds from 5.2, reset Trim Interrupt to NORM	None	None		None		None		None		None	
5.4	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 5	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
5.5	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes. A/P TRIM (red) illuminates		Gong		AP and YD remain shown.		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Continuous AP trim fail warning tone		Master Warning illuminates	
5.6	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. Continuous AP trim fail warning tone. AP caption blinks. YD, FD and ALT extinguish. TRIM (red) caption remains ON		Master Caution illuminates. Master Warning remains illuminated.	

Test 5	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
5.7	Press AP, YD, and ALT on mode controller	AP, YD, FD and ALT engage (verify by manipulating the controls)	A/P DISENG (amber) extinguishes immediately .		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate . TRIM (red) remains illuminated. Continuous AP trim fail warning tone.		Master Caution extinguishes when A/P DISENG extinguishes. Master Warning remains illuminated.	
5.8	Pull the control yoke slowly aft	AP and YD remain engaged. Verify by manipulating controls, but no pitch trim action (rudder trim may operate)	None, except AP TRIM (green) caption when rudder auto-trims.		None		AP and YD remain shown		Continuous AP trim fail warning tone.		Master Warning remains illuminated.	

Test 6

Test 6	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
6.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate. AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
6.2	Press Trim Interrupt	None	None		None		None		None		None	
6.3	Within 10 seconds from 6.2, reset Trim Interrupt to NORM	None	None		None		None		None		None	
6.4	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 6	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
6.5	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes . A/P TRIM (red) illuminates		Gong		AP and YD remain shown.		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Continuous AP trim fail warning tone		Master Warning illuminates	
6.6	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. Continuous AP trim fail warning tone. AP caption blinks. YD, FD and ALT extinguish . TRIM (red) caption remains ON		Master Caution illuminates. Master Warning remains illuminated.	

Test 6	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
6.7	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate . AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
6.8	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	
6.9	Pull the control yoke slowly aft until AP TRIM (green) caption illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) illuminates. Caption extinguishes when trim activity stops		None		AP and YD remain shown		None		None	

Test 7

Test 7	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
7.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
7.2	Press Trim Interrupt	None	None		None		None		None		None	
7.3	Wait for more than 30 sec. after 7.2, reset Trim Interrupt to NORM	None	15 sec after 7.2, AP TRIM (red) illuminates		15 sec after 7.2, Gong		None		TRIM (red) caption illuminates. No audio		15 sec after 7.2, Master Warning illuminates	
7.4	Press AP, YD, and ALT on mode controller	AP and YD do engage (verify by manipulating the controls), but no further pitch trim activity can be forced. Rudder may auto-trim.	No change		No change		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	

Test 8

Test 8	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
8.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
8.2	Press Trim Interrupt	None	None		None		None		None		None	
8.3	Wait for more than 30 sec. after 4.2	None	15 sec after 4.2, AP TRIM (red) illuminates		15 sec after 4.2, Gong		None		TRIM (red) caption illuminates 15 sec after 4.2. No audio		15 sec after 4.2, Master Warning illuminates	
8.4	Press AP, YD, and ALT on mode controller	AP and YD do not engage (verify by manipulating the controls)	No change		No change		None		No change		No change	

Test 9

Test 9	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
9.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
9.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		None	
9.3	Pull Trim adapter CB	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear immediately		AP, YD, FD and ALT captions disappear immediately. No AP disconnect tone		Master Caution illuminates after 3 sec	
9.4	Within 10 seconds from 9.2, reset the Trim adapter CB.	None	AP DISENG (amber) remains illuminated for max. 30 sec		None		None		None		Master Caution remains illuminated	

Test 9	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
9.5	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	AP DISENG (amber) extinguishes (if still ON)		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		Master Caution extinguishes	
9.6	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes . A/P TRIM (red) illuminates		Gong		AP and YD remain shown		TRIM (red) caption illuminates . AP, YD, FD and ALT caption remain illuminated. Trim fail warning tone		Master Warning illuminates	
9.7	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec.		AP and YD disappear		AP disconnect tone. AP, YD, FD and ALT extinguish . Red "trim" caption remains ON		Master Caution illuminates	
9.8	Press AP, then ALT on mode controller	AP and YD engage (verify by manipulating the controls)	A/P DISENG extinguishes . AP TRIM remains on		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate . Continous AP trim fail warning tone.		None	

Test 9	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
9.9	Pull the control yoke slowly aft	AP and YD remain engaged. Verify by manipulating controls, but no pitch trim action (rudder trim may operate)	None, except AP TRIM (green) caption when rudder auto-trims.		None		AP and YD remain shown		Continuous AP trim fail warning tone.		Master Warning remains illuminated.	

Test 10

Test 10	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
10.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone		Master Warning illuminates and extinguishes after end of test	
10.2	Press AP, then ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
10.3	Pull Trim adapter CB	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions extinguish immediately		Master Caution illuminates after 3 sec	
10.4	Within 10 seconds from 10.2, reset the Trim adapter CB.	None	AP DISENG (amber) remains illuminated		None		None		None		Master Caution remains illuminated	
10.5	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	AP DISENG (amber) extinguishes		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		Master Caution extinguishes	

Test 10	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
10.6	Pull the control yoke slowly aft until "AP TRIM" (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes A/P TRIM (red) illuminates		Gong		AP and YD remain shown		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Trim fail warning tone		Master Warning illuminates	
10.7	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec.		AP and YD disappear		AP disconnect tone. AP, YD, FD and ALT extinguish Red "trim" caption remains ON		Master Caution illuminates	
10.8	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	

Test 10	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
10.9	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD and ALT captions illuminate		None	
10.10	Pull the control yoke slowly aft until "AP TRIM" (green) caption illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) illuminates. Caption extinguishes when trim activity stops		None		AP and YD remain shown		None		None	

Test 11

Test 11	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
11.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
11.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD and ALT captions illuminate		None	
11.3	Pull Trim adapter CB	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions disappear		Master Caution illuminates after 3 sec	
11.4	Wait for more than 30 sec. after 11.3, close the Trim adapter CB	None	15 sec after 11.3, AP TRIM (red) illuminates		15 sec after 11.3, Gong		None		TRIM (red) caption illuminates 15 sec. after 11.3. No audio		15 sec after 11.3, Master Warning illuminates	
11.5	Press AP, YD, and ALT on mode controller	AP and YD engage	No change		No change		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
11.6	Pull the control yoke slowly aft	No pitch trim activity may be provoked										

Test 12

Test 12	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
12.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
12.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
12.3	Pull Trim adapter CB	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions disappear		Master Caution illuminates after 3 sec	
12.4	Wait for more than 30 sec. after 12.3	None	15 sec after 12.3, AP TRIM (red) illuminates		15 sec after 12.3, Gong				TRIM (red) caption illuminates 15 sec. after 12.3. No audio		15 sec after 12.3, Master Warning illuminates	
12.5	Press AP, YD, and ALT on mode controller	AP and YD do not engage (verify by manipulating the controls)	No change		No change		None		None		No change	

Test 13

Test 13	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
13.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
13.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
13.3	Press Trim Interrupt	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions disappear immediately		Master Caution illuminates after 3 sec	
13.4	Within 10 seconds from 13.2, reset Trim Interrupt to NORM	None	AP DISENG (amber) remains illuminated		None		None		None		Master Caution remains illuminated	
13.5	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	AP DISENG (amber) extinguishes		None		AP and YD are shown		AP, YD, FD and ALT caption illuminate		Master Caution extinguishes	

Test 13	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
13.6	Pull the control yoke slowly aft until "AP TRIM" (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes . A/P TRIM (red) illuminates		Gong		AP and YD remain shown		TRIM (red) caption illuminates . AP, YD, FD and ALT caption remain illuminated. Trim fail warning tone		Master Warning illuminates	
13.7	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. AP and YD extinguish . Red "trim" caption remains ON. Trim fail warning tone		Master Caution illuminates	
13.8	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate . Trim fail warning tone remains active		None	
13.9	Pull the control yoke slowly aft	No pitch trim activity may be provoked	None				No change		No change			

Test 14

Test 14	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
14.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
14.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
14.3	Press Trim Interrupt	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions disappear immediately		Master Caution illuminates after 3 sec	
14.4	Within 10 seconds from 14.2, reset Trim Interrupt to NORM	None	AP DISENG (amber) remains illuminated		None		None		None		Master Caution remains illuminated	
14.5	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	AP DISENG (amber) extinguishes		None		AP and YD are shown		AP, YD and ALT caption illuminate		Master Caution extinguishes	

Test 14	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
14.6	Pull the control yoke slowly aft until AP TRIM (green) caption briefly illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) briefly illuminates, then extinguishes A/P TRIM (red) illuminates		Gong		AP and YD remain shown		TRIM (red) caption illuminates. AP, YD, FD and ALT caption remain illuminated. Trim fail warning tone		Master Warning illuminates	
14.7	Disconnect AP and YD with A/P DISC switch on control yoke (iaw AFM 3.21.1)	AP and YD disconnect. Verify by manipulating controls	A/P DISENG (amber) illuminates. A/P TRIM (red) remains illuminated		Gong after 3 sec. (after Mode Controller tone has finished)		AP and YD disappear		AP disconnect tone. AP and YD extinguish. Red "trim" caption remains ON		Master Caution illuminates	
14.8	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate. AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	

Test 14	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
14.9	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
14.10	Pull the control yoke slowly aft until AP TRIM (green) caption illuminates	AP and YD remain engaged. Verify by manipulating controls	A/P TRIM (green) illuminates. Caption extinguishes when trim activity stops.		None		AP and YD remain shown		None		None	

Test 15

Test 15	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
15.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
15.2	Press AP, YD, and ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		None	
15.3	Press Trim Interrupt	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD, FD and ALT captions disappear immediately		Master Caution illuminates after 3 sec	
15.4	Wait for more than 30 sec. after 15.3, reset Trim Interrupt to NORM	None	15 sec after 15.3, AP TRIM (red) illuminates		15 sec after 15.3, Gong		None		TRIM (red) caption illuminates after 15 sec.		15 sec after 15.3, Master Warning illuminates	
15.5	Press AP, YD, and ALT on mode controller	AP and YD do engage (verify by manipulating the controls)	A/P DISENG extinguishes		None		AP and YD are shown		AP, YD, FD and ALT captions illuminate		Master caution extinguishes	

Test 15	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
15.6	Pull the control yoke slowly aft	No pitch trim activity may be provoked	None				No change		No change			

Test 16

Test 16	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
16.1	Perform AP test by pressing TEST on mode control panel	AP performs preflight check.	5 sec A/P TRIM (green) and A/P TRIM (red). Extinguish simultaneously		Gong		None		All lights/captions illuminate . AP TRIM (red) flashes 4 or 5 times. AP caption flashes 12 times. AP disconnect tone.		Master Warning illuminates and extinguishes after end of test	
16.2	Press AP, then ALT on mode controller	AP and YD engage (verify by manipulating the controls)	None		None		AP and YD are shown		AP, YD and ALT captions illuminate . DOES THE SWITCH ILLUMINATE?		None	
16.3	Press Trim Interrupt	AP immediately disengages	AP DISENG (amber) illuminates after 3 sec		Gong after 3 sec		AP and YD disappear		AP, YD , FD and ALT captions disappear immediately		Master Caution illuminates after 3 sec	
16.4	Wait for more than 30 sec. after 16.3,	None	15 sec after 16.3, AP TRIM (red) illuminates		15 sec after 16.3, Gong				TRIM (red) caption illuminates 15 sec. after 16.3 No audio		15 sec after 16.3, Master Warning illuminates	

Test 16	Action	System behavior	CAWS Annunciation		CAWS audio signal		EADI indication		AP mode controller audio and light indication		Master Warning/Caution Caption	
			Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual	Expected	Actual
16.5	Press AP, YD then ALT on mode controller	AP and YD do not engage (verify by manipulating the controls)	No change		No change		None		None		None	