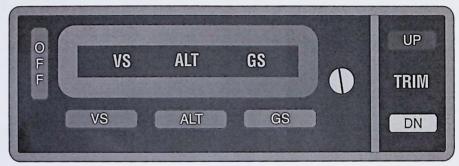


Pilot's Operating Handbook



2.1 Pre-Flight Test

...

Prior to takeoff and with engine running, perform the actions shown in Table 2-1. For each action, verify the corresponding response where applicable.

Table 2-1.	Pre-Flight Test (continued on page 2-4)
------------	-------------------	------------------------

ACTION	RESPONSE
1. Set Trim Master Switch to OFF position (if installed).	
2. Set Battery Master Switch to ON position.	
3. Set Avionics Master Switch to ON position.	
4. Set Pitch Stab Switch to TEST position.	The following annunciations all appear on AP display, as shown in Fig. 2-1:
	VS ALT GS TRIM
	UP switch and DN switch lamps are both illuminated on AP display.



Fig. 2-1. AP Display, All Annunciations Appear

Table 2-1. Pre-Flight Test (continued from page 2-3)

ACTION	RESPONSE	
5. Move A/C Control Wheel forward and aft, to sense its freedom of movement about pitch axis.		
6. P <u>ress ALT mode</u> selector switch to engage altitude hold mode.	CGRASP YOKE, place HOG Bug = ENGAGE Roll AP 3) THEAN PRESS AFT	ERWARD
7. Attempt movement of A/C Control Wheel forward and aft.	A/C Control Wheel's reduced freedom of movement indicates that Pitch Servo is engaged.	
	Pitch Servo can be overridden. If not, set Pitch Stab Switch to OFF position and do not use.	
8. Press/Hold UP switch, while maintaining a grasp on A/C Control Wheel.	Pitch Servo disengages after ½ second, as sensed by the increased freedom of A/C Control Wheel movement about pitch axis.	
9. Release UP switch, while maintaining a grasp on A/C Control Wheel.	Pitch Servo immediately re-engages, as sensed by the reduced freedom of A/C Control Wheel movement about pitch axis.	
10. Press/Hold DN switch, while maintaining a grasp on A/C Control Wheel.	Pitch Servo disengages after ½ second, as sensed by the increased freedom of A/C Control Wheel movement about pitch axis.	
11. Release DN switch, while maintaining a grasp on A/C Control Wheel.	Pitch Servo immediately re-engages, as sensed by the reduced freedom of A/C Control Wheel movement about pitch axis.	

Table 2-1. Pre-Flight Test (continued from page 2-4)

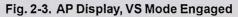
••••••

ACTION	RESPONSE
12. Set Pitch Stab Switch to ON position.	All annunciations are extinguished, as shown in Fig. 2-2.
	UP switch and DN switch lamps are extinguished.
13. Press VS mode selector switch to engage vertical speed mode.	VS annunciation only appears on AP display, as shown in Fig. 2-3.
14. Move A/C Control Wheel until elevator is in neutral position.	



Fig. 2-2. AP Display, All Annunciations Extinguished





1

. .

Table 2-1. Pre-Flight Test (continued from page 2-5)

ACTION	RESPONSE
15. Press/Hold UP switch.	A/C Control Wheel moves in aft direction.
16. Release UP switch.	A/C Control Wheel continues moving in aft direction.
17. Press/Hold DN switch.	A/C Control Wheel slows to a stop in aft direction, and then moves in forward direction.
18. Release DN switch.	A/C Control Wheel continues moving in forward direction.
19. Press ALT mode selector switch to engage altitude hold mode.	A/C Control Wheel stops. ALT annunciation only appears on AP display, as shown in Fig. 2-4.
20. Press/Hold UP switch.	A/C Control Wheel moves in aft direction.
21. Release UP switch.	A/C Control Wheel continues moving in aft direction.



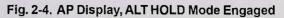
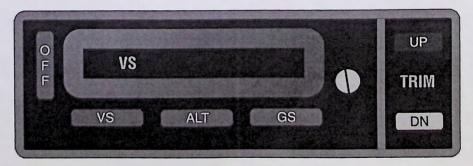
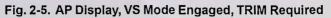


Table 2-1. Pre-Flight Test (continued from page 2-6)

ACTION	RESPONSE
22. Press/Hold DN switch.	A/C Control Wheel slows to a stop in aft direction, and then moves in forward direction.
23. Release DN switch.	A/C Control Wheel continues moving in forward direction.
24. Press VS mode selector switch to engage vertical speed mode.	A/C Control Wheel stops. VS annunciation only appears on AP display.
25. Move A/C Control Wheel as far aft as possible.	After 3 seconds, TRIM annunciation appears on AP display as shown in Fig. 2-5, DN switch lamp becomes illuminated, and audible alert sounds a steady tone. After 7 seconds, TRIM annunciation flashes, DN switch lamp flashes, and audible alert becomes periodic.
26. Move A/C Control Wheel forward until TRIM annunciation is extinguished.	DN switch lamp is extinguished, and audible alert is squelched.





. ?

Table 2-1. Pre-Flight Test (continued from page 2-7)

ACTION	RESPONSE
27. Move A/C Control Wheel as far forward as possible.	After 3 seconds, TRIM annunciation appears on AP display as shown in Fig. 2-5, UP switch lamp becomes illuminated, and audible alert sounds a steady tone. After 7 seconds, TRIM annunciation flashes, UP switch lamp flashes, and audible alert becomes periodic.
28. Move A/C Control Wheel aft until TRIM annunciation is extinguished.	UP switch lamp is extinguished, and audible alert is squelched.
Note: If autopilot is equipped with autotrim, then proceed to step 29. Otherwise, proceed to step 44.	
29. Set Trim Master Switch to ON position.	
30. Move A/C Control Wheel as far aft as possible.	After 3 seconds, Elevator Trim Wheel begins to run nose down with increasing speed.
31. Move A/C Control Wheel forward until Elevator Trim Wheel stops.	
32. Move A/C Control Wheel as far forward as possible.	After 3 seconds, Elevator Trim Wheel begins to run nose up with increasing speed.
33. Move A/C Control Wheel aft until Elevator Trim Wheel stops.	

Table 2-1. Pre-Flight Test (continued from page 2-8)

. 1.

٠,

ACTION	RESPONSE
34. Press Momentarily either forward or aft on both segments of Manual Electric Trim Switch, in order to Disconnect AP.	All annunciations are extinguished. UP switch and DN switch lamps are extinguished.
35. Press/Hold either forward or aft on only one segment of Manual Electric Trim Switch, but not both.	Elevator Trim Wheel does not begin to run.
36. Press/Hold forward on both segments of Manual Electric Trim Switch.	Elevator Trim Wheel runs nose down at full speed, and TRIM annunciation appears flashing on AP display.
37. Press/Hold AP DISC / TRIM INTR Switch.	Elevator Trim Wheel stops.
38. Release AP DISC / TRIM INTR Switch.	Elevator Trim Wheel resumes running nose down at full speed.
39. Release Manual Electric Trim Switch.	Elevator Trim Wheel stops. TRIM annunciation is extinguished.
40. Press/Hold aft on both segments of Manual Electric Trim Switch.	Elevator Trim Wheel runs nose up at full speed, and TRIM annunciation appears flashing on AP display.
41. Press/Hold AP DISC / TRIM INTR Switch.	Elevator Trim Wheel stops.
42. Release AP DISC / TRIM INTR Switch.	Elevator Trim Wheel resumes running nose up at full speed.
43. Release Manual Electric Trim Switch.	Elevator Trim Wheel stops. TRIM annunciation is extinguished.

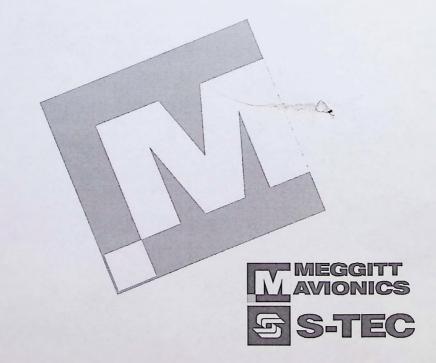
·· ·;

Table 2-1. Pre-Flight Test (continued from page 2-9)

ACTION	RESPONSE
Note: Proceed to step 45.	
44. Press AP DISC / TRIM INTR Switch, in order to Disconnect AP.	All annunciations are extinguished. UP switch and DN switch lamps are extinguished.
45. Trim A/C for takeoff.	

System 60 PSS Pitch Stabilization System Pilot's Operating Handbook





4.0 Procedures

4.1 Pre-Flight Procedures

NOTE: To perform the system function check, adequate DC voltage must be supplied to the system, either 12 or 24 VDC, depending on the aircraft.

4.1.1 Pitch/Altitude and Vertical Speed

The following is a step by step procedure for preflighting the Pitch/Altitude and Vertical Speed Systems:

1. Place the Pitch Stab Switch in the TEST position. Ensure all indicators on the 60 PSS Annunciator light.

2. Move the control wheel to center and push the VS mode switch. Move the control wheel to check for engagement of the pitch servo.

3. Hold the control wheel and depress and hold the UP modifier switch. <u>After approximately 1/2 second the pitch servo should</u> disconnect. Release the UP modifier switch. The pitch servo should reengage. Repeat the procedure for the DN modifier switch. Move the Pitch Stab Switch to the Pitch Stab position.

CAUTION

The above pitch limiter check should be conducted once each flight day. If the pitch servo does not disengage the controls when the UP and DN modifier switches are momentarily selected, the limit accelerometer may have failed. The pitch stabilization system should not be used until the problem is corrected.

4.*Move* the control wheel to level flight position and engage the VS mode. Press the UP modifier switch and hold. The control wheel should move slowly aft. Press the DN modifier switch and hold. The control wheel should move slowly forward.

5. Overpower the pitch function by pulling the control wheel slowly aft. The TRIM and DN annunciator should illuminate and an audible warning should sound. Slowly push the control wheel forward. The TRIM and UP annunciator should illuminate and an audible warning should sound. During overpower, there should be no excessive play in the controls or ratcheting noise.

NOTE: There will be approximately a 2-3 second delay between the overpower and the trim indication. If the trim lights do not function the system should not be used until the problem is corrected.

6. Momentarily depress the OFF switch. Move the control wheel to assure freedom of movement of the controls.