

General Aviation ADS-B Post Installation Test

WAAS GNSS/GPS VHF COM Interference Test On the ground, monitor ADS-B WAAS GNSS signal strength while transmitting on frequencies: 121.150, 121.175, 121.200, 131.250, 131.275 and 131.300 for 30 seconds for each VHF COM radio. Degradation of individually received satellite signals below a point where navigation is no longer possible is not acceptable and will require that additional isolation measures be taken. (1)

FLIGHT TEST: (2)

Verify no ADS-B Notams issued. Record time, and fly to a safe altitude.

Turns Verify the ADS-B system performs properly during turning maneuvers. During the flight, place the aircraft in various normal configurations such as takeoff, approach, landing, and cruise configuration if appropriate for the airframe. During the flight, perform at least two left and two right 360-degree turns. Table 5 below provides the suggested altitude, speed, and bank angle at which these turns should be made. The intent of this test is to ensure the ADS-B system operates properly over the normal flight regimes of the aircraft under test. Variations on altitude, speed, and bank angle are acceptable as long as the intent of the test is met.

Part 23 Aircraft			
Configuration	Altitude Range (in feet AGL)	Speed Range	Bank Angle
Takeoff	3000-5000	1.4 V_S	30°
Approach or Landing	2000-7000	1.4 V_S	30°
Cruise	7000-10000	1.5 V_S to 1.8 V_S	30°

Climbs/Descents Verify the ADS-B system performs properly during climbs and descents. Table 6 provides a suggested airspeed at which climbs should be made during the test flight. Table 7 provides a suggested airspeed at which descents should be made during the test flight. Climbs and descents should be at least one minute in length. The intent of this test is to ensure the ADS-B system operates properly over the flight regime of the aircraft under test. Variations on climb and descent rates are acceptable as long as the intent of the test is met.

Table 6: Climb Speeds

Configuration	Part 23 Aircraft
Take off	V_Y
Cruise	V_H

Table 7: Descent Speeds

Configuration	Part 23 Aircraft
Cruise	$V_{NE} - 10$
Approach	$V_{FE} - 10$
Landing	$V_{FE} - 10$

Check ADS-B Health by: Requesting the public ADS-B Performance Report (PAPR) at:
<https://adsbperformance.faa.gov/PAPRRequest.aspx>

PAPR YouTube Computer Data Entry Demonstration:
<https://www.youtube.com/watch?v=YGWTbQy9cac>

- 1) AC 20-138D (para 21-1.1)
- 2) AC 20-156B (sec 4.3.2)