

COMANT GLOBAL POSITIONING SYSTEM (GPS)/XM ANTENNA - REMOVAL/INSTALLATION

1. General

- A. This section gives the removal and installation procedures for the Comant GPS and the GPS/XM antennas, which are installed on the top of the airplane cabin. For a general overview of the G1000 GPS system (Refer to Garmin G1000 Global Positioning System - Description and Operation).

2. Tools and Equipment

- A. Tools and Equipment
- None.
- B. Special Consumables
- None.
- C. Reference Material
- Chapter 20, Electrical Bonding - Maintenance Practices
 - Chapter 20, Fuel, Weather and High-Temperature Sealing - Maintenance Practices
 - Chapter 20, Adhesive and Solvent Bonding - Maintenance Practices
 - Garmin GDL 69A XM Data Link System - Adjustment/Test
 - Garmin G1000 Global Positioning System - Description and Operation
 - Garmin G1000 Global Positioning System - Adjustment/Test.

3. Setup

- A. Prepare the Airplane
- (1) Make sure that the BATTERY switch, found on the circuit breaker switch panel, is set to the OFF position.
 - (2) Make sure that the AVIONICS switches on the circuit breaker switch panel, are set to the OFF position.
 - (3) Disconnect external electrical power from the airplane.
 - (4) Disengage the applicable circuit breaker given in Table 401.

Table 401. Circuit Breakers

GPS Component	Circuit Breaker Name	Circuit Breaker Location
GPS/XM Antenna (left)	COM1	Avionics Circuit Breaker Panel
	NAV1	Avionics Circuit Breaker Panel
GPS Antenna (right)	COM2	Avionics Circuit Breaker Panel
	NAV2	Avionics Circuit Breaker Panel

- (5) Remove the headliner as necessary to gain access to the antennas and antenna cables.

4. Comant GPS/XM or GPS Antenna Removal

- A. Remove the GPS/XM or GPS Antenna (Refer to Figure 401).

NOTE: The removal procedure for the GPS/XM (left) and the GPS (right) antennas are typical.

- (1) Remove the sealant from the top of the screws.
- (2) Remove the screws that attach the antenna to the doubler.
- (3) Break the bond of the sealant between the bottom of the antenna and the doubler.
- (4) Carefully lift the antenna sufficiently to get access to the coaxial cable.

NOTE: The left GPS/XM antenna has two coaxial cables.

- (5) Disconnect the coaxial cable from the antenna.
- (6) Remove the antenna from the airplane.
- (7) Clean all the sealant from the mating surfaces of the antenna and the doubler. Refer to Chapter 20, Fuel, Weather and High-Temperature Sealing - Maintenance Practices.

5. Comant GPS/XM or GPS Antenna Installation

- A. Remove the GPS/XM or GPS Antenna (Refer to Figure 401).

NOTE: The installation procedure for the GPS/XM (left) and the GPS (right) antennas are typical.

- (1) Make sure that the mating surface area and the antenna are clean and free of old sealant and contamination. Refer to Chapter 20, Fuel, Weather and High-Temperature Sealing - Maintenance Practices.
- (2) Put the antenna in its position adjacent to the doubler.
- (3) Connect the coaxial cable to the antenna.
NOTE: The left GPS/XM antenna has two coaxial cables.
- (4) Install the screws that attach the antenna to the doubler.
- (5) Do an electrical bond check (Type I) from the antenna to the airplane skin. Refer to Chapter 20, Electrical Bonding - Maintenance Practices.
- (6) Use Type V, Class A (white) RTV sealant to fill all the screw holes. Refer to Chapter 20, Adhesive and Solvent Bonding - Maintenance Practices.
- (7) Apply a fillet seal (Type I, Class B) around the perimeter of the antenna. Refer to Chapter 20, Fuel, Weather and High-Temperature Sealing - Maintenance Practices.
- (8) Engage the applicable circuit breakers given in Table 401.

6. Comant GPS/XM and GPS Antennas Post-Maintenance Checks

A. Do the GPS/XM and GPS Antennas Post-Maintenance Checks that follow:

- (1) For the left GPS/XM antenna, do checks that follow:
 - (a) Garmin G1000 Global Positioning System - Adjustment/Test.
 - (b) Garmin GDL 69A XM Data Link System - Adjustment/Test.
- (2) For the right GPS antenna, do the Garmin G1000 Global Positioning System - Adjustment/Test.

7. Closeout

- A. Put the Airplane Back to its Initial Condition.
- (1) None.

Figure 401 : Sheet 1 : GPS/XM Antenna Installation

