TracVision HD11 Sensor Module
Replacement Instructions

Technical Support

If you need technical assistance, please contact KVH Technical Support:

North/South America, Australasia:
Phone: +1 401 847-3327
Email: support@kvh.com

Europe, Middle East, Africa, Asia-Pacific:
Phone: +45 45 160 180
Email: support@emea.kvh.com

The following instructions explain how to replace the sensor module in a TracVision® HD11 antenna.

NOTE: Your antenna might have parts that differ from those pictured in this document. Such differences have no bearing on the instructions unless noted otherwise.

Figure 1: Sensor Module in an HD11 Antenna

Tools Required

This procedure requires the following tools:

- Headband light
- Phillips screwdrivers
- Torque wrench with Phillips bits (11 in.-lbs and 21 in.-lbs)
- Flat-head jeweler's torque screwdriver set to 5 in.-lbs
- Latest HD11 software update file downloaded to a laptop computer via the KVH Partner Portal or to a mobile device via the KVH HD11 app

Step 1 - Remove the Old Sensor Module

Follow the steps below to remove the old sensor module.

CAUTION

For your own safety, disconnect power from all wired components before you begin.

a. Turn off the ACU to remove power from the antenna.

b. Disconnect the power/data cable from the back of the ACU and unplug the AC power cable from its power source.

NOTE: Follow all shipboard lockout-tagout procedures, where applicable.

c. Using a 7/16" socket/ratchet or nut driver, unlock the three hex latches securing one of the service hatches to the baseplate (see Figure 2). Open the hatch.

NOTE: If you are unable to work through the hatch, you may remove the radome instead. If possible, open the second hatch as well to allow in more light. Use a headband light if needed.

d. Disconnect the two cables from the sensor module (see Figure 3) as follows:

d1. Disconnect the GPS cable.

d2. Using a flat-head jeweler's screwdriver, loosen the Sensor cable connector's DB9 retaining screws first to avoid breaking the screws. Then fully disconnect the cable.

e. Using a #2 Phillips screwdriver, loosen the three captive screws securing the sensor module to the frame.

f. Remove the faulty sensor module.

Step 2 - Install the Replacement Sensor Module

Follow the steps below to secure the new sensor module, reconnect the cables, close the hatch, and apply power.

a. Secure the replacement sensor module to the frame and tighten the captive screws to 21 in.-lbs.

b. Reconnect the two cables to the sensor module at the locations shown in Figure 3.

When reconnecting the DB9 connector (the Sensor Cable), tighten the retaining screws to 5 in.-lbs of torque. Do not overtighten – these screws break easily.

c. Inspect the inside of the antenna to make sure you have not left any tools or debris inside.

Figure 2: Service Hatches

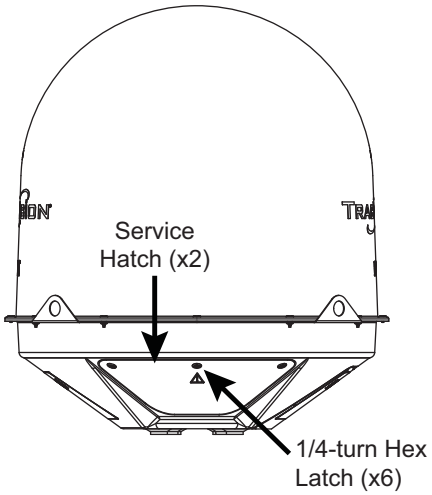
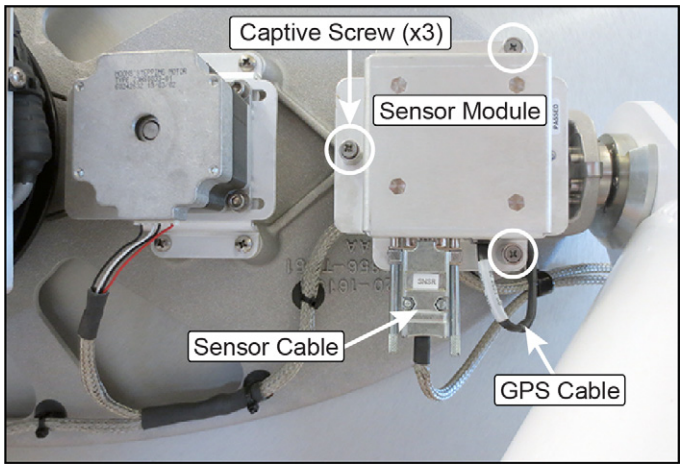


Figure 3: Sensor Module Screws and Cables



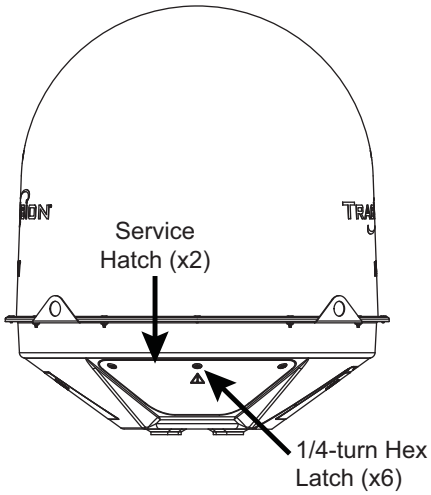
d. Close all open hatches and lock their three hex latches (see Figure 4).

e. Reconnect the power/data and AC power cables to the ACU and turn on the antenna. Then wait five minutes for system startup.

Step 3 - Update the Software

Follow the instructions in the TracVision HD11 Installation Guide or User's Guide to update the system software to the latest version.

Figure 4: Service Hatches



Step 4 - Calibrate the Gyros

The sensor module's gyros need to be calibrated to work with the antenna's main board. Follow the steps below to calibrate the gyros.

Important!

Calibrate the gyros only while the vessel is stationary in calm seas.

a. Connect your computer to the HD11's Ethernet or Wi-Fi network. Then type the ACU's serial number into your web browser's address bar, as shown below:

http://hd11-<ACU serial number>.local

*NOTE: You can view the ACU's IP address and serial number on the ACU's front panel display. Press **MENUS** until the display shows "ABOUT SYSTEM", press **ACCEPT**, and then scroll through until you see the desired information.*

b. Log into the web interface:

Default Username: **admin**
Default Password: **password**

c. At the Support page of the web interface, select Command Line (Figure 5).

d. At the command line (see Figure 6), enter and send the following commands:

- **HALT**
- **DEBUGON**
- **EEUNLOCK**
- **=CALNEWGYRO**

e. After calibration is complete, verify that the azimuth (AZ), elevation (EL), and skew gyros all pass, then enter and send the following command:

- **ZAP**

Figure 5: Support Page and Command Line Icon

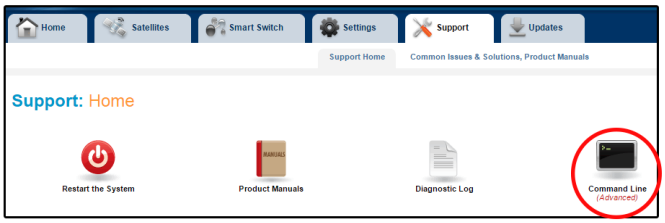
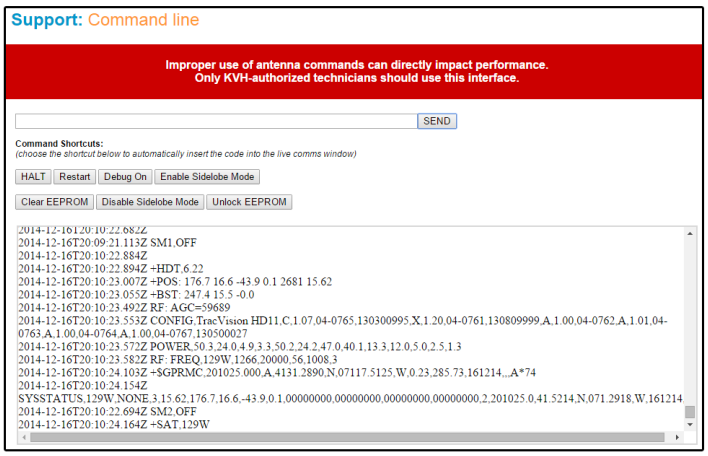


Figure 6: Command Line



Step 5 - Test the System

Test the system for normal operation. If the problem persists, contact KVH Technical Support.

The replacement procedure is complete!