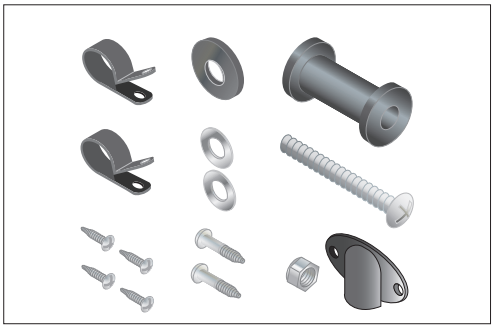
GARMIN®

Water Speed Sensor Installation Instructions

Contents

Speed Sensor

Transom Mounting Bracket
Mounts to the transom and holds the speed sensor.



Mounting Hardware

(×2) 1/4 in. Cable clamps
(×4) 4 × 12 mm Screws
(×1) 1/4 in. Rubber washer
(×2) 5 mm Flat washers
(×2) M5 × 30 mm Screws
(×1) Plastic spacer
(×1) 10-32 × 1 3/4 in. Screw
(×1) 10-32 Lock nut
(×1) Cable entry cover

Tools Needed

Drill and drill bits
Number 2 Phillips screw driver
3/8 in. Wrench or socket
Scissors and masking tape
Marine sealant

Assembling the Speed Sensor

1. Insert the rubber washer and the plastic spacer into the speed sensor at the same time. Do not lubricate the rubber washer.
2. Slide the speed sensor into the mounting bracket.
3. Place a 5 mm flat washer on the 10-32 × 1 3/4 in. screw and insert the screw through the mounting bracket, the spacer, and the rubber washer.
4. Place the remaining 5 mm flat washer on the exposed end and install the 10-32 lock nut finger tight (see Figure 1). The speed sensor will be tightened further after installation on the boat.

Figure 1

Selecting a Location

For the speed sensor to operate properly, it should be located in non-turbulent water. The speed sensor should be mounted as close to the center of the boat as possible. The speed sensor should be positioned so that it is not in the path of the prop, nor in the path of items on the hull that may cause the water to become turbulent (Figure 2).

Do not place the speed sensor near strakes, struts, fittings, water intake or discharge ports, or anything that causes the water to become turbulent.

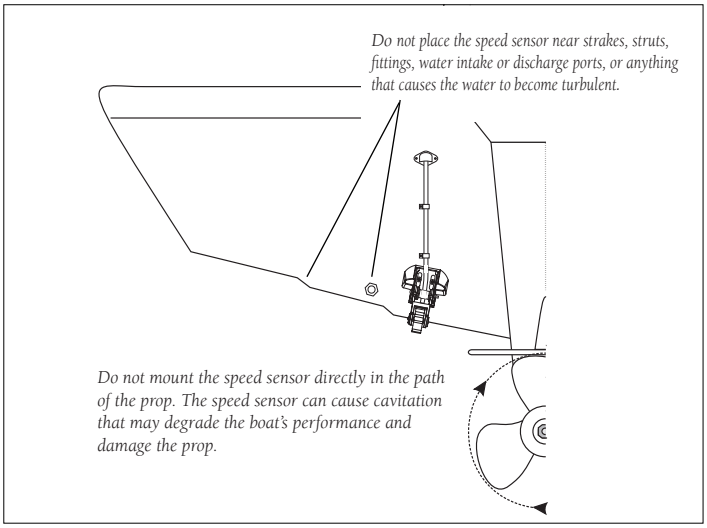


Figure 2

Mounting the Speed Sensor

1. Cut out the speed sensor mounting template provided with this document.
2. Position the template at the selected location, ensuring that the mark on the template is aligned with the bottom of the transom. Tape the template in place (see Figure 3).
3. Drill 5/32 in. (4 mm) pilot holes approximately 1 in. (25 mm) deep at the locations indicated on the template. To avoid drilling the holes too deep, wrap a piece of tape around the bit 1 in. (25 mm) from the point of the bit. Remove the template from the transom.
4. Apply marine sealant to the M5 × 30 mm screws.
5. Attach the speed sensor assembly to the transom using the M5 × 30 mm screws. Adjust the speed sensor to extend beyond the bottom of the transom approximately 1/8 in. (3 mm) on fiberglass hulls or 3/8 in. (10 mm) on aluminum hulls. Examine the alignment of the speed sensor; it should be aligned parallel to the water (see Figure 4).
6. Tighten the 10-32 locking nut until it touches the mounting bracket, and then tighten it an additional 1/4 turn (do not overtighten).

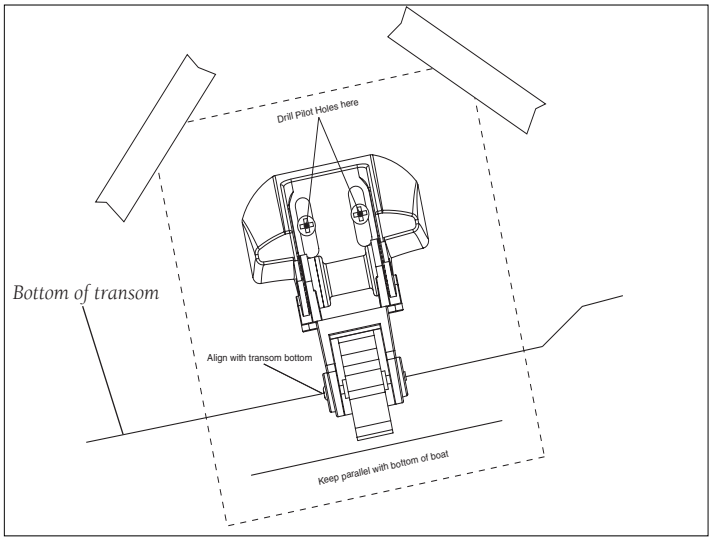


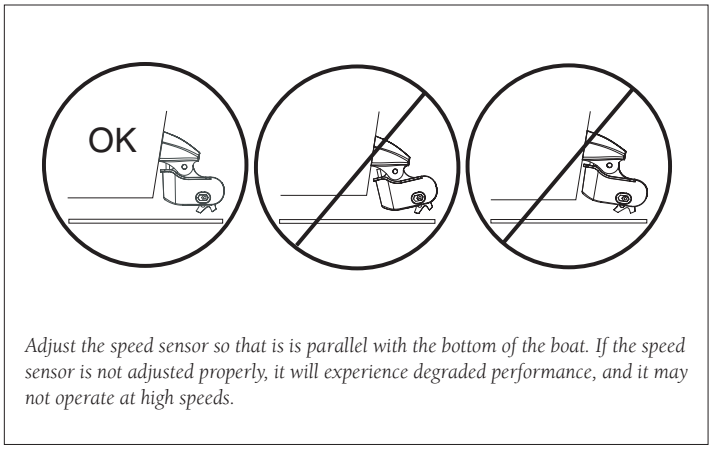
Figure 3

Routing the Speed Sensor Cable

It may be possible to route the speed sensor cable through an existing drain hole, or it may be necessary to drill a hole in the transom to route the cable through. Before drilling through the transom, ensure that any wires, cables, or lines are removed from the area inside the boat.

1. Drill a 3/4 in. (19 mm) hole through the transom far above the water line.
2. Route the speed sensor cable through the transom.
3. Place the first cable clamp on the speed sensor cable approximately one third of the distance between the speed sensor and the hole. Mark the location. Drill a 1/8 in. (3 mm) pilot hole approximately 3/8 in. (10 mm) deep.
4. Coat a 4 × 12 mm screw with marine sealant and use it to secure the cable clamp.
5. Place the second cable clamp on the speed sensor cable approximately two thirds of the distance between the speed sensor and the hole. Mark the location. Drill a 1/8 in. (3 mm) pilot hole approximately 3/8 in. (10 mm) deep.
6. Repeat step 4 for the second cable clamp.
7. Coat the inside of the 3/4 in. (19 mm) hole with marine sealant. Place the cable entry cover over the speed sensor cable and the 3/4 in. hole, and then mark the screw locations. Drill 1/8 in. (3mm) pilot holes approximately 3/8 in. (10 mm) deep. Coat the 4 × 12 mm screws with marine sealant, and then secure the cable entry cover to the transom.

When routing the speed sensor cable to the sonar or to the GST™ 10 adapter, avoid routing the cable close to electrical wires or other sources of electrical interference. Do not cut the cable jacket while routing the cable. Do not cut the speed sensor cable. If the cable is too long, coil the extra cable and secure it using a cable tie. If the cable is too short, contact your Garmin dealer for an extension cable.



Adjust the speed sensor so that is is parallel with the bottom of the boat. If the speed sensor is not adjusted properly, it will experience degraded performance, and it may not operate at high speeds.

Figure 4

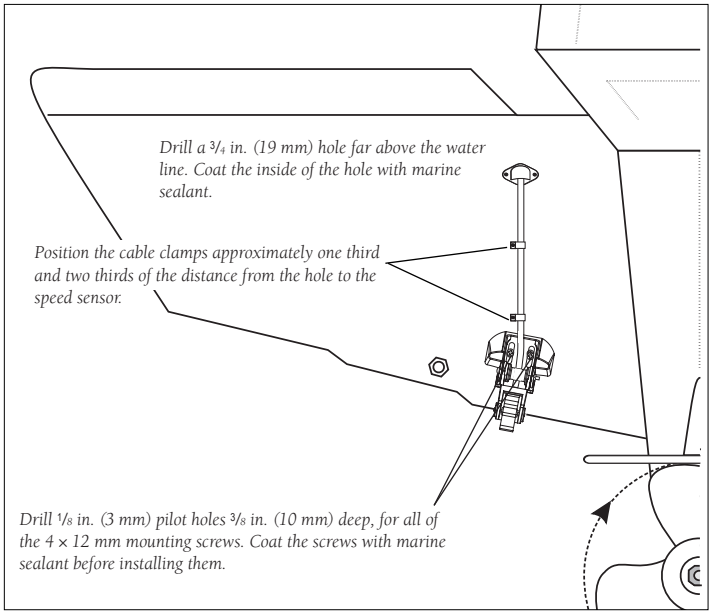


Figure 5

Calibrating the Speed Sensor

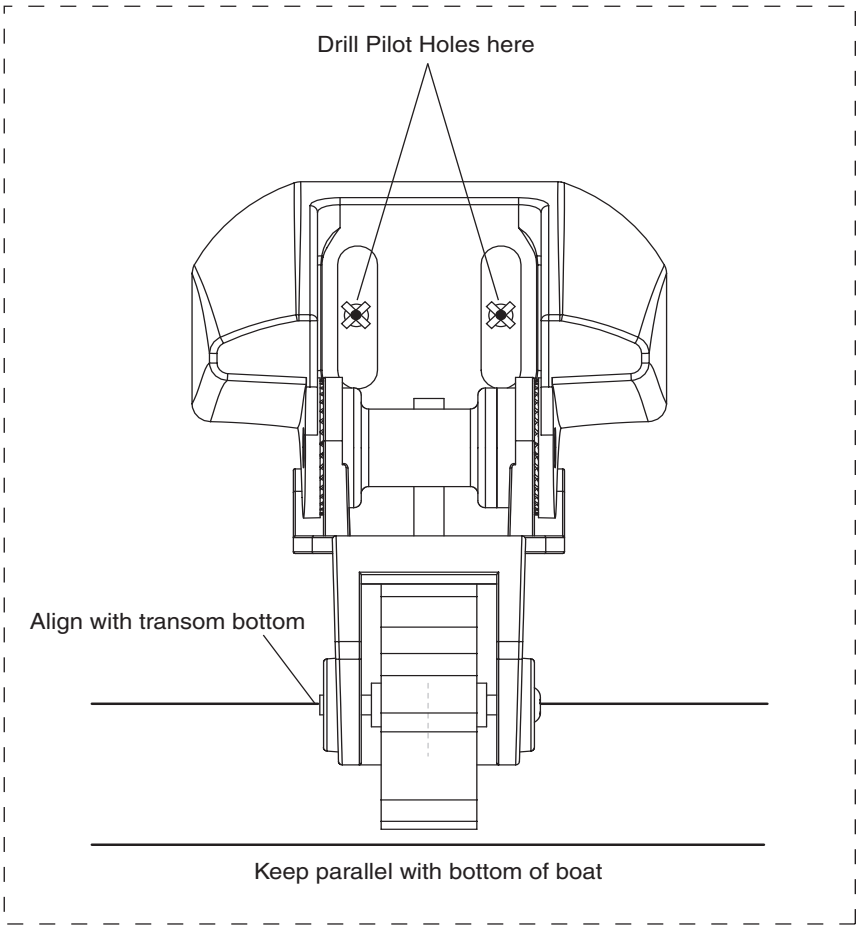
When you place your boat in the water, check for leaks around the screw holes that are below the water line. Do not leave your boat in the water for an extended period of time without checking for leaks.

Consult your sonar or chartplotter owner's manual or the *GST 10 Installation and Configuration Instructions* for directions on calibrating the speed sensor.

Testing the Installation

1. Start slowly and gradually increase the boat speed. Verify that the speed reading does not fluctuate.
2. If the speed reading fluctuates, adjust the speed sensor so that it extends another 1/8 in. below the transom of the boat. It may take several adjustments to eliminate the degradation.
3. Ensure that the sensor is parallel with the bottom of the boat (see Figure 4). High-speed operation will be severly degraded if the sensor is not properly aligned.
4. If the reading does not improve, it may be necessary to move the speed sensor to a different location.

TEMPLATE



Garmin International, Inc.
1200 East 151st Street, Olathe, Kansas 66062, USA

Garmin (Europe) Ltd.
Liberty House, Hounsdown Business Park, Southampton, Hampshire, SO40 9LR UK

Garmin Corporation
No. 68, Jangshu 2nd Road, Shijr, Taipei County, Taiwan

www.garmin.com

July 2009 Part Number 190-00226-00 Rev. B Printed in Taiwan