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INSTALLER: THESE INSTRUCTIONS CONTAIN IMPORTANT SAFETY INFORMATION AND MUST BE FORWARDED TO BOAT OWNER.

These instructions describe how to install the following Bezel Kits and Steering Helms for **Safe-T™**, **NFB™**, and **NFB Safe-T II™** Steering Systems.

BEZEL KIT P/N	DESCRIPTION
SB 27150	BEZEL KIT, NFB; SAFE-T II (90°)
SB 27483	BEZEL KIT, ALL SYSTEMS (20°)
SB 27484	BEZEL KIT, SAFE-T (90°)

 **NOTE:** The **SB 27150** kit is for use with **SH5150**, **SH4910**, and **SH4920** helms only. **IT MAY NOT BE USED WITH ANY OTHER HELM.**

In addition to this kit, the following components are required for a complete **Safe-T™**, **NFB™**, or **NFB Safe-T II™** system.

- (1) Steering Helm (see catalog)
- (1) SSC 62-length Cable (two required for dual helm)
- (1) Steering Wheel (see catalog, max. 16 inch diameter)
- (1) Engine Connection Kit (see catalog)

WARNING

BEFORE STARTING INSTALLATION READ THESE INSTRUCTIONS THOROUGHLY. FAILURE TO FOLLOW THESE INSTRUCTIONS OR INCORRECT ASSEMBLY CAN RESULT IN LOSS OF CONTROL AND CAUSE PROPERTY DAMAGE OR INJURY.

DO NOT SUBSTITUTE PARTS FROM OTHER MANUFACTURERS, THEY MAY CAUSE A SAFETY HAZARD FOR WHICH TELEFLEX INC., USA CANNOT ACCEPT RESPONSIBILITY.

TO AVOID EXCESSIVE STEERING LOADS, AND TO GET THE BEST STEERING PERFORMANCE, THE OUTBOARD MOTOR OR OUTDRIVE TRIM TABS AND TILT POSITION MUST BE ADJUSTED AS INSTRUCTED IN THE MOTOR MANUFACTURERS OPERATION MANUAL. FAILURE TO DO SO CAN EFFECT THE PERFORMANCE OF THE BOAT AND ITS SAFE OPERATION.

PREPARATION FOR INSTALLATION

- Steering cables must be routed to the starboard side of the boat. (SH 5023 and 5075 can be routed to port side but starboard side is preferred in order to balance engine torque). A minimum horizontal clearance of 12" is required from the gunwale to the center of the helm steering shaft (see Figure 1). This dimension controls the minimum acceptable bend radius of 8". A smaller bend radius will reduce steering performance and may result in premature cable failure.

NOTE: Dimensions shown in Figure 2 or 3 and in the Template must be maintained to provide proper clearance for the helm.

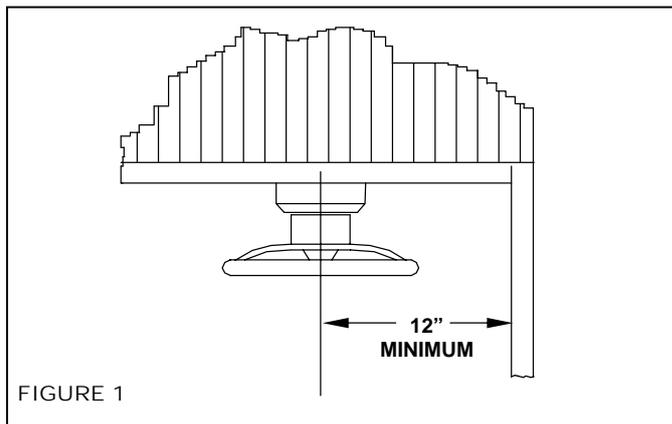


FIGURE 1

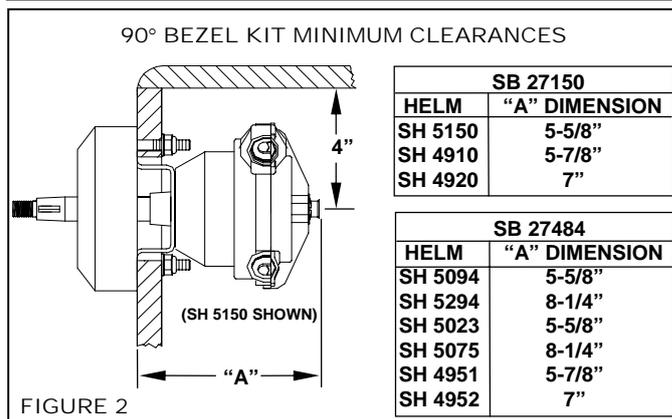


FIGURE 2

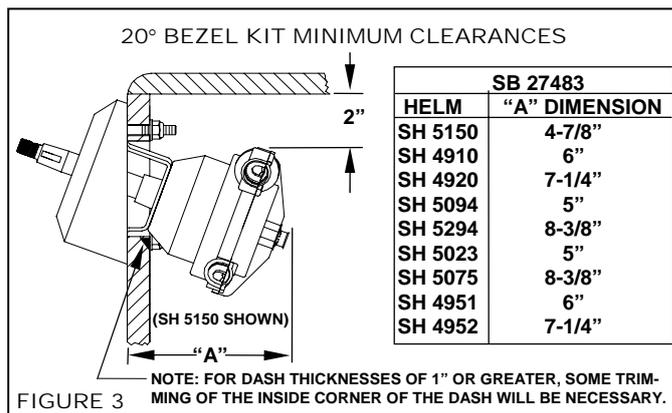


FIGURE 3

- Locate the approximate position for the bezel on the console or dashboard. Using template provided (Figure 7) mark the location of the holes. Drill three (3) holes 3/8" diameter and one (1) 3-1/4" diameter hole through the dash.

HELM MOUNTING BRACKET INSTALLATION

1. Place helm mounting bracket (Item 1) in position on dash as shown in Figure 4. Insert hex bolts (Item 3) through mounting holes in bracket and dash. Add a flat washer (Item 2) to each bolt and thread a locknut (Item 4) on each. Torque to 110 inch-pounds minimum. DO NOT EXCEED 145 INCH-POUNDS.

HELM INSTALLATION

1. Insert helm steering shaft through hole in mounting bracket (see Figure 5), orienting in the proper direction for steering cable entry, and align mounting holes. Insert the three (3) hex bolts supplied with the helm through the mounting bracket and thread into the helm. Torque to 75 inch-pounds minimum. DO NOT EXCEED 120 INCH-POUNDS.

BEZEL MOUNTING

1. Center bezel (Item 5) around shaft and fasten in place using two (2) self-tapping screws (Item 6) as shown in Figure 6. Tighten snugly, taking care not to over-torque which may crack the bezel or strip screw threads.

STEERING WHEEL INSTALLATION

1. Insert Woodruff key (Item 7) into slot in helm steering shaft. Slide steering wheel over shaft, aligning keyway with Woodruff key. Add flat washer (Item 8) and thread on locknut (Item 9). Torque to 240 inch-pounds minimum. DO NOT EXCEED 320 INCH-POUNDS.

The installation is now complete.

MAINTENANCE NOTES

1. AFTER A FEW HOURS OF OPERATION AND PERIODICALLY THEREAFTER, RETORQUE ALL FASTENERS AND CHECK THE STEERING SYSTEM FOR SECURITY AND INTEGRITY. LOOSENING OR SEPARATION OF ONE OR MORE FASTENERS MAY CAUSE FAILURE OF THE STEERING SYSTEM, RESULTING IN PROPERTY DAMAGE AND PERSONAL INJURY.

2. KEEP ALL MOVING PARTS FREE OF SALT BUILDUP OR OTHER FOREIGN MATTER WHICH MIGHT AFFECT THEIR OPERATION.

3. INSPECT PERIODICALLY FOR CORROSION. ALL PARTS WHICH ARE AFFECTED BY CORROSION MUST BE REPLACED. WHEN REPLACING HARDWARE, SELF-LOCKING HARDWARE MUST BE USED.

4. INSPECT OUTER COVERING OF CABLE FOR CRACKS OR OTHER DAMAGE. IF ANY IS FOUND THE CABLE MUST BE REPLACED.

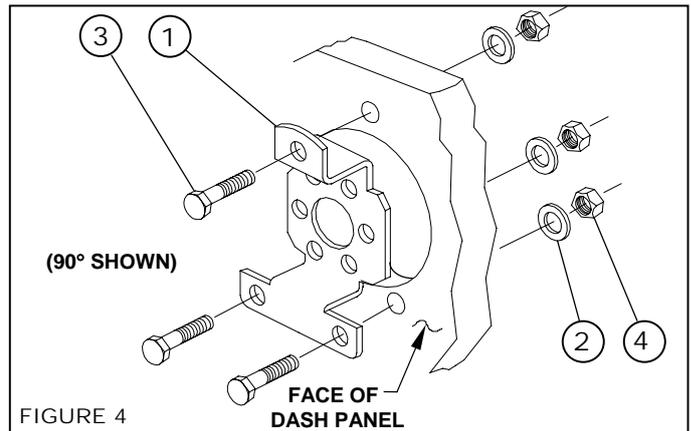


FIGURE 4

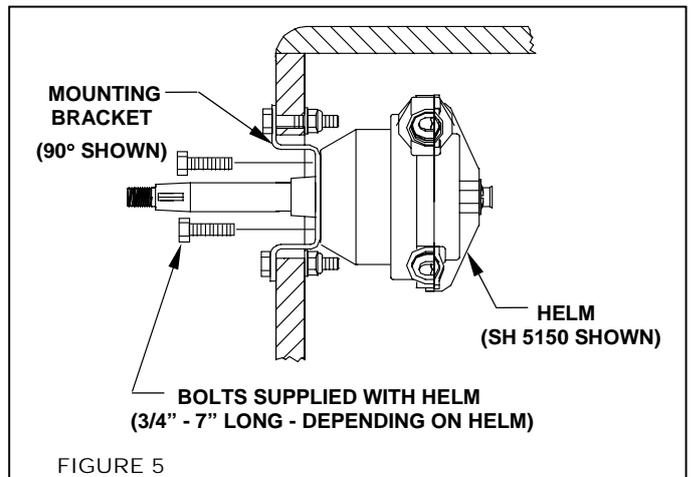


FIGURE 5

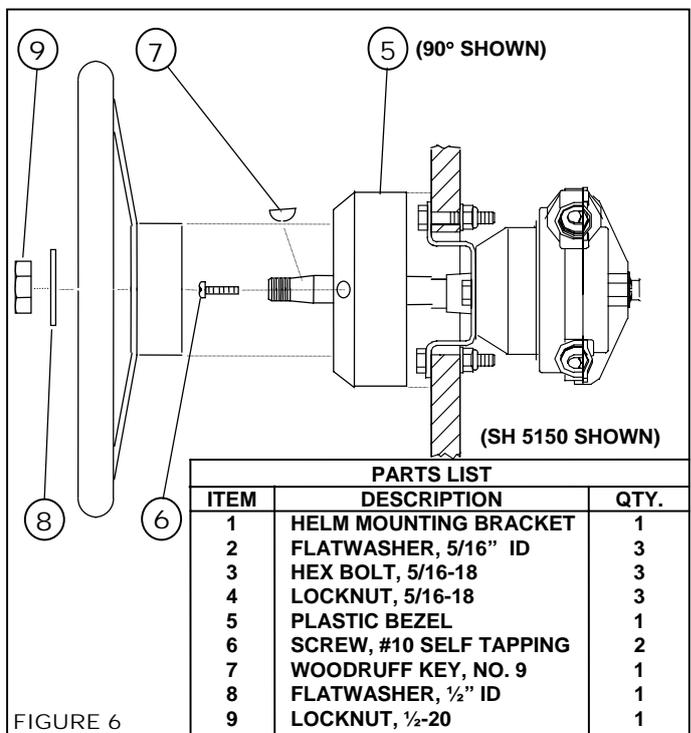


FIGURE 6

Insert Template
Here
(See SB27150.dwg)

KEEP THESE INSTRUCTIONS WITH YOUR BOAT FOR FUTURE REFERENCE.