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# INSTALLATION INSTRUCTIONS AND OWNERS MANUAL

Part # IS-SH5230/35, Rev 2, 07/2013

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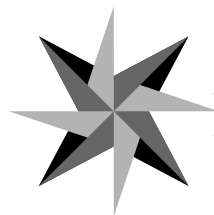


# *nfb*

Mechanical Steering for  
Outboard Powered Vessels

BACK MOUNT RACK NO FEEDBACK HELM  
SH5230P/SH5235P

*big-t*  
*jbs*  
*nfb*  
*rack*  
*safe-t*  
*xtreme*



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# BACK MOUNT RACK NO FEEDBACK HELM SH5230P, SH5235P

## NOTICE

*Installer: these instructions contain important safety information and must be forwarded to the boat owner.*

These instructions describe how to install helm assemblies for *The Back Mount Rack-No Feedback Helm* steering system. These helms have a clutch mechanism to prevent engine torque at the steering wheel. This reduces operator fatigue by eliminating the constant fighting of the wheel. *It does not eliminate the engine torque.* This can only be reduced by proper trim and tilt setting by trial and error when running the boat. The instructions for mounting the cable and drive assembly to the helm are given in the Cable Drive and Assembly instructions.

Additional components required to complete the system are:

- SSC134xx Cable (where xx is the length in feet) For single cable system.
- SSC135xx Cable (where xx is the length in feet) For dual cable system.
- SB39544P Bezel Kit (Required to mount helm to dash)
- Engine Connection Kit (refer to SeaStar Solutions catalog)
- Steering Wheel (refer to SeaStar Solutions catalog; Maximum wheel diameter 16", Maximum wheel dish 5")

Optional components are:

- SB27448P 10 degree Mounting Kit
- SB27449P 20 degree Mounting Kit

## NOTICE

*When replacing an existing steering system it is recommended that you stay with the style (rotary or rack) the boat manufacturer installed. Never change your steering from a dual cable to a single cable system, as this could cause an unsafe boating condition.*

## WARNING

**Before starting installation read these instructions and engine makers instructions thoroughly. Failure to follow either of these instructions or incorrect assembly can result in loss of control and cause property damage, injury, or death.**

## WARNING

**DO NOT substitute parts from other manufacturers, they may cause a safety hazard for which SeaStar Solutions cannot accept responsibility. Use only SeaStar Solutions steering cables with this helm.**

## WARNING

**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 which may cause property damage, injury, or death.**

## WARNING

**DO NOT attach any electrical ground wires to the helm. This would result in an electrolytic reaction to the steering system that may result in system failure or greatly reduced service life.**

## NOTICE

Helms and cable assemblies are supplied lubricated ready for installation, do not add any lubricant to either assembly. Use of other lubricants can cause damage to the steering cable, resulting in the cable seizing or premature wear. Keep the cable and drive assembly clean during installation. Dirt will damage the system and cause premature wear. Do not take the plastic sleeve off the end of the cable until you are ready to install it into the helm.

This notice does not include the engine output ram end of the cable.

## ⚠ WARNING

**Helms must not be disassembled for any reason. Failure to reassemble correctly may lead to total failure of the system, which could result in property damage, injury, or death.**

## Preparation for Installation

If possible the steering cable should be routed to the starboard side of the boat in order to balance engine torque.

When routing the cable select a path with the minimum number of bends, making the bends as large as possible. **DO NOT MAKE BENDS LESS THAN 8" RADIUS.** Sharp or frequent bends will result in hard steering and premature cable wear. When necessary to pass through a bulkhead, a 1-1/2" diameter hole is required. The cable should be loosely clamped or tied for support at regular intervals.

**STEP 1.** Locate the position for the Helm Assembly on the dashboard.

## ⚠ CAUTION

**Ensure that the clearances shown on Figures 1 and 2 are maintained. Ensure that the steering wheel does not interfere with other dashboard equipment such as engine controls and instruments.**

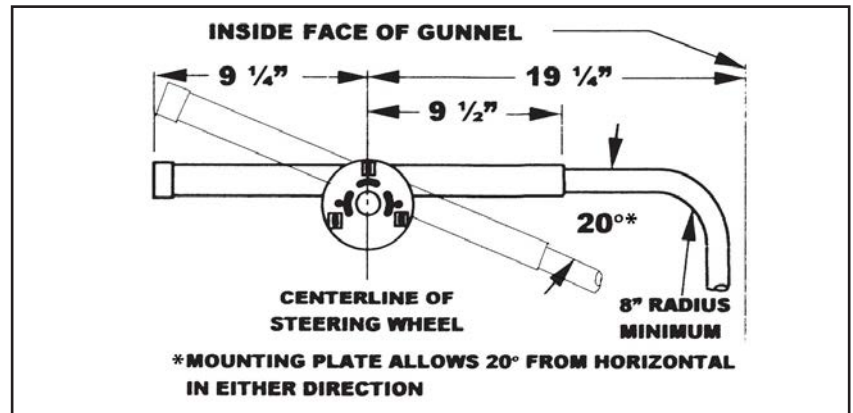


Figure 1.

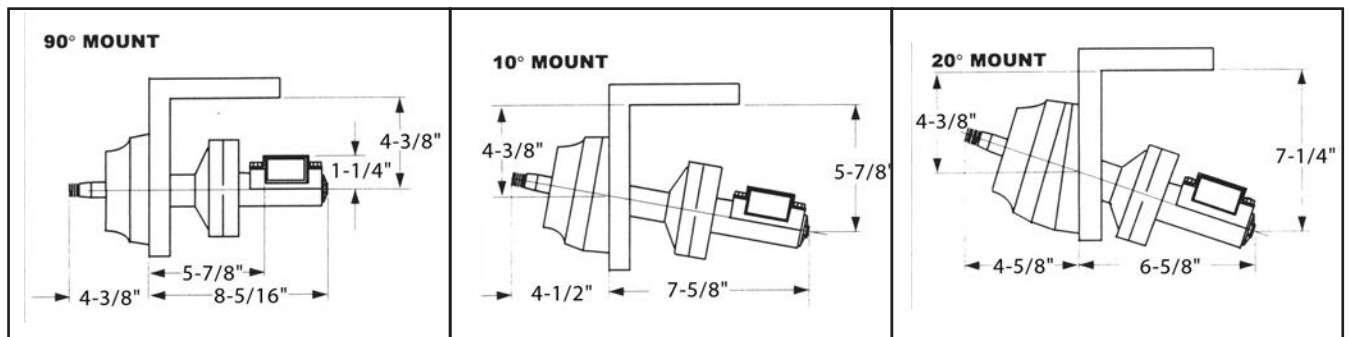


Figure 2

**STEP 2.** Position the template (Figure 5) on the console or dashboard at the location previously marked. Drill one hole 2 1/4" diameter and 3 holes 5/16" diameter.

## NOTICE

Template for 20 degree mount differs from template for 90 and 10 degree mounts. Ensure that the correct one is used.

# Helm Assembly Installation

**STEP 1.** Attach the helm mounting plate (supplied with the SB39544P Bezel Kit along with mounting hardware) to the dash as described in Figure 3.

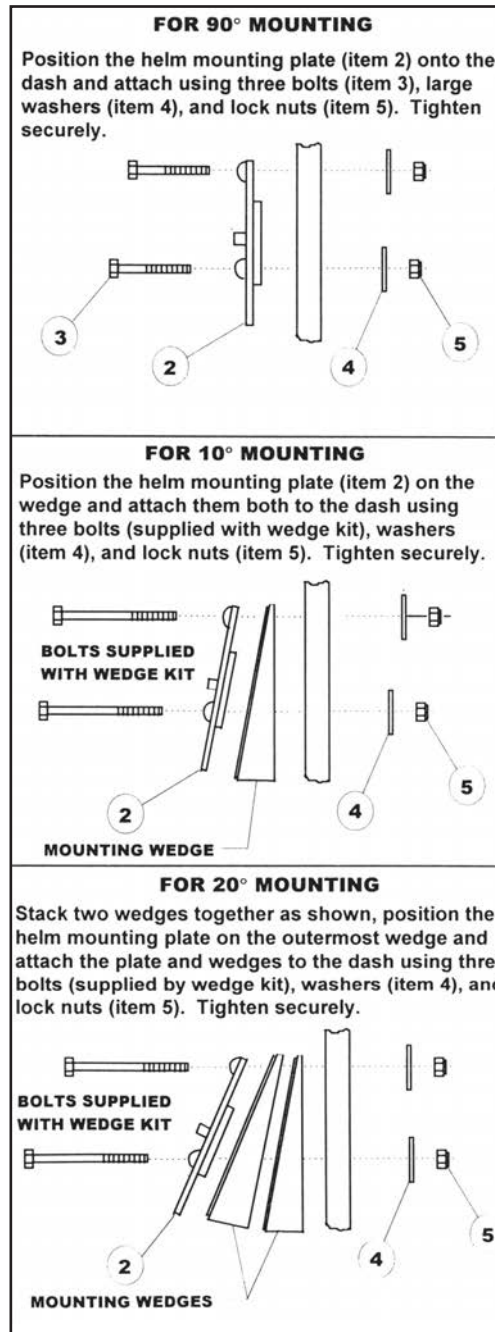


Figure 3.

**STEP 2.** Install rack and cable assembly to helm, following instructions provided with the cable assembly.

**STEP 3.** Attach the helm and cable assembly to the helm mounting plate, using three bolts (item 6) and washers (item 7) supplied with the SB39544P Bezel Kit (see Figure 4). If required, the helm and cable assembly can be angled 20° from horizontal in either direction by rotating the helm and cable assembly in the mounting plate slots before tightening (see Figure 1). Tighten bolts securely after positioning helm.

If the rack is to be angled from horizontal, additional care is needed to ensure that it does not interfere with other equipment.

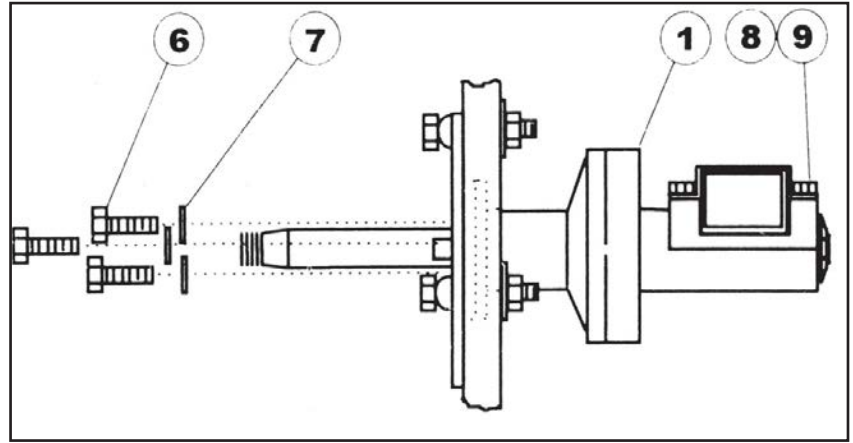


Figure 4.

The helm is now ready for the bezel to be mounted. Refer to instruction sheet packed with the bezel kit SB39544P.

## Parts List

ITEM	DESCRIPTION	QUANTITY
1	Helm Assembly	1
2*	Mounting Plate	1
3*	1/4" x 2 1/8" Long Bolt	3
4*	Flat Washer, Large OD	3
5*	Lock Nut, 1/4"	3
6*	1/4" x 1" Long Bolt	3
7*	Flat Washer, Small OD	3
8*	1/4" x 1" Long Lock Patch Bolt	4
9*	Flat Washer, 1/2" OD	4

\*Items 2-7 supplied with the SB39544P Bezel Kit. Items 8-9 installed following the cable instructions.

## Operation & Maintenance Notes

### CAUTION

It is possible to over trim the engine and increase the steering torque to the point that the steering wheel cannot be turned, even though the torque is not felt at the wheel. This may give the impression that the steering is “locked”. This condition can occur more when jack plates are used to raise the engine on the transom, and can only be overcome by reducing the boat speed or engine trim out position. Until you are completely familiar with the boat and the effects of power trim, make all adjustments of trim with extreme caution.

1. After a few hours of operation and at frequent intervals thereafter, check all fasteners and the complete steering system for security and integrity.

### DANGER

**Loosening or loss of one or more fasteners may cause failure of the steering system, resulting in loss of steering control and could cause property damage, injury, or death.**

2. Keep all moving parts free from build-up of salt and other foreign material. This will affect their operation and create steering problems. Periodically remove the cable, clean support tube and telescopic end of cable thoroughly and lubricate with a **waterproof marine grease**.
3. Periodically inspect for corrosion. Any parts affected by corrosion must be replaced. When replacing hardware, self-locking hardware as originally supplied must be used.
4. Periodically inspect steering cable for cracks or other damage. If any is found the cable must be replaced.
5. If cable is stiff in operation, it is unsafe to use and must be replaced immediately.

### DANGER

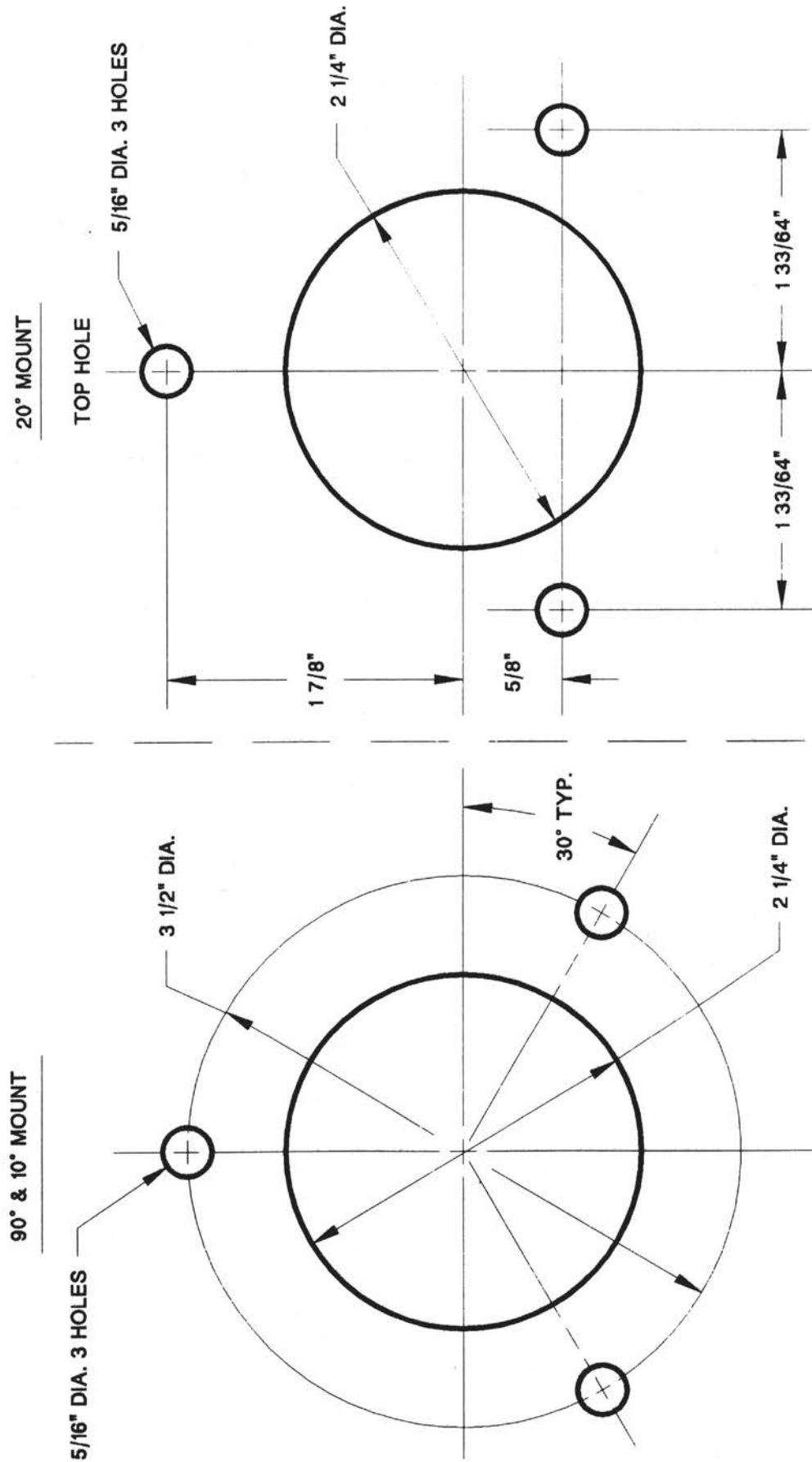
**DO NOT cover cracks with tape or other sealants, this will create a hazard in which the cable can fail suddenly without warning, resulting in property damage, injury, or death.**

### NOTICE

*Boat builder and boat dealer, please supply these Installation Instructions and Owner's Manual with the delivery of boat. Boat owner keep these instructions with your boat for future reference. Boat owner consult with your boat builder, boat dealer, or SeaStar Solutions if you have any questions regarding these instructions.*



## Mounting Templates



### NOTICE

If you must photocopy this mounting template for use, check ALL measurements using a measuring device prior to using as a template.

Figure 5.



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