

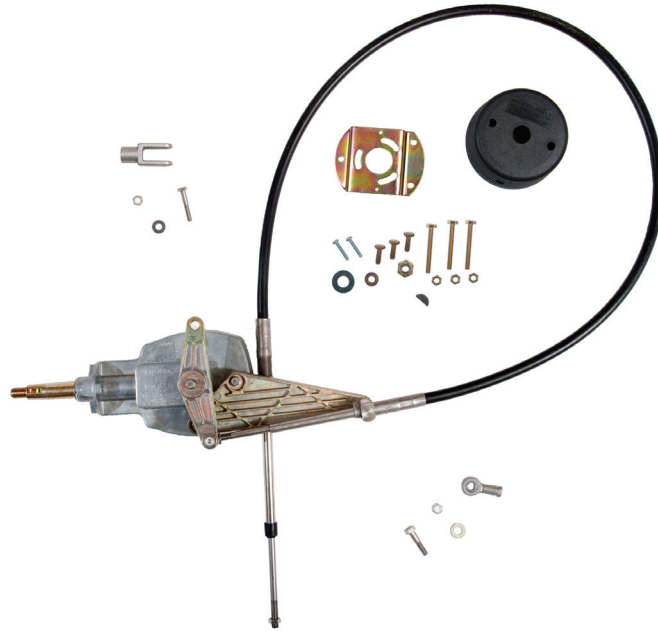
MEMBER
ABYC
Setting Standards for Safer Boating®

INSTALLATION INSTRUCTIONS

AND OWNERS MANUAL

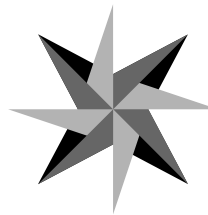
Part # IS-SH5087/88, Rev 2, 07/2013

www.seastarsolutions.com



jbs

Jet Boat Mechanical Steering
Helm Assembly SH5087/SH5088



SEASTAR
SOLUTIONS®

big-t
jbs
nfb
rack
safe-t
xtreme

MANUFACTURED BY
MARINE ACQUISITION INCORPORATED
DBA SEASTAR SOLUTIONS
U.S.A.

*Before you do it your way,
please try it our way.*

JETBOAT STEERING SYSTEM

SH5087 HELM 135° TURN

SH5088 HELM 270° TURN

NOTICE

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

These instructions show you how to install a *HELM UNIT* for a Jetboat steering system. *This steering system is for use with small jet propelled boats using 2 cycle engines. It is not for use with large jet pumps using automotive V8 engines.*

A complete system consists of the following components

- Bezel Mounting Kit SB39452
- Helm Assembly SH5087—135° steering wheel turn **or** Helm Assembly SH5088-270° steering wheel turn.
- Cable Assembly SSC219XX (XX denotes length in feet)
- Steering Wheel (refer to SeaStar Solutions catalog)
- Nozzle Connection Kit (Refer to SeaStar Solutions catalog).

⚠ DANGER

If steering cable is stiff in operation, it is unsafe to use and must be replaced immediately.

⚠ WARNING

This steering system is for use with small jet propelled boats using 2 cycle engines (175 HP Maximum). IT IS NOT FOR USE WITH LARGE JET PUMPS USING AUTOMOTIVE V8 ENGINES OR OUTBOARDS WITH LOWER JET UNITS.

⚠ 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 SSC219XX steering cables with this helm.

⚠ WARNING

To avoid excessive steering loads, and to get the best steering performance, the water jet nozzle and the reverse gate 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.

⚠ WARNING

Helms must not be disassembled for any reason. Removal and replacement of the hardware which locks the steering shaft to the helm assembly may lead to total failure of the system, which could result in property damage, injury, or death.

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.

NOTICE

Before the helm can be installed, the bezel kit SB39452 must be installed. Follow the instructions packed with that kit.

Helm Installation

NOTICE

The helm may be installed for either vertical, port, starboard or inline cable entry. This is determined by the type of engine and the construction of the boat. Refer to Figure 1 for the correct arrangement of the cable bracket and Steering arm and to Figure 2 for the general arrangement of the helm.

STEP 1. Assemble the cable bracket (item 1) to the helm (item 2) using 2 hex bolts (item 8). Attach the steering arm (item 3) to the shaft of the helm using 1 hex bolt (item 8) and washer (item 9). **Note:** Flat side of arm **MUST** face the cable. Refer to Figure 1.

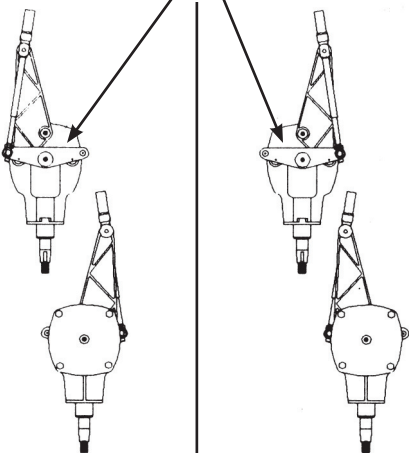
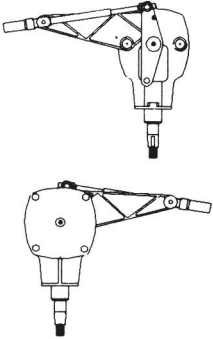
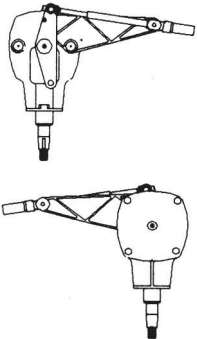
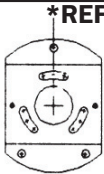
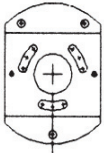
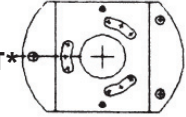
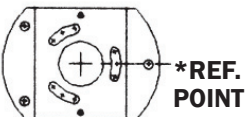
STEP 2. Attach the cable pivot (item 4) and the arm pivot (item 5) onto the cable ensuring that at least three threads of the cable protrude through each pivot.

STEP 3. Attach the cable to the helm, using bearing (item 6), nut (item 10) and washer (item 11) on cable pivot and bearing (item 7), nut (item 12) and washer (item 13) on arm pivot. Tighten jam nut, on cable, securely against the pivot. **DO NOT OVERTIGHTEN.**

STEP 4. Pass shaft of helm through mounting bracket and retain in place using hex bolts (item 10 of bezel mounting kit).

STEP 5. Fasten bezel in place using self tapping screws supplied with bezel kit. Install woodruff key supplied with bezel kit and fasten steering wheel in place using lock nut and washer supplied with bezel kit. The system is now ready to attach to the jet unit.

Helm Mounting Options

<p>THESE ARE FOUR BASIC CABLE-TO-HELM MOUNTING OPTIONS (SHOWN AT RIGHT)</p> <p>(BOTH SIDES SHOWN)</p>	<p>NOTE: FLAT SIDE OF ARM MUST FACE CABLE</p>  <p>OPTION 1 OPTION 2</p>		 <p>OPTION 3</p>	 <p>OPTION 4</p>
<p>THESE ARE FOUR BASIC HELM MOUNTING BRACKET-TO-DASH OPTIONS (SHOWN BELOW)</p>	<p>OUTPUT WHEN USING THE ABOVE CABLE MOUNTING OPTIONS WITH THE FOLLOWING HELM MOUNTING BRACKET LOCATION OPTIONS.</p>			
 <p>*REF. POINT</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM TO PORT SIDE -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM TO STARBOARD SIDE -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>
 <p>*REF. POINT</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM TO STARBOARD SIDE -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM TO PORT SIDE -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>
 <p>REF. POINT*</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT DOWN -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT UP -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>
 <p>*REF. POINT</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT BACK -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT UP -STARBOARD TURN PULLS CABLE (OMC. JET)</p>	<p>-CABLE EXITS HELM STRAIGHT DOWN -STARBOARD TURN PUSHES CABLE (MERC. JET)</p>

NOTE: IN ADDITION TO THE ABOVE MOUNTING BRACKET OPTIONS, SLOTTED MOUNTING BRACKETS ALLOW 20° OF HELM ROTATION IN BOTH DIRECTIONS.

Figure 1.

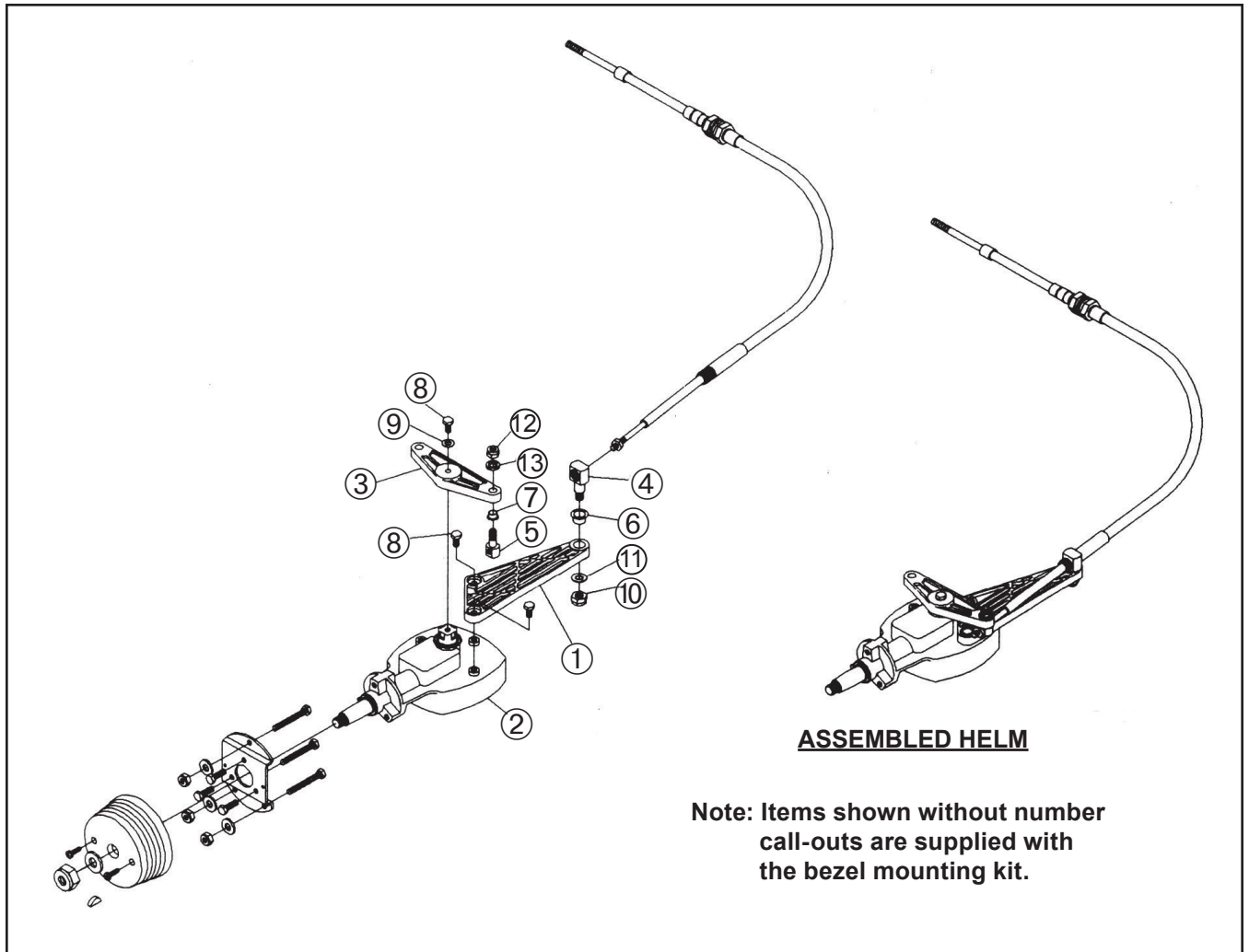


Figure 2.

Parts List

ITEM	DESCRIPTION	QUANTITY
1	Cable Bracket	1
2	Helm	1
3	Steering arm	1
4	Cable Pivot	1
5	Arm Pivot	1
6	Bearing	1
7	Bearing	1
8	Hex Bolt, 1/4 x 3/4 LG.	3
9	1/4 Washer	5
10	3/8 Locknut	1
11	3/8 Washer	1
12	1/4 Locknut	1
13	1/4 Washer	1

Operation & Maintenance Notes

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. Pay particular attention to the attachment to the jet nozzle. Periodically clean 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.

DANGER

If steering cable is stiff in operation, it is unsafe to use and must be replaced immediately.

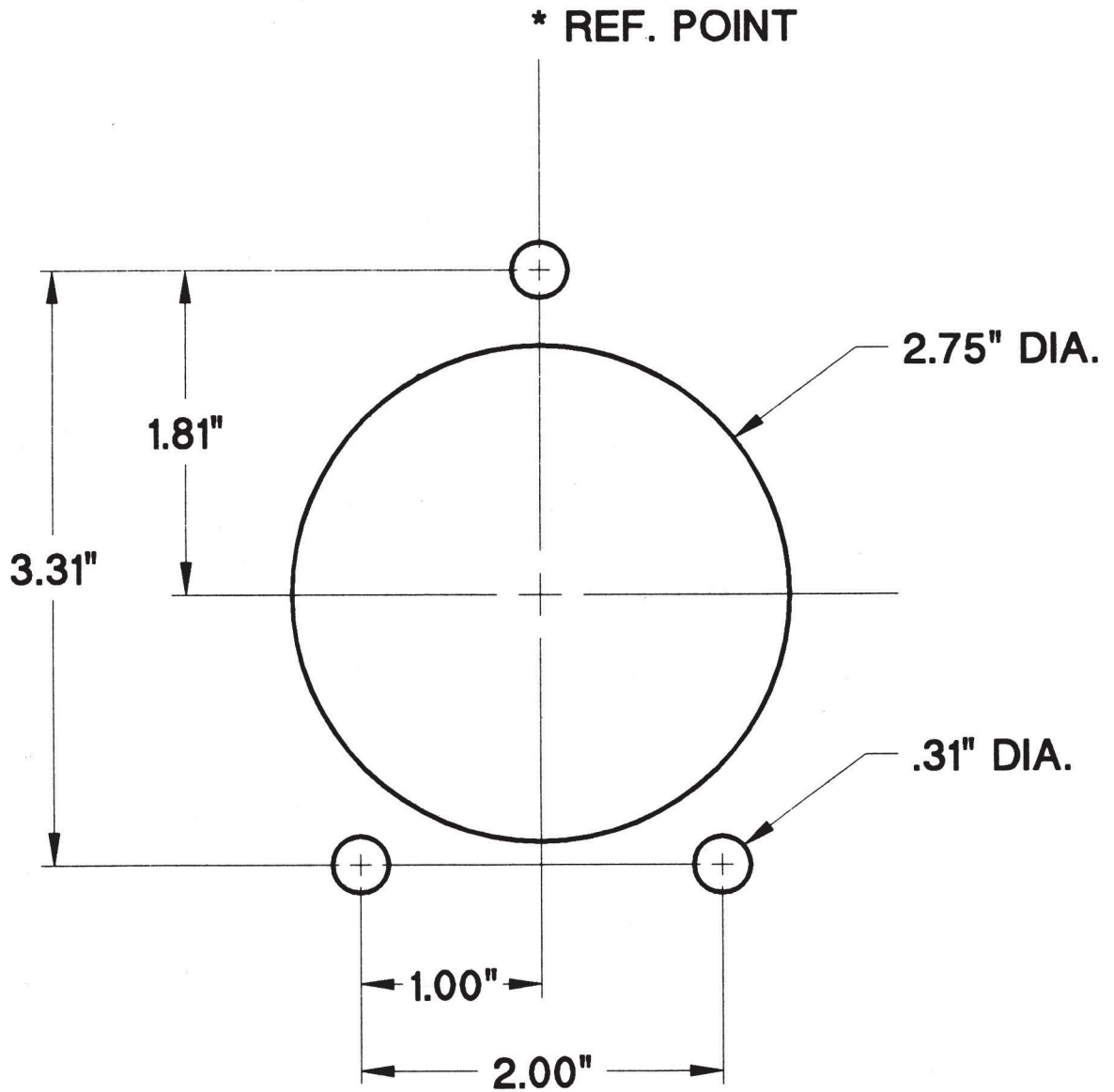
DANGER

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.

Dash Mounting Template



NOTICE

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



**SEASTAR
SOLUTIONS®**

640 North Lewis Road
Limerick, PA 19468 USA
610-495-7011
www.seastarsolutions.com

ISO 15652



© 1998 MARINE ACQUISITION (US) INC.

PART # IS-SH5087/88 07-2013 Rev. 2