



SEASTAR
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SA27620P QC (QUICK-CONNECT) HELM CONVERTER INSTRUCTIONS

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

THESE INSTRUCTIONS DESCRIBE HOW TO INSTALL AN SSC62 CABLE USING THE **SA27620P QC (QUICK CONNECT) HELM CONVERTER**. THE CONVERTER ALLOWS AN SSC62 CABLE TO BE MOUNTED TO SEASTAR SOLUTIONS SAFE-T TS (THREADED SPIGOT) AND BIG-T SERIES HELMS, EITHER AS A DIRECT REPLACEMENT FOR SEASTAR SOLUTIONS SSC72 CABLES OR FOR NEW STEERING SYSTEM INSTALLATIONS.

EQUIPMENT REQUIRED:

- **SSC62XX Cable** (Two required for dual helm)
- **SA27620P QC Helm Converter** (Two Converters required for dual helm applications)

ADDITIONAL EQUIPMENT REQUIRED (NEW INSTALLATIONS ONLY):

- **Steering Helm** (See Figure 1)
- **Bezel Kit** (See SeaStar Solutions Catalog)
- **Engine Connection Kit** (See SeaStar Solutions Catalog)
- **Steering Wheel** (See SeaStar Solutions Catalog)

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 OR INJURY.

DO NOT SUBSTITUTE PARTS FROM OTHER MANUFACTURERS. THEY MAY CAUSE A SAFETY HAZARD FOR WHICH SEASTAR SOLUTIONS CANNOT ACCEPT RESPONSIBILITY. USE SEASTAR SOLUTIONS HELMS AND STEERING CABLES ONLY WITH THIS CONVERTER.

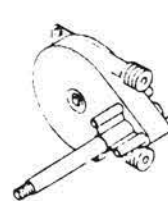
TO AVOID EXCESSIVE STEERING LOADS, AND TO GET THE BEST STEERING PERFORMANCE, THE OUTBOARD MOTOR OR OUTDRIVE TRIM TABS AND TILT POSITION MUST BE ADJUSTED AS INSTRUCTED IN THE MOTOR MANUFACTURER'S OPERATION MANUAL. FAILURE TO DO SO CAN AFFECT THE PERFORMANCE OF THE BOAT AND ITS SAFE OPERATION.

NOTE: The QC Converter and cable assemblies are supplied 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 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.*

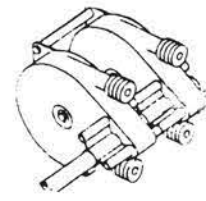
WARNING

THE QC HELM CONVERTER MUST NOT BE DISASSEMBLED FOR ANY REASON. ANY ATTEMPT TO DEFEAT THE FASTENING RIVETS MAY LEAD TO TOTAL FAILURE OF THE SYSTEM, WHICH COULD RESULT IN PERSONAL INJURY OR PROPERTY DAMAGE.

SAFE-T TS (THREADED SPIGOT) STEERING

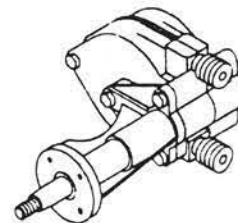


SINGLE
SH5023
SH91521 (TILT VERSION, NO LONGER AVAILABLE)



DUAL
SH5075 (NO LONGER AVAILABLE)
SH91522 (TILT VERSION, NO LONGER AVAILABLE)

BIG-T STEERING



SH5000
SH91525 (TILT VERSION, NO LONGER AVAILABLE)

Figure 1

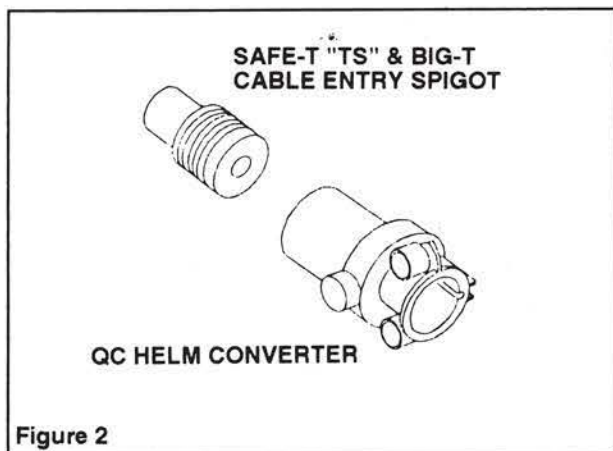
REPLACING AN SSC72 CABLE IN AN EXISTING INSTALLATION

A. SSC72 CABLE REMOVAL

1. Disconnect the old cable completely from the engine, noting carefully how the connection to the engine is made. **NOTE:** Examine the cable-to-engine connection components and replace if any signs of corrosion or wear are present. If any hardware is lost, it must be replaced with locking hardware. **DO NOT SUBSTITUTE PLAIN NUTS, ENGINE VIBRATION WILL LOOSEN THEM AND CAUSE LOSS OF STEERING.**
2. Undo the large aluminum nut retaining the cable into the lower spigot of the helm.
3. Turn the steering wheel clockwise to remove the cable from the helm, and remove the cable completely from the boat.
4. Check that all the components of the helm are in good condition and are firmly mounted. Do not remove the long plastic tube from the upper spigot of the helm.

B. QC HELM CONVERTER INSTALLATION

1. Thread the QC Converter onto the spigot from which the old cable was removed (lower or bottom spigot-see figure 2). The QC Converter should be fully threaded onto the spigot and tightened securely. **NOTE: DO NOT OVERTIGHTEN.** Tighten just enough to allow the QC Converter to bottom out against the spigot. For a proper installation, no spigot threads should be visible with the QC Converter fully installed. **NOTE:** The QC Converter has a locking ring in the threads that will cause the need for increased effort in threading after approximately three turns of the QC Converter. Continue to tighten the QC Converter until it bottoms against the spigot (until no spigot threads are showing).



C. STEERING CABLE INSTALLATION (SINGLE CABLE)

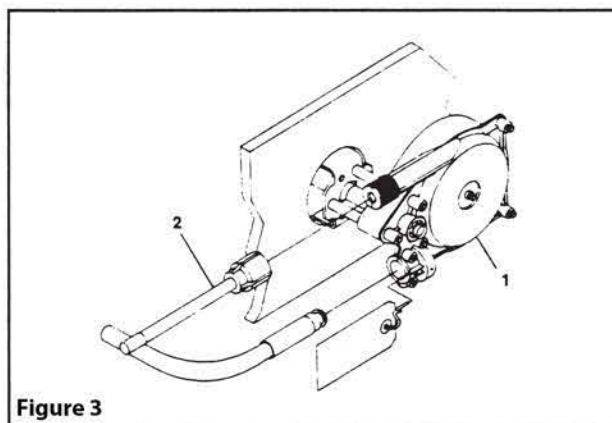
1. Route the new cable as close as possible along the same path as the removed cable. **NOTE:** When routing cables, a path with the minimum number of bends should be taken, making the bends as large a radius as possible.

DO NOT MAKE BENDS OF LESS THAN 8" RADIUS. Sharp or frequent bends will result in hard steering and premature cable wear. The cable should be clamped or tied for support at regular intervals.

CAUTION

CABLES MUST NOT BE BUNDLED TOGETHER WITH ELECTRICAL WIRING. CABLES MUST NOT REST ON SHARP EDGES WHICH CAN CAUSE CHAFING.

2. Before the steering cable is installed, the steering wheel should be positioned as pictured in the helm instructions to have the correct orientation when installation is completed.
3. Remove the pin from the cable entry of the QC Converter, **DO NOT REMOVE TAG FROM PIN.**
4. Remove the protective sleeve from cable end, making sure that dirt does not get onto the lubricated cable end. Feed the cable end into the QC Converter until it contacts the internal gear of the helm, then turn the steering wheel counterclockwise to draw the cable fully into the helm (see figure 3). Continue turning the wheel until the end fitting of the cable is entered into the QC Converter, and the wheel cannot be turned further. During this you may hear a "click" as the locking mechanism of the QC Converter engages the end fitting of the cable. Turn the steering wheel fully in the other direction until it cannot be turned any further, and check that the cable end fitting is retained inside the QC Converter.



5. Replace the pin as shown in figure 4, making sure that it is fully seated. **DO NOT REMOVE TAG FROM PIN.**

6. Turn the steering wheel fully to both extremes of rotation and check that the cable fitting is retained in the QC Converter. Also verify that the ram of the cable extends when the wheel is turned clockwise.

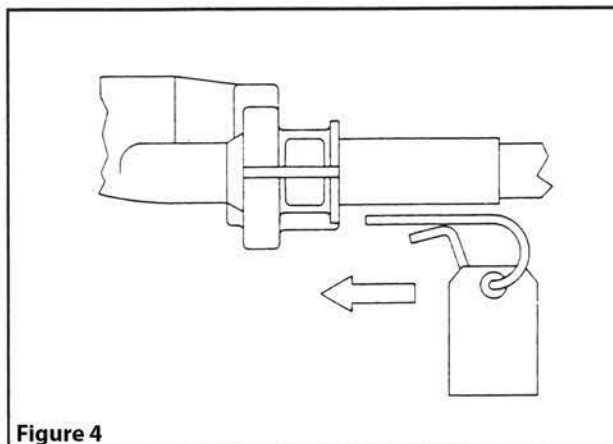


Figure 4

D. CONNECTION TO ENGINE (SINGLE CABLE)

1. Reconnect the cable to the engine in exactly the same way the cable was removed. Ensure that all hardware is fully tightened. **NOTE:** The coupler nut of the cable has a locking ring in the threads. Make sure the nut is drawn up fully and the locking ring is engaged. If you do not tighten this nut fully there will be excessive play in the steering system. **NOTE:** If any hardware is lost, it must be replaced with locking hardware. **DO NOT SUBSTITUTE PLAIN NUTS, ENGINE VIBRATION WILL LOOSEN THEM AND CAUSE LOSS OF STEERING. IF THERE ARE ANY QUESTIONS REGARDING RECONNECTION TO THE ENGINE REFER TO YOUR ENGINE MANUFACTURER'S INSTRUCTION MANUAL FOR DETAILS.**

CAUTION

ENSURE THAT THE CABLE OUTPUT END IS NOT BENT WHEN INSTALLING. IF NECESSARY THE ENGINE MUST BE REMOVED FROM THE BOAT.

E. STEERING CABLE INSTALLATION (DUAL CABLE)

1. Route the new cables as close as possible along the same path as the removed cables. **NOTE:** When routing cables, a path with the minimum number of bends should be taken, making the bends as large a radius as possible. **DO NOT MAKE BENDS OF LESS THAN 8" RADIUS.** Sharp or frequent bends will result in hard steering and premature cable wear. The cables should be clamped or tied for support at regular intervals.

CAUTION

CABLES MUST NOT BE BUNDLED TOGETHER WITH ELECTRICAL WIRING. CABLES MUST NOT REST ON SHARP EDGES WHICH CAN CAUSE CHAFING.

2. Before the steering cable is installed, the steering wheel should be positioned as pictured in the helm instructions to have the correct orientation when installation is completed.

3. Remove the pins from the cable entries of the QC Converters, **DO NOT REMOVE TAGS FROM PINS.**

4. Push both output rams of the cables to the fully retracted position. Make sure that they stay fully retracted during installation into the helm. Remove the protective sleeves from the steering cables, making sure that dirt does not get onto the lubricated cable ends. Hold both cables together at the helm end with the faces of the conduit fittings flush, as shown in figure 5.

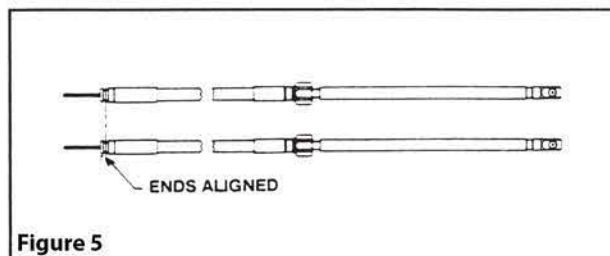


Figure 5

4. Feed the cable ends into the QC Converters until they contact the internal gear of the helm, then turn the steering wheel counterclockwise to draw the cables fully into the helm (see figure 6). Continue turning the wheel until the end fittings of the cable are entered into the QC Converters, and the wheel cannot be turned further. During this you may hear a "click" as the locking mechanisms of the QC Converters engage the end fittings of the cables. Turn the steering wheel fully in the other direction until it cannot be turned any further, and check that the cable end fittings are retained inside the QC Converters.

WARNING

IT IS POSSIBLE THAT ONE CABLE MAY NOT BE FULLY ENGAGED AT THIS TIME. CHECK THAT BOTH CABLES ARE FULLY ENGAGED BY PUSHING EACH CABLE FULLY HOME TO SEAT THEM PROPERLY.

5. Replace the pins as shown in figure 4, making sure that they are fully seated. **DO NOT REMOVE TAGS FROM PINS.** If one pin cannot be inserted, that cable is not fully seated in the QC Converter. Push on this cable to ensure that it is fully home and reinsert pin.

6. Turn the steering wheel fully to both extremes of rotation and check that the cable fittings are retained in the QC Converters. Also verify that the rams of the cables extend when the wheel is turned clockwise.

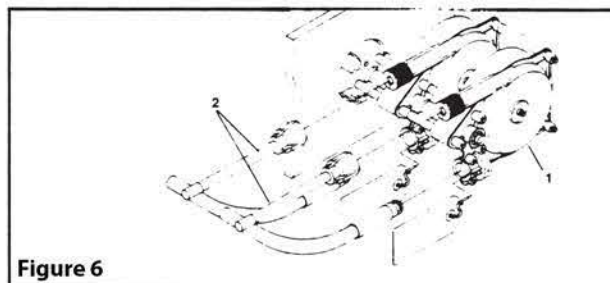


Figure 6

F. CONNECTION TO ENGINE (DUAL CABLE)

1. Reconnect the cables to the engine in exactly the same way the cables were removed. Ensure that all hardware is fully tightened. **NOTE:** The coupler nut of the cables have a locking ring in the threads. Make sure the nuts are drawn up fully and the locking rings are engaged. If you do not tighten this nut fully there will be excessive play in the steering system. **NOTE:** If any hardware is lost, it must be replaced with locking hardware. **DO NOT SUBSTITUTE PLAIN NUTS, ENGINE VIBRATION WILL LOOSEN THEM AND CAUSE LOSS OF STEERING. IF THERE ARE ANY QUESTIONS REGARDING RECONNECTION TO THE ENGINE REFER TO YOUR ENGINE MANUFACTURER'S OWNER'S MANUAL FOR DETAILS.**

CAUTION

ENSURE THAT THE CABLE OUTPUT END IS NOT BENT WHEN INSTALLING. IF NECESSARY THE ENGINE MUST BE REMOVED FROM THE BOAT. ADJUSTMENT OF THE CONNECTION KIT IS CRITICAL TO OPERATION OF THIS SYSTEM. IF THE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY THE STEERING WILL BE HEAVY AND COULD BE SUBJECT TO ACCELERATED WEAR. ADJUSTMENTS MUST BE MADE AND TESTED WITH THE BOAT UNDER OPERATING CONDITIONS.

INSTALLING SSC62 CABLES USING THE QC CONVERTERS IN A NEW INSTALLATION

A. PREPARATION FOR INSTALLATION

Before the steering cable(s) can be installed, the helm, bezel, and steering wheel must be fully installed as shown in the bezel kit instructions.

B. QC HELM CONVERTER INSTALLATION

(See "QC HELM CONVERTER INSTALLATION" on page 2 of this instruction).

C. CABLE ROUTING AND INSTALLATION: The steering cable(s) must be routed to the starboard side of the boat. (For the remaining instructions on cable routing and installation, see "STEERING CABLE INSTALLATION" on page 2 of this instruction for single cable installation or on page 3 for dual cable installation).

D. SPENT TRAVEL TUBE INSTALLATION

Feed the spent travel tube(s) (figures 3 or 6, item 2) over the exposed cable end and fully thread onto upper spigot(s) of helm.

E. CONNECTION TO ENGINE

Engine-Mounted Steering Systems: Slide the output ram through the engine support tube. Thread the cable coupler nut fully onto the support tube. **NOTE:** The coupler nut has a locking ring in the threads. Make sure the nut is drawn up fully and the locking ring is engaged. If you do not tighten this nut fully there will be excessive play in the steering system. Connect the cable output ram to the engine tiller arm as shown in the instructions packed with the connection kit.

Boat-Mounted Steering Systems: Attach the cable to the boat and engine in accordance with the instructions furnished with the connection kit.

Dual Cable Steering Systems: Connect the cables to the engine using a connection kit available from the engine maker or an approved equivalent.

CAUTION

ENSURE THAT THE CABLE OUTPUT END IS NOT BENT WHEN INSTALLING. IF NECESSARY THE ENGINE MUST BE REMOVED FROM THE BOAT. ADJUSTMENT OF THE CONNECTION KIT IS CRITICAL TO OPERATION OF THIS SYSTEM. IF THE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY THE STEERING WILL BE HEAVY AND COULD BE SUBJECT TO ACCELERATED WEAR. ADJUSTMENTS MUST BE MADE AND TESTED WITH THE BOAT UNDER OPERATING CONDITIONS.

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 PERSONAL INJURY OR PROPERTY DAMAGE.

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 hinge tube of outboard motors. Periodically remove the cable, clean the hinge tube thoroughly and lubricate with a waterproof marine grease.

3. Inspect periodically for corrosion. Any parts affected by corrosion must be replaced. When replacing hardware, self-locking hardware **MUST** be used.

4. Inspect steering cable periodically for cracks or other damage. If any are found the cable must be replaced.

DANGER

DO NOT COVER CRACKS WITH TAPE OR OTHER SEALANTS. THIS WILL CREATE A HAZARD IN WHICH THE CABLE CAN FAIL SUDDENLY WITHOUT WARNING.

KEEP THESE INSTRUCTIONS WITH YOUR BOAT FOR FUTURE REFERENCE.