

INSTRUCTIONS

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

These instructions show you how to install SSC62 steering cables into **SAFE-T QUICK CONNECT HELMS**. The instructions for mounting the helm to the bezel are given in the bezel kit instructions.

For a complete **SAFE-T QUICK CONNECT SYSTEM** steering system the following additional components are required.

- **Bezel kit**, see Teleflex catalog.
- **SSC62-length steering cable**. (Two required for dual helm)
- **Engine connection kit**, see Teleflex catalog,
- **Steering Wheel**, (maximum diameter 16 inches) see Teleflex 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 TELEFLEX INC., USA CANNOT ACCEPT RESPONSIBILITY. USE TELEFLEX STEERING CABLES ONLY WITH THIS HELM.

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.

DO NOT ATTACH ANY ELECTRICAL GROUND WIRES TO THE HELM. THIS WOULD RESULT IN AN ELECTROLYTIC REACTION TO THE STEERING CABLE THAT MAY RESULT IN CABLE FAILURE OR GREATLY REDUCED SERVICE LIFE.

NOTE: 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 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

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 PERSONAL INJURY OR PROPERTY DAMAGE.

PREPARATION FOR INSTALLATION.

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

CABLE ROUTING. The Steering cables, must be routed to the starboard side of the boat. When routing the steering cable, select a path with the minimum number of bends, 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. When it is necessary to pass through a bulkhead, a 1-1/2" Dia. hole is required. Cable should be clamped or tied for support at regular intervals.

CAUTION

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

STEERING CABLE INSTALLATION - SINGLE HELM.

Before the steering cables are installed the steering wheel should be positioned as shown in Figure 1, so that it is in the correct orientation when installation is completed.

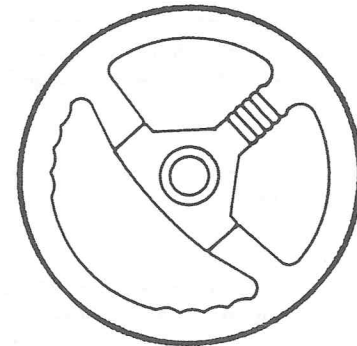


Figure 1

STEP 1. Remove pin from cable entry of helm, **DO NOT REMOVE TAG FROM PIN.**

STEP 2. Remove protective sleeve from cable end, making sure that dirt does not get onto the lubricated cable end. Feed cable end into **LOWER** helm entry spigot until it contacts the internal gear, then turn steering wheel to draw cable fully into the helm, (see Figure 2). Continue turning wheel until end fitting of cable is entered into the entry spigot, and wheel cannot be turned further. During this you may hear a click as the locking mechanism engages. Turn steering wheel fully in the other direction until it cannot be turned any further, check that cable end fitting is retained inside the entry spigot.

STEP 3. Replace pin as shown in Figure 3, making sure that it is fully seated. **DO NOT REMOVE TAG FROM PIN.**

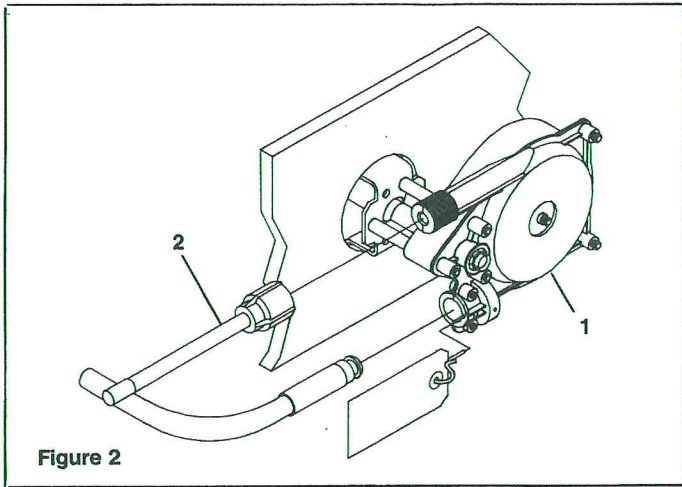


Figure 2

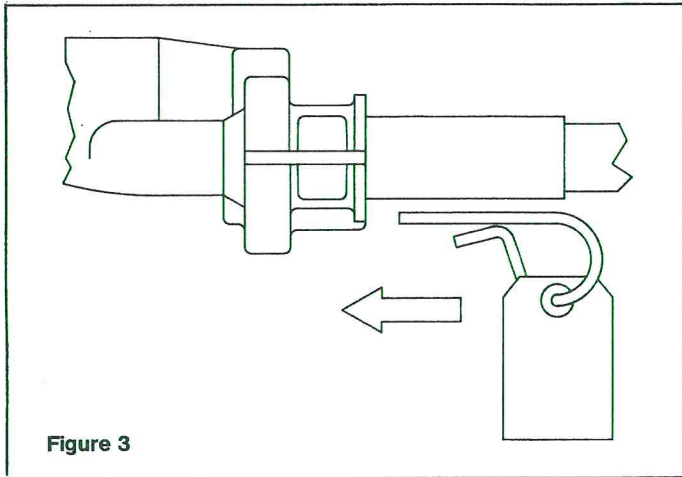


Figure 3

STEP 4. Turn steering wheel fully to both extremes of rotation and check that the cable fitting is retained in the entry spigot.

STEP 5. Feed Spent Travel Tube (Item 2) over exposed cable and thread Retaining Nut onto spigot. Tighten nut hand tight.

STEP 6. Rotate steering wheel several times from stop to stop, and watch the movement of the Steering Cable output ram. Turning the wheel clockwise should cause the ram to extend.

CONNECTION TO ENGINE.

For 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.

CAUTION

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

For a boat-mounted steering system, attach the cable to the boat and engine in accordance with the instructions furnished with the connection kit.

STEERING CABLE INSTALLATION - DUAL HELM.

Before the steering cables are installed the steering wheel should be positioned as shown in Figure 1, so that it is in the correct orientation when installation is completed.

STEP 1. Remove pins from cable entries of helm. **DO NOT REMOVE TAGS FROM PINS.**

STEP 2. 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 Steering Cables, make 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 4.

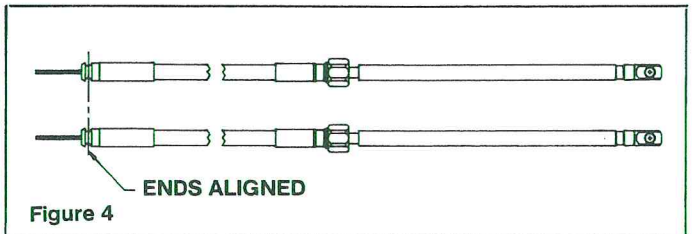


Figure 4

STEP 3. Feed the cable ends into the **LOWER** helm entry spigots, keeping the conduit fittings aligned, until they contact the internal gears. Then turn the steering wheel to draw the cables fully into the helm (see Figure 5). Continue turning wheel until end fittings of cables are entered into the entry spigots, and wheel cannot be turned further. During this you may hear a click as the locking mechanism engages. Turn steering wheel fully in the other direction until it cannot be turned any further, check that cable end fittings are retained inside the entry spigot.

WARNING

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

STEP 4. Replace pins as shown in Figure 2, making sure that they are fully seated. If one pin cannot be inserted, that cable is not fully seated in the helm. Push on cable to ensure that it is fully home. **DO NOT REMOVE TAGS FROM PINS.**

STEP 5. Feed the Spent Travel Tubes (Item 2) over the exposed cable ends and insert bolt (Item 4) into the helm. Tighten fully.

STEP 6. Rotate the steering wheel several times from stop to stop, and watch the movement of the Steering Cable output ram. Turning the wheel clockwise should cause the ram to retract.

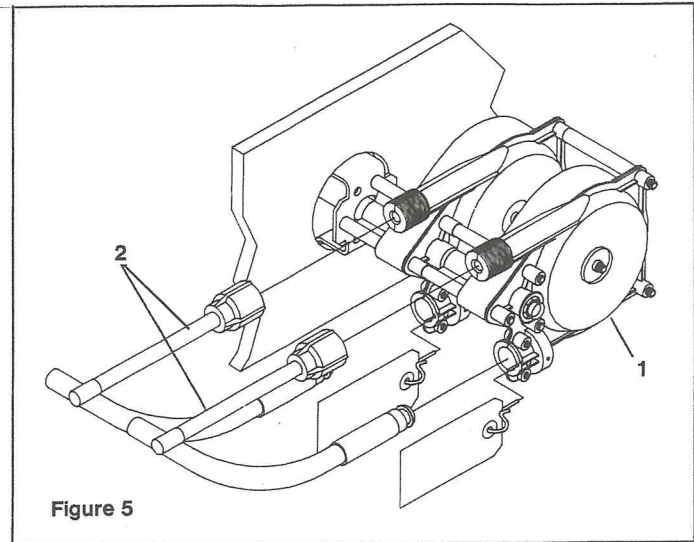


Figure 5

CONNECTION TO ENGINE.

The steering cables can now be connected to the engine, using a connection kit available from the engine maker or an approved equivalent.

CAUTION

ENSURE THAT CABLE ENDS ARE NOT BENT WHEN INSTALLING THEM INTO THE ENGINE. IF NECESSARY REMOVE ENGINE FROM THE BOAT.

To fine tune the steering, install the connection kit without adjusting the second cable tube. Turn the steering wheel so that you get a feel of the load to move the engine. Move the engine from side to side and check the amount of free play in the cables. Adjust the connection kit tube until as much of the free play is removed as possible **WITHOUT INCREASING THE LOAD AT THE STEERING WHEEL.** Tighten both adjusting nuts and test drive the boat. Readjust the connection kit if necessary.

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 hinge tube thoroughly and lubricate with a waterproof 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.

