

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

These instructions describe how to install cable and drive assemblies to 'The Back Mount Rack' system helms.
These cables are designed to work with the SH 5200 series helms only.

WARNING

BEFORE STARTING INSTALLATION: THOROUGHLY READ THESE INSTRUCTIONS – AS WELL AS THE INSTRUCTIONS PROVIDED BY THE ENGINE MANUFACTURER. 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, AS 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 MANUFACTURER'S OPERATION MANUAL. FAILURE TO DO SO CAN AFFECT THE PERFORMANCE OF THE BOAT AND ITS SAFE OPERATION.

First install the helm mounting plate (supplied with the bezel kit) to the dashboard according to the instructions packed with the helm. If installing the optional tilt steering system, then install the tilt mounting plate (supplied with the helm) according to instructions packed with the helm.

NOTE: CABLE AND DRIVE ASSEMBLIES ARE SUPPLIED LUBRICATED AND 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, AS DIRT WILL DAMAGE THE SYSTEM AND CAUSE PREMATURE WEAR.

WARNING

CABLE AND DRIVE ASSEMBLIES MUST NOT BE DISASSEMBLED FOR ANY REASON. REASSEMBLY MAY LEAD TO TOTAL FAILURE OF THE SYSTEM, WHICH COULD RESULT IN PROPERTY DAMAGE OR PERSONAL INJURY.

CABLE ROUTING

Steering cables, if possible, should be routed to the starboard side of the boat in order to balance engine torque. When routing the steering cable, select a path with as few bends as possible and as gradual as possible. **A MINIMUM BEND RADIUS OF 8" MUST BE MAINTAINED.** WHERE CONDITIONS DICTATE, ONE BEND IN THE CABLES IMMEDIATELY AT THE HELM CAN BE A 6" RADIUS, BUT SHOULD BE AVOIDED, IF POSSIBLE. Sharp or frequent bends will result in hard steering and premature cable wear. When it is necessary to pass through a bulkhead, a 1½" diameter hole is required. Cable(s) should be clamped or tied at regular intervals for support.

CAUTION: CABLE(S) MUST NOT BE BUNDLED TOGETHER WITH ELECTRICAL WIRING. CABLE(S) MUST NOT REST ON SHARP EDGES WHICH CAN CAUSE CHAFING.

BOLTS & WASHERS FROM HELM KIT

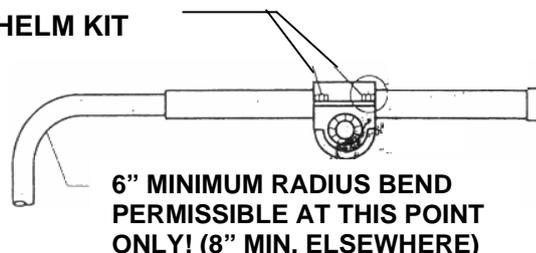


FIGURE 1 (VIEWED FROM BACK OF HELM)

INSTALLING CABLE AND DRIVE ASSEMBLY

Place the cable and drive assembly on top of the helm unit taking care that the pinion gear of helm unit meshes with gear teeth on rack. Turn helm shaft to accomplish this. Fasten cable and drive assembly to rack using (4) ¼-20 x 1" long locking patch bolts and (4) ½" OD flat washers provided with the helm (see Figure 1). Make sure the washers are *under* the head of the bolt. Tighten all 4 bolts equally and securely.

Mount the helm/cable and drive assembly to the helm (or the optional tilt) mounting plate, following the instructions packed with the helm.

After mounting, install the bezel and steering wheel following the instructions packed with the bezel kit (ref. ISSB39526). For tilt steering systems, install the tilt mechanism, bezels, and steering wheel, following the instructions packed with the tilt mechanism (ref. ISSH91542/3).

After the steering wheel has been mounted, turn the wheel to check freedom of movement.

Cable and drive assemblies should now be supported at regular intervals.

CONNECTION TO ENGINE

A. SINGLE CABLE (SC 134XX/SC154XX) SYSTEM

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 IT INTO THE ENGINE. 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.

B. DUAL CABLE (SC 135XX) SYSTEM

Connect the steering cables to the engine, using a connection kit available from the engine maker or an approved equivalent. The adjustment of dual cable connection kits is critical for smooth, easy steering. The instructions provided by the kit maker **MUST** be followed.

CAUTION

ENSURE THAT THE CABLE OUTPUT END IS NOT BENT WHEN INSTALLING IT INTO THE ENGINE. IF NECESSARY, THE ENGINE MUST BE REMOVED 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**. There may be a small amount of free play at the steering wheel; this is normal and cannot be removed by adjusting the connection kit. 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 POSSIBLE PROPERTY DAMAGE OR PERSONAL INJURY.

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 waterproof grease.
3. Periodically inspect 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 found, the cable must be replaced.

DANGER

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

KEEP THESE INSTRUCTIONS WITH YOUR BOAT FOR FUTURE REFERENCE.