

Sticky Steering

Maintaining or Replacing the O/B Steering Cable

Paul Esterle has been building or repairing watercraft, of all descriptions, for longer than he cares to admit, from hovercraft to power and sailboats. Paul specializes in boat improvement and repair projects utilizing wood, epoxy, and fiberglass. If you have any questions about your boat project, contact Paul at pesterle@comcast.net.

by Paul W. Esterle

You've noticed that your outboard steering is becoming progressively harder to turn. Before you start tearing things apart, it's time to do some troubleshooting.

Mechanical O/B Steering Systems

Mechanical steering systems consist of three main parts: the helm, the cable and the motor connection. The helm is what the steering wheel is fastened to and actuates the steering cable. It can be either a rotary or rack style unit. The engine connection includes all the parts and adapters to mate the steering cable to the outboard and will vary depending on the outboard make and model. The cable obviously connects the two.

Many manufacturers have made steering systems through the years, but the marketplace is currently dominated by the Teleflex Corporation. They purchased their biggest rival, Morse Cables, a while back and now supply most of the mechanical steering systems and replacement cables in use today.

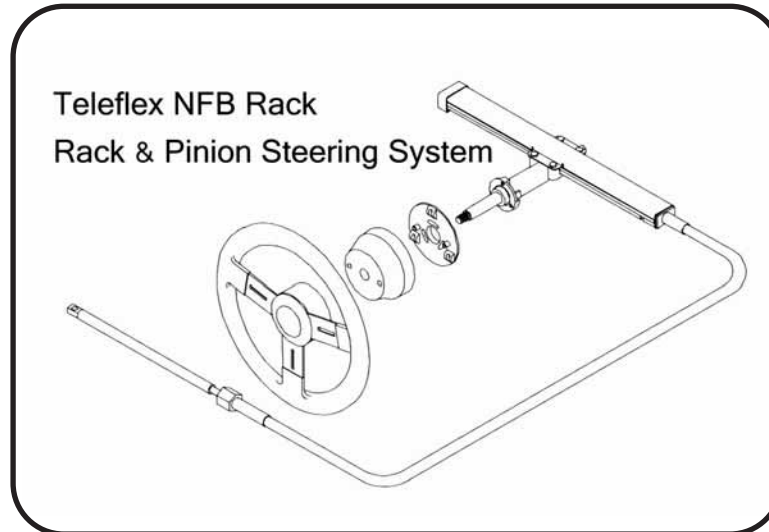
Maintenance

A quick glance at a Teleflex manual will point out that there are no maintenance points on the helm or the cable. The only maintenance notes in the manual concerning the cable is to regularly inspect it for free movement and to ensure there are no cracks or breaks in the outer cable cover. This is often hard to do as much of the cable is hidden from view.

Those breaks will let water and/or salt into the cable interior and eventually corrode it to the point it will seize. Teleflex specifically recommends against trying to tape up or seal these cracks as it can hide corrosion and lead to sudden steering lock-up due to a seized cable.

That leaves the cable connection to the outboard and the outboard itself. In fact, this area is where most of the problems occur. Salt spray settles on the exposed cable and the steering tube on the outboard and will cause corrosion or buildup that will increase steering loads. Keep these areas clean and well lubricated. Pay attention to your outboard manual for proper care of the outboard-mounted steering components. If you let this go, a locked steering tube and some expensive repairs are inevitable.

One often installed aftermarket accessory is the Cable Buddy by Davis Instruments. This unit is installed on the outboard end of the steering cable. It is basically a nut that screws on the end of the cable and has a seal

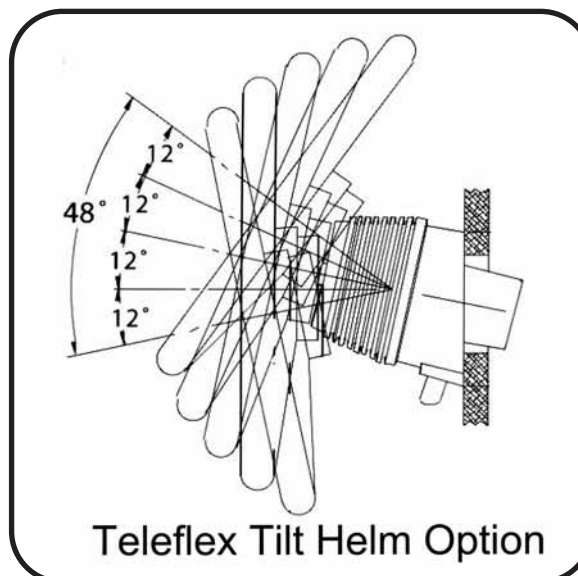


This rack & pinion style steering system provides a precise feel and 4-turn lock to lock. Drawing courtesy of Teleflex.

and a fitting for introducing a cable lubricant into the cable interior. Relatively inexpensive, it is a worthwhile addition to a steering cable. It does not eliminate the need for maintaining the cable connection to the outboard and the outboard's steering components.

Repairs

Okay, you've checked the cable connections and the outboard steering components and they are fine. You disconnected the cable from the outboard and it doesn't budge. So the cable needs replacement, right? Well, maybe. There are two parts here, the helm and the cable. Admittedly, the cable is most often the culprit, but check the helm before removing the cable from the boat. Disconnect the cable



One advantage of installing a new steering kit is the availability of options like a tilt helm. Drawing courtesy of Teleflex.

from the helm and see if the cable will move. If it does, the helm is the guilty party.

At this point you have either a bad helm or a bad cable or both. In any case, something needs to be replaced. Some replacement helms are available and many replacement cables are available. The problem is identifying which cable or helm you have. Many cables have part numbers and the length printed on the outer cable cover. The problem is that this lettering is faded to the point of illegibility on older cables. The other critical factor is the cable length. Steering cables can't be cut and don't like to be coiled up.

Another problem is the sheer number of cable end combinations out there. When I was a parts specialist for a major marine retailer, I always asked customers calling for replacement steering cables to bring their cable in so I could match it properly for both end connections and length.

The vast majority of my customers measured the cable length incorrectly. I would lay out the cable on the floor for proper measurement and so I could use the extensive Teleflex cable catalog to identify the exact cable required.

However, you need to take one important step before tearing that cable out of your boat. It was usually installed when the deck was off of the hull and is snaked through the boat. If you simply pull the cable out, you'll have the devil of a time getting that cable back in the same place. Failing to do that may well change the length of cable required.

Whether you pull the cable from the transom end or the helm end; tie a messenger line to it. Use a piece of small rope or heavy line and drag it through the boat as you extract the old cable. This process may be complicated even more if the steering cable is clipped to the hull or deck. Good luck in finding those clips. This messenger line will allow you to pull the new cable back along the same path as the old. It still may not be easy, requiring some twisting, pulling and pushing, but it should follow the same path and more importantly the length, as the old cable.

If the helm is the problem, leave the cable in place and remove the helm. Take it to your local marine dealer. Make sure he has the full Teleflex catalog to refer to and see if he can match up your helm unit with an available replacement. If the problem is the cable, the same steps apply. Take it to your dealer and see

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if he can identify it.

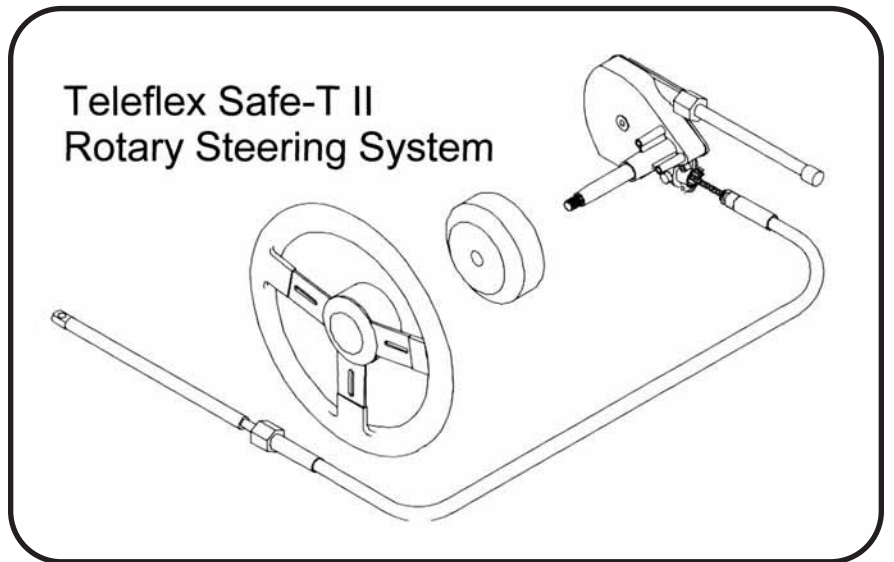
Now comes the fun. Not all helms are still available as replacement parts so you may be out of luck there. Many cables can be identified and are still available and Teleflex can supply a vast number of replacement cables. That isn't to say they are available off-the-shelf. It doesn't make much sense for them to stock multiple lengths of obsolete cables. They do maintain the basic parts to build these cables, but they will often need to be made to order. This may result in an extended delivery time.

You need to do the math and evaluate your situation, Do you wait for a replacement cable to be made and lose the use of your boat or not?

Often the smartest decision is to replace the cable and helm with a current, off-the-shelf replacement kit. The kit will contain a new helm and cable. You will need to make sure your existing steering wheel will fit the new helm. Or you can buy one of those spiffy new stainless steel wheels with the suicide knob. You may also need a connector kit to adapt your new system to your old outboard. The cost of a complete kit will be higher than the cable itself, but the cost of a replacement cable can be surprisingly high.

Another advantage of a new steering system kit is that the new units have some great new features, such as No Feed Back response, tilt helms and such. Be careful if you are changing from a rotary style helm to a rack and pinion style or visa-versa. Examine the area behind the dashboard to make sure there is enough room for the new helm. Rack and pinion helms will need more room on the side opposite the cable than a rotary style helm, for example.

If you want more information about Teleflex mechanical steering systems or cables, then visit www.teleflexmarin.com. They have online manuals for all components for their mechanical steering systems. If you are thinking of replacing your steering system,



This rotary helm steering system is one of the most common and popular. It features quick 3-turn lock-to-lock steering. Drawing courtesy of Teleflex.

download the manual and study it before spending the money for the new system. These systems are well engineered and the manuals excellent. Don't be afraid to replace yours.

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