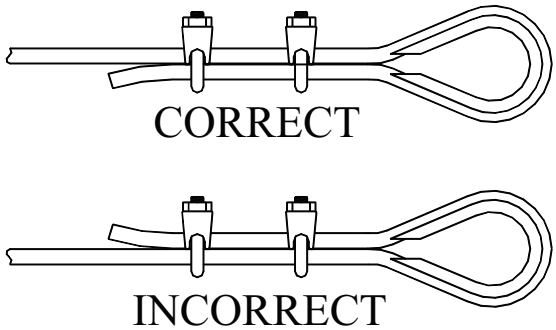
# 420 SOP STEERING INSTALLATION



## CABLE TO QUADRANT INSTALLATION

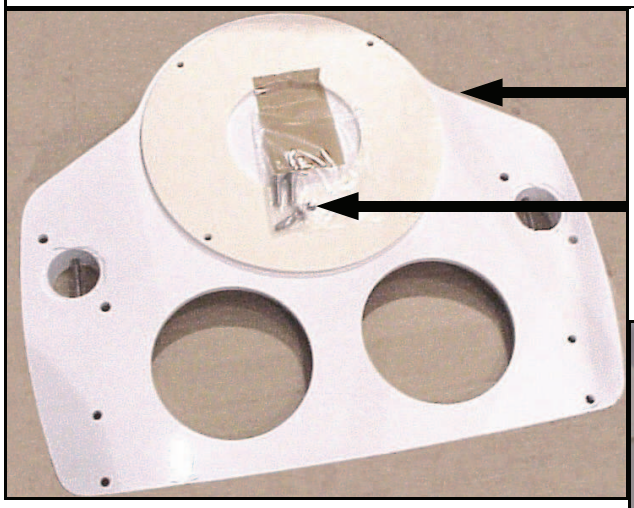
1. Before connecting the cables to the quadrant it will be necessary to place the steering wheel on the steering shaft and make sure the chain is centered on the gears then lock the steering shaft in place.
2. Place the two eye-bolts with thimbles into the two "ears" welded to the sides of the quadrant and place both of the nuts onto the threaded portion so the end of the nut is flush with the end of the threads.
3. Check to make sure the cables are running in the grooves of the pulley and quadrant and also running inside the retaining pins on the outboard-aft corners of the quadrant. Also make sure the quadrant is centered. Run the steering cables thru the eye-blots so they are laying in the groove of the thimbles. Pull the cable tight (hand tight only ) then clamp the cable onto itself using the two u-bolt style cable clips on each cable. NOTE: The cable clips need to be installed so the u-bolt (the part with the threads ) of the clip is holding the loose end (short end) of the cable (see drawing). If these clips are put on backwards they have a greater chance of letting the cable slip.
4. Unlock the steering wheel then turn the wheel hard all the way port to starboard to take out any slack in the cable. Also turn the steering all the way to port then starboard and check to see if the chain is still centered on the gears. Return the wheel to the center position and lock it into place. Make sure the quadrant is centered then, if necessary adjust the nuts on the quadrant eye-bolts to remove any slack (do not over tighten, this will cause to much tension on the cables and require to much force to turn the wheel).
5. Check the steering load by placing a torque wrench on the nut of the steering shaft. Read the amount of force needed to rotate the shaft. 7ft.-lbs is the maximum amount of load allowed. If there is more than 7ft.-lbs it may be due to over tensioned cables, incorrect conduit routing, or rudder bearings being tight or misaligned. Try backing of the adjusting nuts on both quadrant eye-bolts equally to relieve the tension on the cables.




# 420 SOP STEERING INSTALLATION

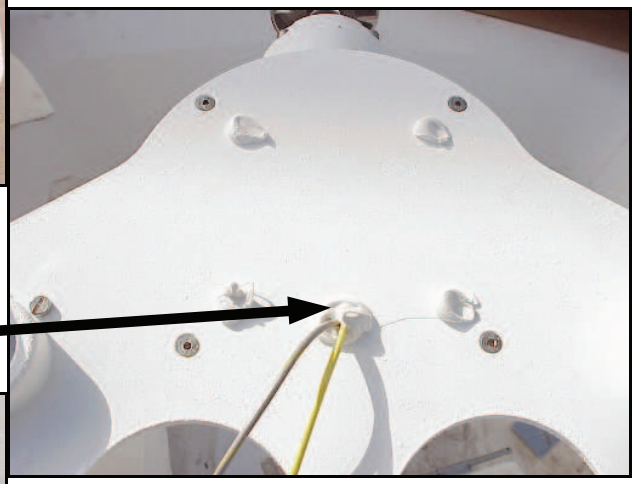


**TOP PLATE INSTALLATION**

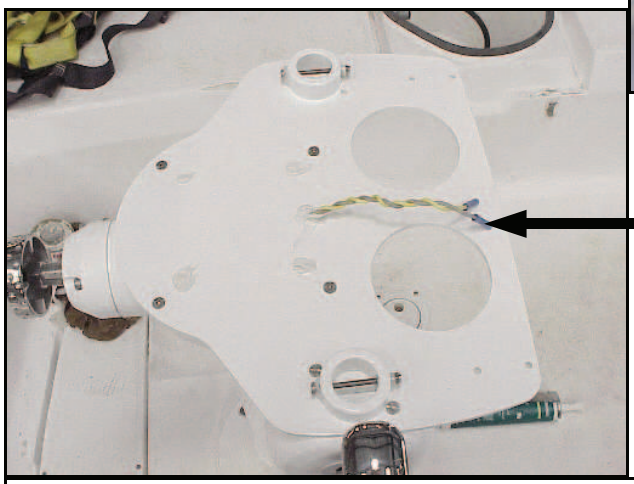


BOTTOM SIDE OF TOP PLATE SHOWING GASKET (IT COMES ATTACHED TO THE PLATE)

MOUNTING SCREWS (METRIC A 3MM HEX KEY WILL FIT THEM)



CAULK WITH 5200 AROUND THE WIRES AND ALSO THE FOUR SMALL HOLES



ATTACH BLUE BUTT CONNECTORS TO THE ENDS OF THE WIRES

1. Two wires, one gray with a yellow tracer and one yellow, will need to be pulled up thru the pedestal and out the top. Run and secure these wire so the will not interfere with the steering cables or chain.
2. In the top plate there is a rubber grommet in the center small hole, it will need to be remove so the two wires can go thru the hole. Position the top plate over the pedestal so the bottom (the side with the gasket) is down and the large holes are forward.
3. Run the two wires thru the small center hole and place the top onto the pedestal. Secure the top to the pedestal using the four fasteners that came with the top. NOTE: The fasteners are metric and requires a 3mm hex wrench to tighten.
4. Strip the ends of the wires back approximately 1/2" then attach a blue butt connector on the ends of each wire.
5. Caulk (5200) around the wires where they come out of the top and also caulk up the other four small holes in the top plate.

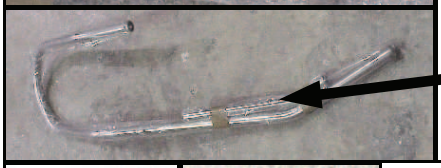
# 420 SOP STEERING INSTALLATION



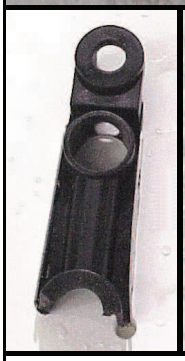
## ENGINE CONTROL MECHANISM INSTALLATION

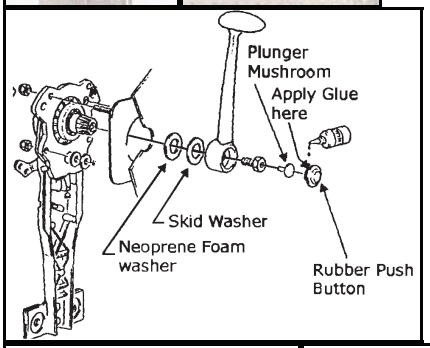
**PARTS NEEDED**

**ENGINE CONTROL MECHANISM WITH BAG OF ASSORTED HARDWARE AND HANDLE**



**SHORT SECTION IN THE GUARDRAIL KIT**






1. Pictured to the left are the parts need to install the engine control. In the small bag of parts there will be two cable housings which will include the