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#### **CONDUIT GREASERS & AFT CONDUIT INSTALLATION**

- 1. At the aft end of the boat slide the two conduit greasers over the aft end of the two stainless steel cables down to the aft end of the long conduit pieces then slide the short pieces of conduit (3' 3") over the cables.
- 2. The conduit greasers are threaded on both ends so they can be screwed onto the conduit. One end will be a right handed thread and the other end will be a left handed thread. The reason this is so both pieces of conduit can stationary (do not need to rotate) and the greaser can be screwed onto both of them at the same time. Put both ends of the conduit (one end of the long conduit and one end of the short conduit) up to the greaser then turn the greaser to screw the conduits onto the greaser at the same time.



- 3. Run the end of the stainless cable that comes out of the conduit marked with tape (this should be on the end of the long piece of conduit) thru the forward conduit clamp on the roller plate. The other cable will go thru the aft conduit clamp. Take the loose ends of the short piece of conduit and attach them to the conduit clamps on the roller plate.
- 4. Using a grease gun apply approximately \_\_\_\_ pumps of super-lube grease into each of the grease nipples on the conduit greasers.



#### AFT CONDUIT TO ROLLER PLATE INSTALLATION

- Take the stainless steel cable that runs thru the conduit pieces that have been marked with tape and run the cable thru the forward conduit clamp on the roller plate. Continue going starboard until the cable is past the two spacers then loop the cable forward and port to go around the rudder post. Slide the conduit end up into the conduit clamp and tighten the clamp well.
- . Take the other stainless steel cable and run it thru the forward conduit clamp. Continue around the pulley back to the portside then loop the cable back forward and starboard to go around the rudder post. Slide the conduit end up into the conduit clamp and tighten the clamp well.

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#### RUDDER REFERENCE INSTALLATION (FOR AUTO PILOT OPTION)



- 1. When the auto pilot option is ordered then the rudder reference will need to be installed.
- 2. First four pieces will need to be made from starboard. The angular piece will be easier to mount before the boat is decked but the other pieces will be installed after the boat is decked to minimize the possibility of the unit being damaged. The dimensions for these pieces are in figure 1. The 3" radius that is cut into the angular piece can be obtained by placing the starboard onto the quadrant and marking the ID of the quadrant clamp onto the starboard. Cut this out on a bandsaw then dress it up with a drum sander. The only critical measurements are; (1) the ball that will hold the socket on the tie-rod needs to be 5-1/2" from the center of the rudder shaft, (2) the two holes for the 10-24 screws that will hold the piece of starboard to the quadrant must be placed so they do not interfere with the quadrant clamp screws. The tolerance of the dimensions on the rectangular piece are fairly wide open. The height of the shorter pieces (3") need to be tall enough so the quadrant can go under the longer piece when the quadrant is rotated all the way to the starboard side and the shorter pieces need to be short enough so the rudder reference will not hit the deck when it is installed.
- 3. Place the angular piece onto the quadrant so the socket ball will be directly aft of the rudder shaft when the quadrant is centered port to starboard and the radius cut out is aft enough so it will not obstruct the rudder shaft. Transfer mark the 10-24 mounting hole locations to the quadrant (or drill them now and let the drill mark the spot) then drill the quadrant with a 5/32" drill bit and tap with 10-24 tap. Secure the starboard to the quadrant. Secure the socket ball onto the starboard with the screws provided in the kit so the ball is 5-1/2" aft of the center of where the rudder shaft will be.

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#### RUDDER REFERENCE INSTALLATION (FOR AUTO PILOT OPTION)



- 4. In the rudder reference kit there is the tie-rod assembly which consist of; two sockets, two jam nuts, and a threaded rod. Screw the two jam nuts onto the threaded rod then screw the sockets approximately 5/8" onto the threaded rod, this will allow for adjustments in either direction later if necessary. Make sure the sockets are facing the same direction then tighten the jam nuts up to the sockets.
- 5. The two 3-1/2" x 3" x 3/4" starboard pieces will be positioned together so they will be 1-1/2" thick. They will be installed so the 3-1/2" length runs port to starboard and the 3" length runs vertically. The bottom will rest on the shelf and the blocks will be attached to the aft side of the aft kick board.
- 6. Measure from the center of the rudder shaft going starboard the same distance as between the center of the sockets on the tie-rod. Mark this position then place the starboard blocks so the are centered port to starboard to the mark.
- 7. Secure the starboard blocks to the aft kickboard using caution not to go thru the forward side of the aft kickboard.
- 8. Place the 7-3/4" x 3-1/2" x 1/2" piece of starboard on top of the other blocks then secure all the starboard together using four screws.
- 9. Rotate the rudder reference arm back and forth to find the center the leave the arm in the center position. Place the base of the rudder reference on the 3-1/2" x 7-3/4" piece of starboard so the arm is facing aft (remember the arm needs to be centered) and the center of the base is the same distance aft of the aft kickboard as the center of the rudder shaft is and the center of the base is starboard of the center of the rudder shaft the same distance as the distance between the sockets on the tie-rod assembly.
- 10. Mark the mounting hole locations then drill the marked locations with a 1/8" drill bit and secure the rudder reference to the piece of starboard.
- 11. Snap the sockets on the tie-rod assembly onto the ball of the rudder reference and the ball mounted onto the quadrant.

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### ABOVE DECK KIT PARTS



Steering pedestal

Engine control mechanism



Top plate (bottom view) T

Top plate (top view)