



## **E-STOP SWITCH ARRANGEMENT INSTALLATION INFORMATION**

**Step One:** Select which Vertical horn you want to install the E-Stop Switch arrangement. To Install the E-Stop Switch Arrangement into the selected Winch Horn, it is advisable to remove any Winch Inspection Cover Plates (to help gain access into the winch housing) and to Grind the Horn Flat using a rotary Grinder prior proceeding to Step 2 of the instructions. See Figures 1 and 2 below.



Figure 1-Grinding the Selected Horn



Figure 2-Grinding the Selected Horn

**Step Two:** Locate the provided Horn Jig and note that it has two different sides. Place the Provided Horn Jig upside down (to be used as a Template for Drilling out the Horn) onto the Winch Horn and Mark the Center of the horn by inserting a pen in the Horn Jig. See Figures 3 and 4 below.

**Horn Jig “Side A”- Note: The Center hole on this side has a recess feature for marking the center of the horn with a marking pen.**

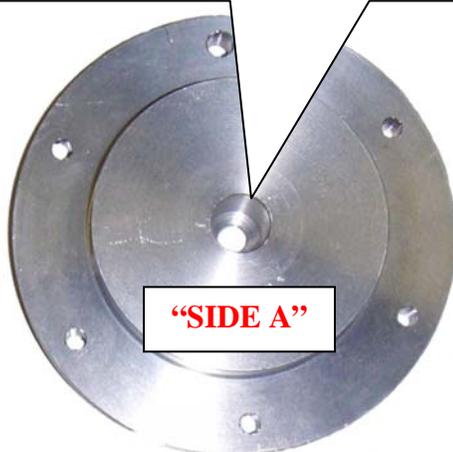


Figure 3-“Side A” of the Horn Jig

**Horn Jig “Side B” with Star- Note: One of the Outer Circumference Holes has a ★(and perhaps a recess feature) for tapping the 1st E-Stop mounting hole into the horn.**

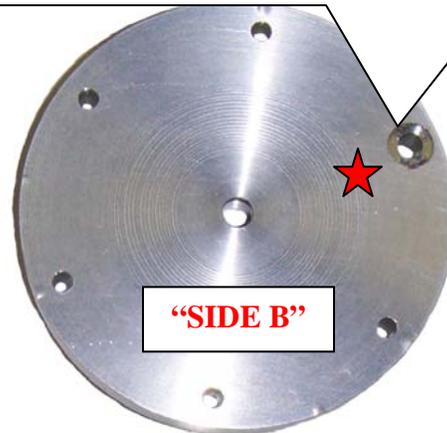


Figure 4-“Side B” of the Horn Jig

**Step Three:** Place the Provided Horn Jig with “Side A” facing up and center it onto your horn. Using the Horn Jig as a Template, insert a pen into the center recessed hole and mark the center of the Horn. See Figures 5 and 6 below.



Figure 5-Preparing to mark the horn center



Figure 6-Marking the horn center

**Step Four:** Remove the Horn Jig and Center Punch the horn. See Figures 7, 8 and 9 below.



Figure 7-Horn marked in center



Figure 8-Preparing to Center Punch horn center



Figure 9-Center Punch the horn center

**Step Five:** Using the provided Hole Saw, Drill the horn as shown. See Figures 10, 11 and 12 below.



Figure 10-Horn center punched in center



Figure 11-Preparing to Drill horn center



Figure 12-Drilling the horn center

**Step Six:** Insert the Horn Jig with “Side B” facing up into the drilled hole. See Figures 13, 14 and 15 below.



Figure 13-Horn center drilled out



Figure 14-Inserting Horn Jig with Side B showing



Figure 15-Horn Jig Inserted into horn center

**Step Seven:** Using Electrical Tape, secure the Horn Jig to the horn as shown. See Figures 16 and 17 below.



Figure 16-Secure Horn Jig to the horn



Figure 17-Secured Horn Jig

**Step Eight:** Drill ONE Mounting Screw hole thru the Horn Jig hole as shown. Use any of the (5) Horn Jig holes – **Do not use the special Starred-Recessed hole for this operation.** Remove the Horn Jig and continue drilling into the horn at least  $\frac{3}{4}$ " deep. See Figures 18 and 19 below.



Figure 18-Drill 1st Mounting Hole into Jig to the horn



Figure 19-Remove Jig and continue Drilling  $\frac{3}{4}$ " Deep

**Step Nine:** Hint: Apply a little oil to the hole being drilled... It will assist in your drilling endeavor!  
See Figure 20 below.



Figure 20-Apply Oil to assist in drilling 3/4" Deep

**Step Ten:** Re-insert the Horn Jig onto the horn with “**Side B**” facing up, and rotate the jig till the Special Starred-Recessed hole is directly over the 1<sup>st</sup> Drilled Hole. Insert the provided Tap through the Special Starred-Recessed hole and using the Horn Jig as a guide, start tapping your threads perpendicular and true with firm pressure, backing off occasionally 1/4 turn for each full turn of the tap. Apply a little oil as you tap the threads into the winch horn. See Figure 21 below. Be careful not to bottom out the tap, which may cause you to break the tap or strip your threads in error. Following tapping the one hole, remove the Tap and Jig from the horn, and clean off any chips and debris off the horn which may have been deposited during tapping.



Figure 21-Tapping threads into Winch Horn using Horn Jig.

**Step Eleven:** Secure the Horn Jig to the Winch Horn using one of the longest length provided Socket Head Capscrews. Secure the Jig using the Special Starred-Recessed Hole. See Figures 22 and 23 below.



Figure 22-Special Recessed Hole over 1st Tapped Hole



Figure 23-Secure Horn Jig to Winch Horn

**Step Twelve:** Using the secured Horn Jig as a guide, Drill the remaining (5) holes into the Winch Horn keeping your drill perpendicular and true, and remove the Horn Jig as necessary. Repeat Step 10 for the tapping of the (5) remaining holes, and if necessary secure the Jig to the horn using one of the regular holes (to hold the Jig in place) while tapping the remaining holes through the Special Starred-Recessed hole, Again, ensure that all the tapped holes are at least  $\frac{3}{4}$ " deep. See Figure 24 below.



Figure 24-Drill remaining holes using secured Horn Jig

**Step Thirteen:** Install the provided Rubber Gasket to the E-Stop Switch Arrangement and Insert the E-Stop Switch Arrangement, carefully directing the cable into the Winch Horn. After inserting the E-Stop Switch Arrangement into the horn, adhere the E-Stop Switch to the horn using the provided (6) 10/24 Socket Head Capscrews. Reaching into the winch housing, thread and direct the cable away from any internal winch rotating parts, to achieve an exit point for the cable. Note: An Inspection or Winch Access Plate is an ideal location for the cable to exit. Drill an 11/16” Diameter hole for the cable exit, and install the provided Packing Gland as necessary. See Figure 25 below.



Figure 25-Inserting the E-Stop Arrangement into the Winch Horn.

Hint! Note: A provided Eyebolt is supplied to assist in keeping the cable away from the internal rotating winch parts. Drill a 1/4” Diameter hole into the winch housing and install the eyebolt internally, securing the eyebolt with the provided hex nut. Thread the cable through the eye-ring to ensure cable is not touching internal rotation winch parts. Continue to thread the cable into and through the installed Winch Exit Packing Gland, and pull the cable taut while re-installing the inspection cover plate.



Figure 26-Finished E-Stop Switch Arrangement Installed into the Winch Horn.

**Step Fourteen:** Run the Cable from the Purse Winch alongside your hydraulic hoses or piping which lead to the E-Stop Shut-off Valve Assembly, and by using the provided tie-straps, secure the cable to your hoses.

Connect the cable from the E-STOP Switch Arrangement to the E-Stop Shut-off Valve Assemble (Into and Through the Wiring Box Packing Gland) as per Fig. 27 below, and as per the enclosed Wiring Diagram.

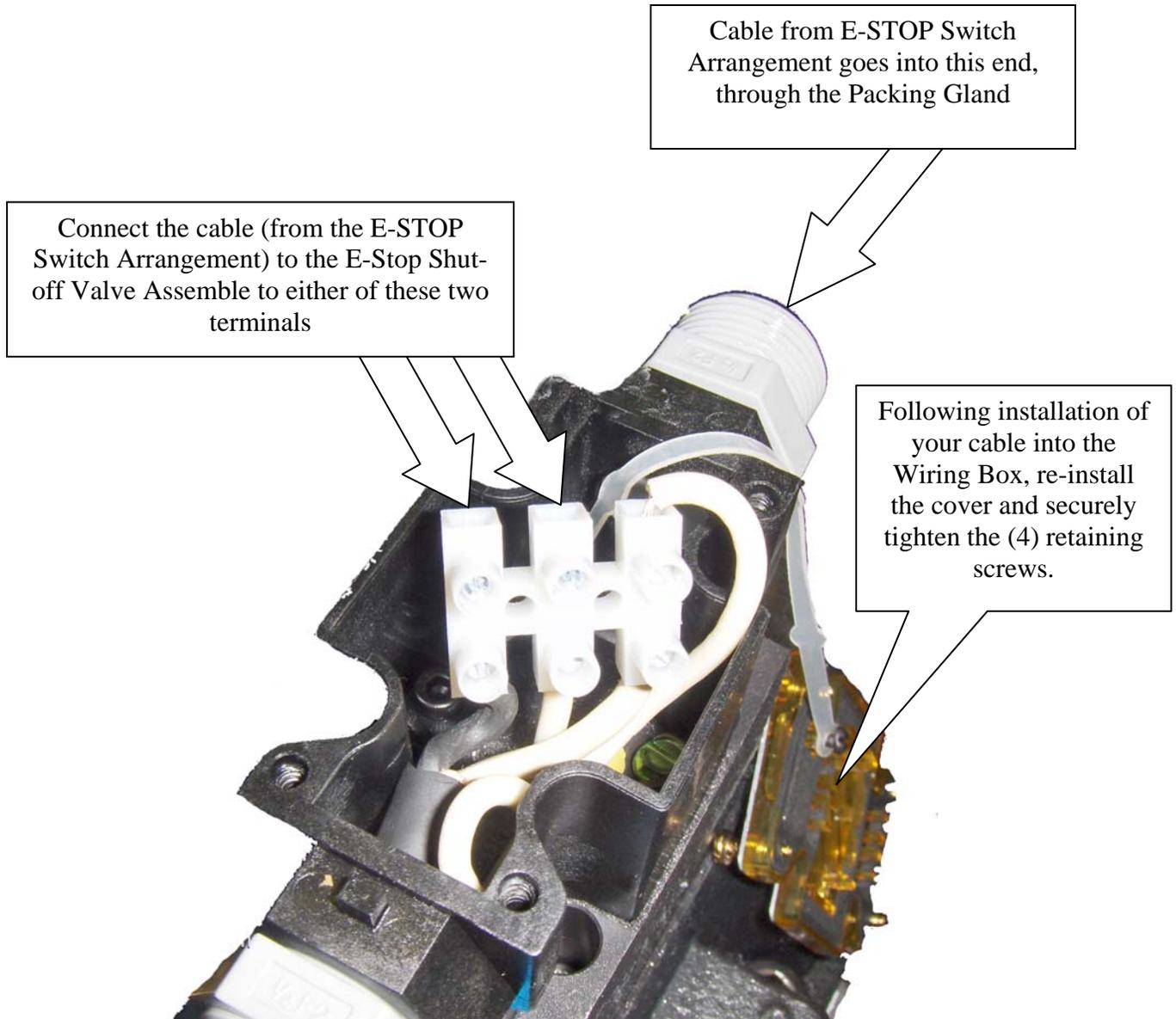


Figure 27-E-Stop Shut-off Valve Assembly-Wiring Box on top of Valve

#### Installation Tips:

- 1) If your Purse Winch is equipped with a **Steel Housing**, It's a good idea to Primer/Paint the Winch Horn that has been ground flat prior to installing the E-STOP Switch Arrangement. This will reduce the rusting that naturally occurs on untreated steel surfaces while in the marine environment.
- 2) The use of silicone sealant between the E-STOP Switch Arrangement Rubber Gasket and the Winch Horn is permitted, but not mandatory, for adequate sealing of the E-STOP Switch Arrangement to the Winch Horn.