Cablehead Replacement

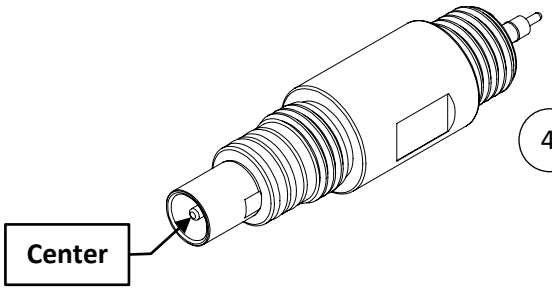
Secure the Cablehead in a bench vise grip with the stinger clamped.

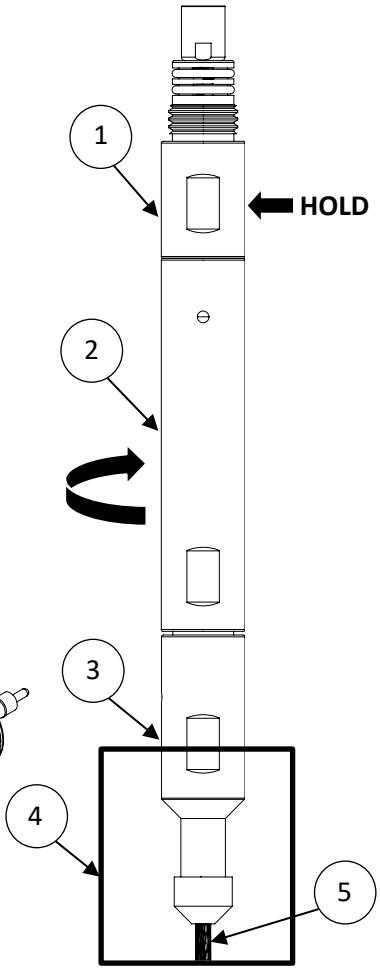
Using the wrench flats, hold the contact subassembly with one wrench and grab the body with the other wrench.

Turn the body in a clockwise motion. The stinger is a left hand thread, so the Cablehead threads on and off as a turnbuckle. Hold the contact subassembly still while unthreading the body, both ends will unthread from the body.

Continue to disassemble the Cablehead by disconnecting the watertight connector and the ground lug.

Test the contact subassembly for leakage with a voltmeter set on Ω (Ohms). Place the positive lead (red) on the center of the UHF connector and the negative lead (black) on the housing of the Cablehead. If the voltmeter overloads there is no leakage and it does not need to be reassembled. If the voltmeter does not overload the contact subassembly needs to be taken apart and reassembled with a new connector and wire.





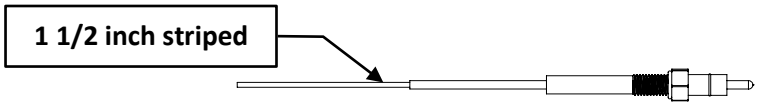
1. CONTACT SUBASSEMBLY
2. BODY
3. STINGER
4. BENCH VISE GRIP
5. STEEL CABLE

Repairing the Contact Subassembly:

To take the contact subassembly apart, unscrew the bulkhead connector. Note this will break the wire and/or the solder connection to the UHF connector.

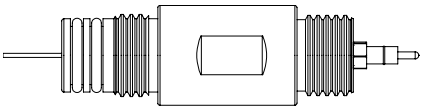
Then unscrew the UHF connector and discard both.

Locate the new bulkhead connector and tin the pin of the threaded end. Cut 5” off of the joy plug wire. Tin one end of the wire, then solder to the tinned end of the bulkhead connector.



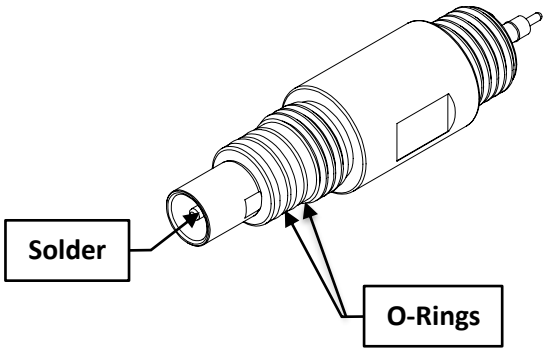
Cut a 1/2 inch piece of 3/16 inch heat-shrink tubing, use it to cover the whole pin and wire solder connection. Apply heat to shrink the tubing to the wires and note that there should be adhesive that seals the end.

Strip the other end of the wire so that 1-1/2 inches is exposed.



Tin the 2 inches of wire then insert the tinned end into the contact subassembly and thread in the bulkhead connector.

After hand tightening the bulkhead connector then use a wrench to turn the connector 1/2 a turn to cinch it in place.



Install the UHF connector by feeding the tinned wire through it then threading the UHF connector into the contact subassembly.

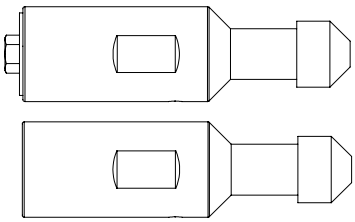
After the UHF connector is installed, solder the wire to the center of the UHF connector by filling the center with solder then trim the excess tinned wire off.

Install supplied new O-Rings to the contact subassembly.

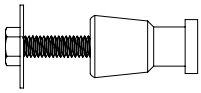
Once the Cablehead stinger section is disconnected from the remainder of the Cablehead, try pushing the steel armored cable back through the center of the stinger. It may be necessary to cut the cable using a grinder with a cut-off wheel. Remember to use proper eyewear for this process. Cut the cable as close as possible to the rear of the stinger.

There are two method of removing the brass cone from the center of the stinger:

The first method is to use a 1/4 inch pin punch and a hammer and push it through with the cable still attached.



The second method is the remove the wires then tap the brass cone with a 5/16-18 thread (if it has not been already) and thread a 5/16-18 x 1-1/4 in long bolt on with a large washer. The tightening of the bolt should pull the brass cone out of the stinger.

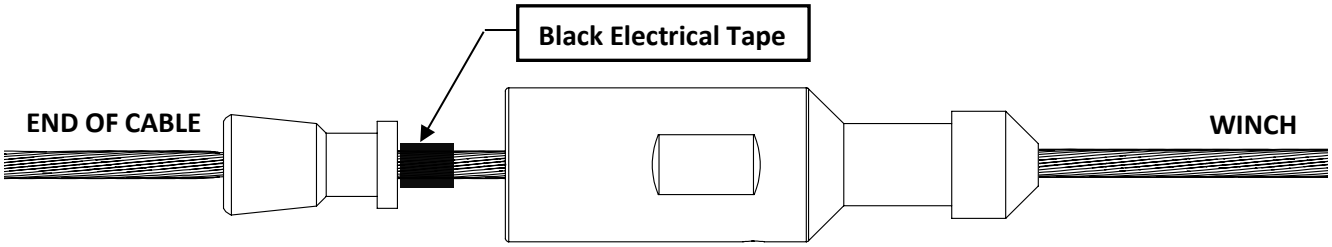


After removing the Cablehead pieces from the steel cable any damaged steel cable needs to be cut off, it is recommended to cut at least 10 feet off when replacing the Cablehead.

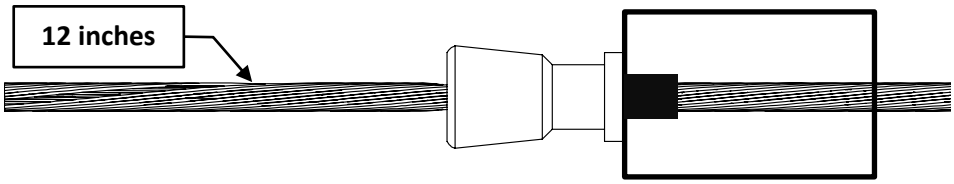
With a voltmeter set on Ω (Ohms), it is possible to check the cable for leakage. Place the positive lead (red) on the center of the coax and the negative lead (black) on the copper shield. If the voltmeter overloads there is no leakage.

Once the cable is cut, slide the stinger on the cable with the tapered end towards the winch.

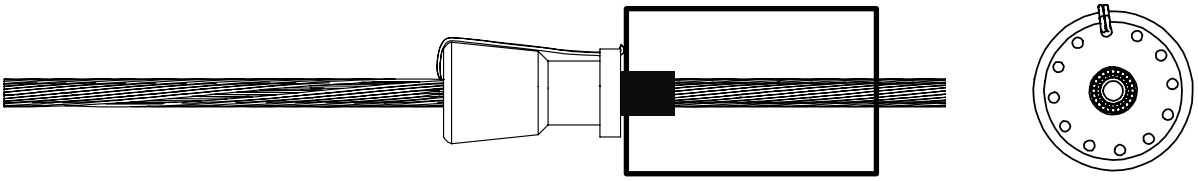
Measure back 12 inches from the end, and wrap black electrical tape around the cable.



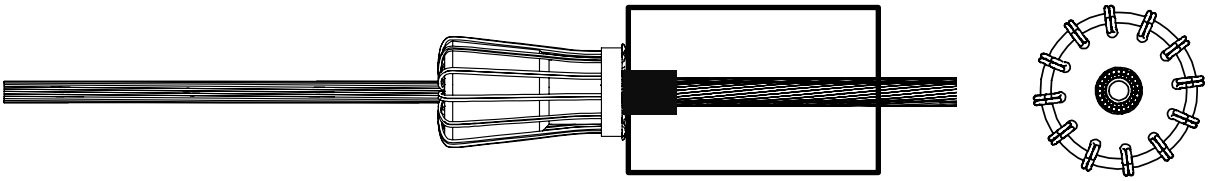
Place the brass cone on to the cable so it rests on top of the tape. It is recommended to place the cable in a vise grip such that the brass cone sits on top of the vise clamp.



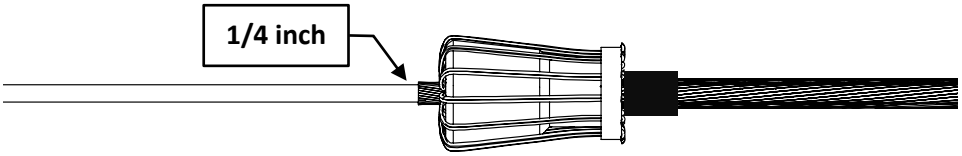
The armored cable has 24 outer strands. Separate one strand from the end of the cable and bend downward to the top of the brass cone. Bend the strand and feed it into the closest hole on the brass cone.



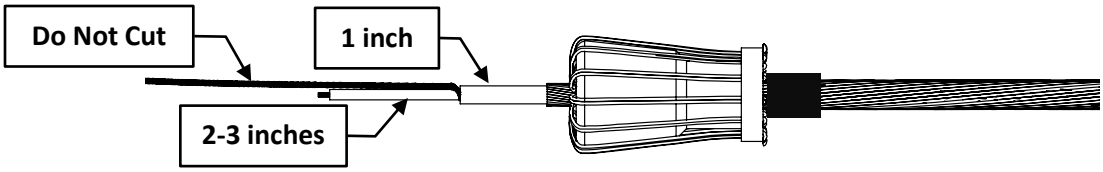
Notice that there are 12 holes on the cone; each hole will have 2 strands. Be careful not to overlap the strands. They should lie side by side evenly. Carefully bend the fed-through strands around the edge of the cone and cut the excess off as shown.



CAUTION: When pulling and bending the wires, be careful not to pull the wires through the side of the cone holes. The cone is brass.

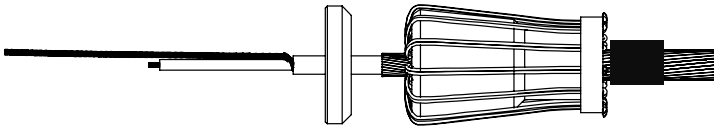


Cut back the inner armor to within 1/4 inch of the cone. Trim back the plastic covering on the center wire to within one inch of the cone.



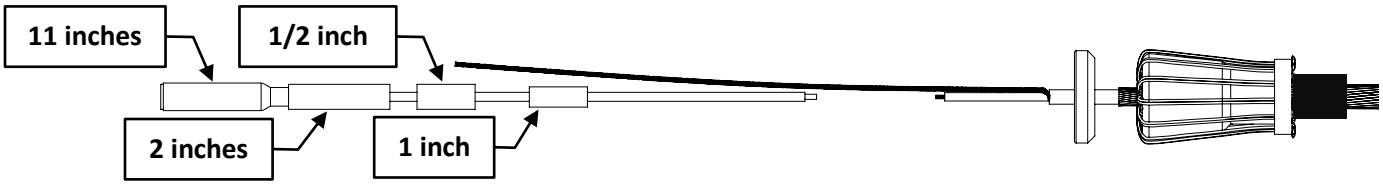
CAUTION: DO NOT cut the copper shielding under the plastic covering.

Once the plastic covering is cut, separate the center conductor and copper shielding. Twist the copper shielding wires together then cut the center conductor approximately 2-3 inches from brass cone.



Slide the brass washer over the wires. Note the direction of the beveled edge should be towards the cone.

Tinning the wires before soldering them together is helpful. To tin a wire the solder is wrapped around the wire, and then heated up with a soldering iron to make the solder flow into the wire.



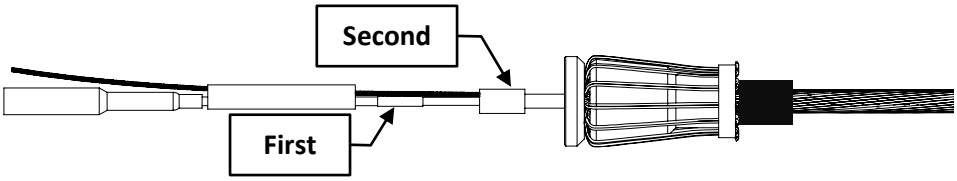
Cut the new joy plug connector to 11” long.

Cut a piece of 1/4 inch shrink tubing 1 inches in length.

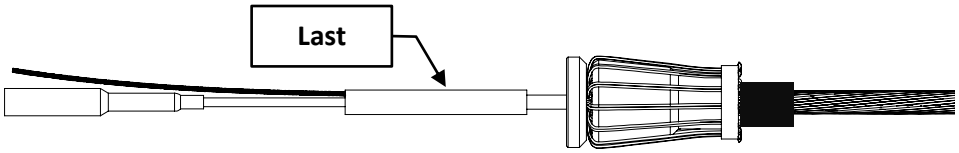
Cut a piece of the 3/16 inch shrink tubing 1/2 inch in length. Cut a piece of the 3/16 inch shrink tubing 2 inches in length.

Place all three pieces onto the joy plug watertight connector. Tin the center wire then solder it to the joy plug connector (with heat-shrink tubing on).

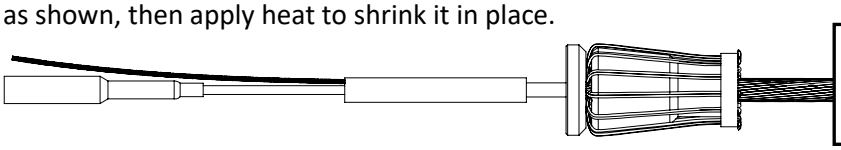
Heat-shrink the 3/16 inch tubing over the soldered connection of the joy plug and center wire. The adhesive should ooze out to the sides of the shrink tubing.



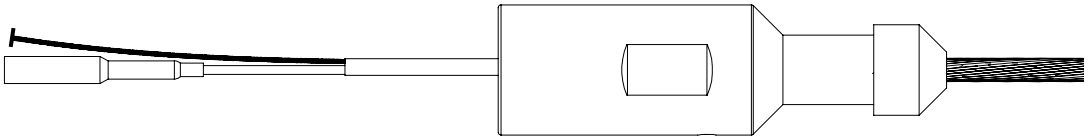
Slide the 1/4 inch tubing pieces over the copper shield so that they are covering the joy plug and shield. Heat-shrink the 1/2 long piece over the joint where the copper shielding is separated from the core.



Place the last piece of tubing (2 inch long piece) so that it covers both of the smaller heat-shrunk pieces, as shown, then apply heat to shrink it in place.

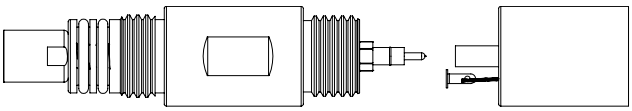


Remove the black electrical tape from the cable before pushing the brass cone assembly into the stinger.



Solder the grounding lug to the tinned copper shielding.

Push the brass cone assembly/strain relief into the “stinger” section.



Slide the body piece over the joy plug connector and copper ground. Connect the watertight joy plug to the contact subassembly and screw on the ground lug.

Place the Cablehead in a bench vise grip to finish the assembly. Remember, the stinger section is a left-hand thread. Thread the stinger onto the body only a half of a turn so that just the beginning of the thread is engaged.

Ensure the excess length of wiring is tucked into the body before starting to thread the contact subassembly on.

Thread the contact assembly onto the body counterclockwise, only a half of a turn so that just the beginning of the thread is engaged.

Then begin turning the body section counterclockwise while holding the contact subassembly by hand. This should thread both ends onto the body portion at the same time.

When the Cablehead can no longer tighten by hand, turn the contact subassembly so that it is flush with the body. Use wrenches to tighten everything in place.

There should be a gap of about 1/16 inch between the stinger and the body, this is normal and expected.