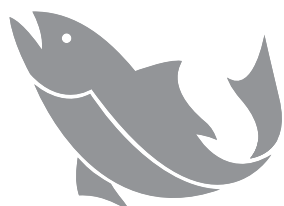
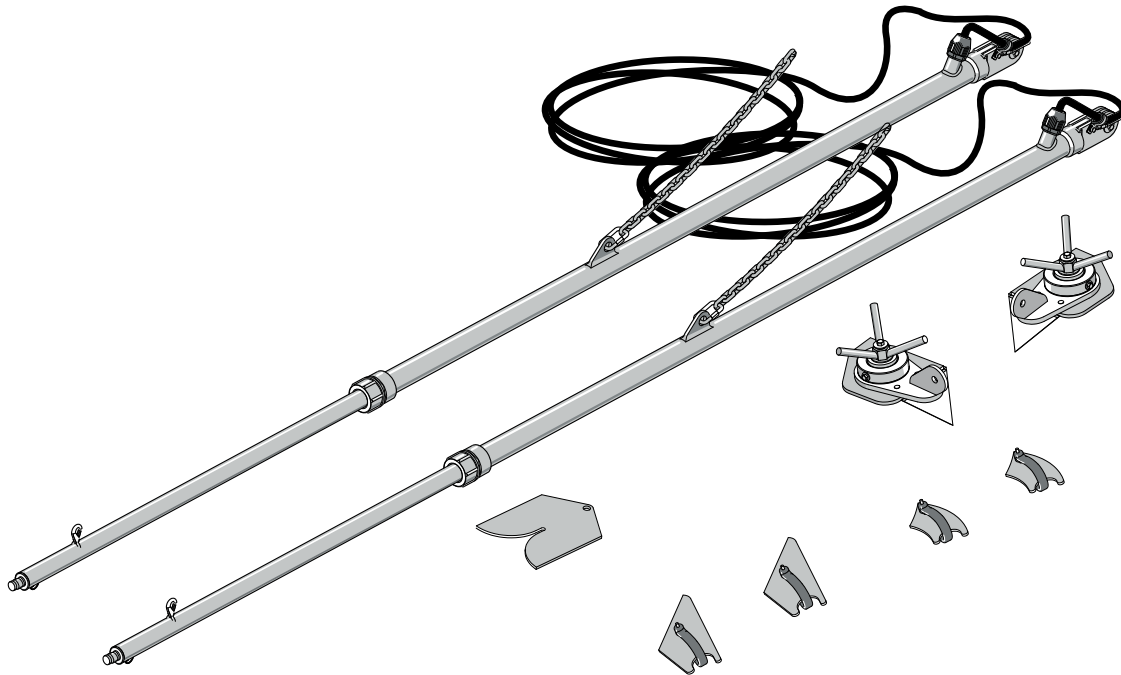


INSTRUCTIONS

ELECTROFISHER BOOM KIT



SMITH ROOT

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Items manufactured by companies other than Smith-Root carry the original manufacturer's warranty. Please contact product manufacturer for return instructions.

All Smith-Root, Inc. manufactured products are covered by a one year warranty.

Credit & Refund Policy: Customers returning equipment, in new condition, will be given credit five days from the date of the return. A return authorization must accompany returns. Valid equipment returns include, but are not limited to, ordering incorrect equipment, funding deficits, and defective equipment returned for reimbursement. All returns are subject to a restocking fee and applicable shipping charges. The restocking fee is figured at 10% of the purchase price but not less than \$20.00. Customers receiving equipment in damaged condition will be referred to the shipping company for insurance reimbursement.

07295.25 Boom Kit Inst. - © 2018 Smith-Root, Inc.



INTRODUCTION

ADVANTAGES OF BOOMS

When an Electrofisher System is installed in a boat, the most popular electrode set-up is to hang anodes in the water around the boat and use the boat hull as the cathode. Electrodes could either be on hand-held poles or suspended from booms. Booms are preferred over hand poles for three reasons:

A boom can support a much larger electrode array than a person could support on a pole. Larger diameter arrays provide a less intense field at each electrode that is less stressful to fish.

Booms keep the array at a fixed distance from the boat, so the field will remain constant, with predictable results. By contrast a hand pole being used too close to the boat-hull causes the field to intensify to a level that would damage fish in its vicinity.

With booms it is impossible for a person standing on the metal boat to get shocked by touching the array, because the arrays are suspended well out of reach. By contrast a hand-held electrode pole could be accidentally swung over the deck, touching a crew member and causing shock.

BOOM MODELS

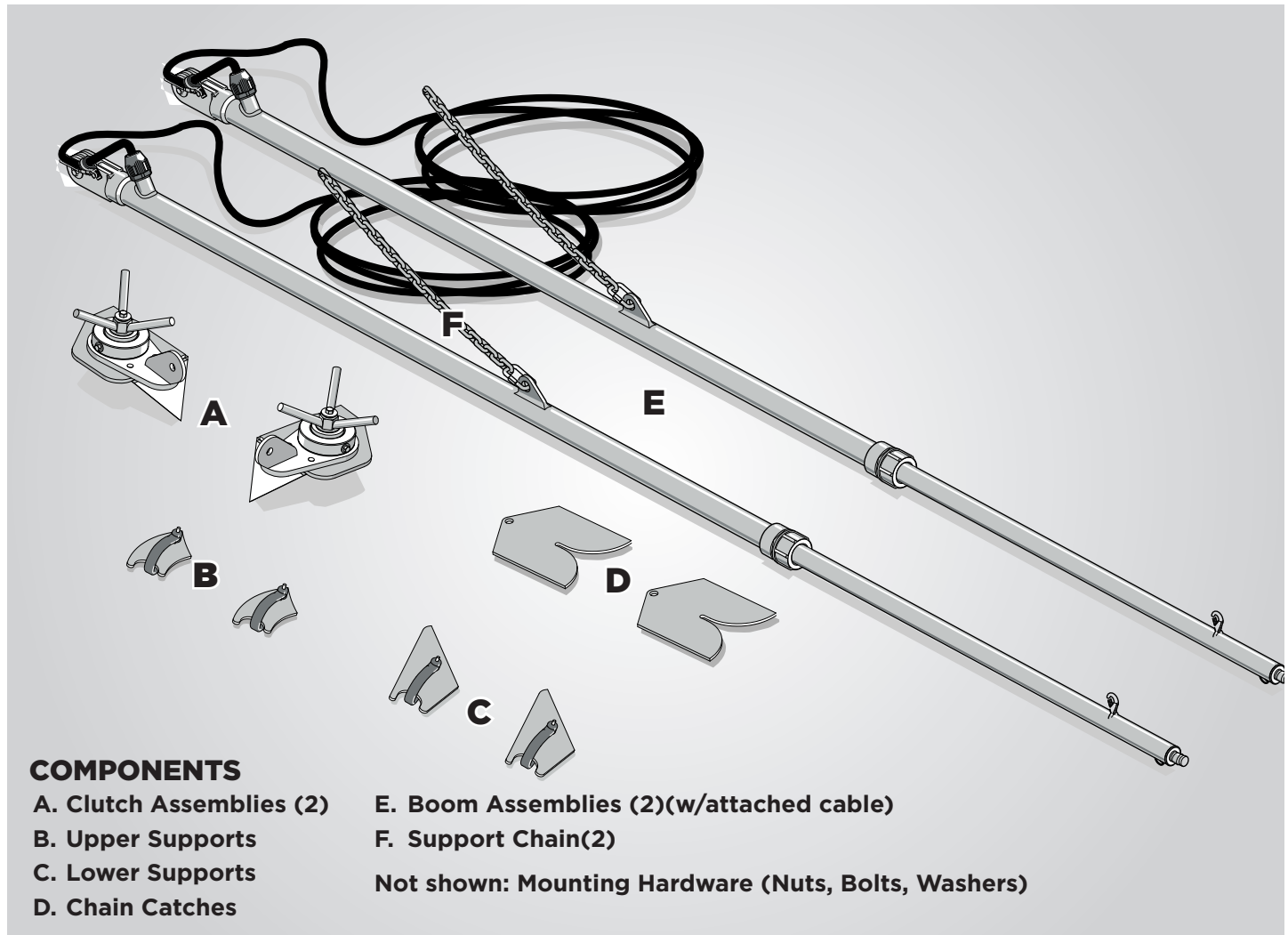
There are two basic boom models; Standard and Hi-Current. The Standard Boom is approximately 8' long, made of 1.25" and 1.75" diameter tubes. The High Current boom, used with 9.0 GPPs, is made with the same diameter tubes as the Standard boom but has larger diameter electrical conductors to accommodate the higher currents produced by 9.0 GPPs.

BOOM ASSEMBLY WITH CONNECTORS BY MODEL:

Models 2.5, 5.0 GPP, 1.5 KVA, VVP-15B, & Type VI, APEX:	A ring lug is installed on cable end. You will need a Boom Junction Box to safely operate the Boom.
Model 7.5 GPP:	A 7-pin plug is installed on cable end. This plugs directly into 7.5 GPP Electrofisher box.
Model 9.0:	A male jack is installed on cable end. This plugs directly into 9.0 GPP Electrofisher box.

HI-CURRENT AND STANDARD BOOM

Smith-Root, Inc. Boat Boom Kit consists of a pair of adjustable booms that mount on the forward corners of your boat. They can be attached by welding or bolting, depending upon your boat design.



HI-CURRENT AND STANDARD BOOM KIT CONTAINS:

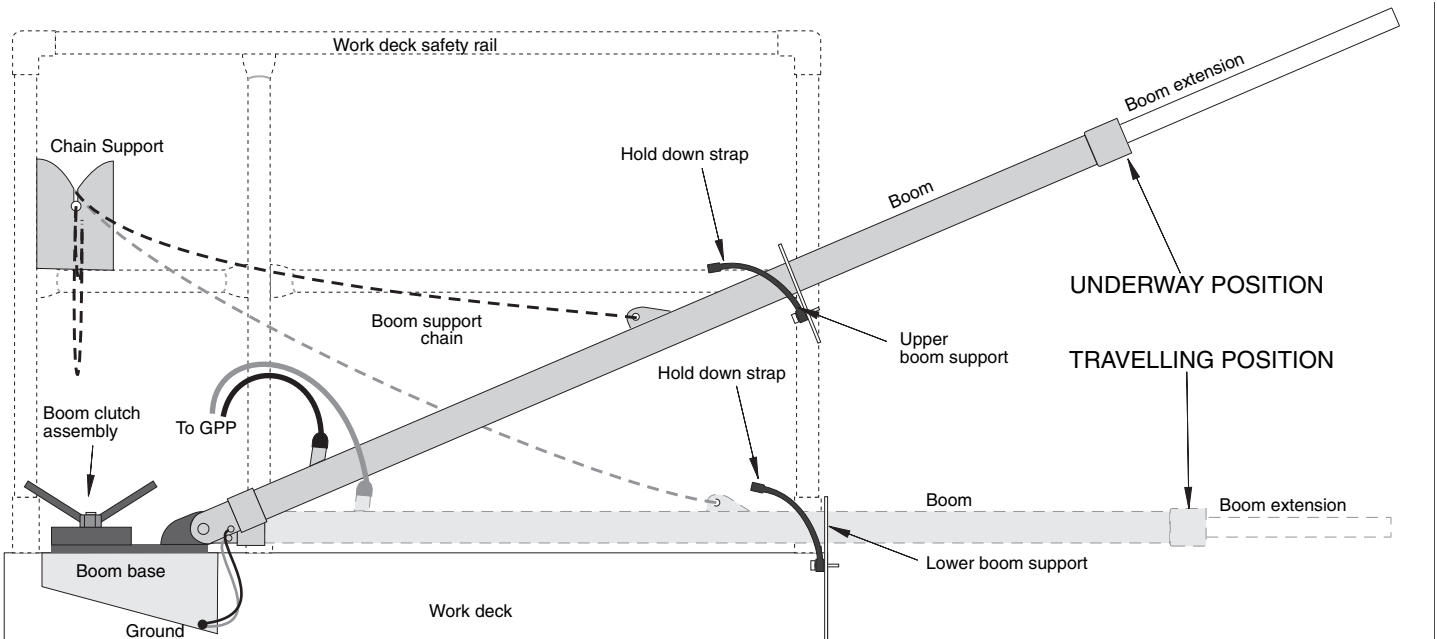
- Two (2) clutch assemblies, port and star-board.
- Boom Clutch Mounting Kit: each boom clutch comes with 4 bolts, 8-washers & 4-nuts.
- 15 feet of #8 cable for Standard Boom OR 15 feet of #2 cable for Hi-Current Boom.
- 5 feet of #8 ground cable for grounding to the boat hull.
- Quick release fitting for attaching anode array.
- Boom Supports: each boom comes with 1 upper and 1 lower boom support with attached strap. Will require welding to mount onto boat.
- Chain Support Assembly: each boom comes with 1 chain catch and 6 feet of chain with 2 quick links on both ends. Will require welding to mount onto boat.

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PREPARING A BOAT FOR BOOMS

Forward Work Area

Your forward work area must have strong metal railings across the front and at both sides. The work area should provide a roomy and safe work space and meet OSHA safety guidelines. The deck should be a non-skid surface for secure footing.



INSTALLATION PROCEDURE

1. Level the boat on a trailer to the expected angle of operation on the water.
2. Remove the clutch assembly from the clutch base.
3. Weld or bolt the clutch base to the boat hull as far forward on each side as possible.
4. Weld the chain supports 24 inches directly above the center of the clutches.
5. Reinstall the clutch assemblies to the clutch bases.
6. Attach the chains to each eye on the booms.
7. Attach the booms to each of the clutches. Be sure that the two plastic shoulder washers are installed between the clutch pivot plate and the boom's base.
8. Don't over-tighten each of the boom attaching bolts. The booms should be able to pivot up and down.
9. Attach the loose end of the chain to the chain catch and adjust the booms to the horizontal position.
10. Weld the lower boom support to the rear handrail stanchion. The lower boom support should position the boom nearly horizontally.
11. Weld the upper boom support approximately 16 inches higher on the same stanchion. This positions the boom in a convenient height for attaching the arrays.
12. Connect the boom ground wires to the boat hull or generator ground.
13. Connect the booms to the GPP Electrofisher anode outputs, using the Boom Interconnect Box.
14. The cathode output needs to be connected to the boat hull or to a Cathode Array.
15. Installation is complete.

UNDERWAY OPERATING AND ELECTROFISHING PREPARATION

BEFORE LAUNCHING THE BOAT, raise each boom from the lower traveling position to the upper underway position. Secure with the hold-down strap. Now attach the array with the quick-connector, attach its safety line but do not unfold the array. Now launch boat.

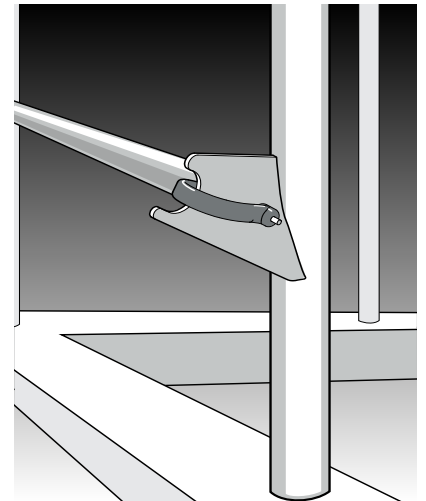
When you reach the work site, throttle-down and unfold the array. Fix the boom support chain to the boom angle adjuster at the front of the safety railing. Swing the boom out and forward to the working position. Adjust the boom to the desired working depth with the chain. The array should be as far into the water as possible without submersing the spreader plate. Start the gas-powered electrofishing generator and allow it to warm up for a minute or two with the pulser turned off.

Now adjust the electrofisher pulser to the desired mode and voltage and turn on the pulser.

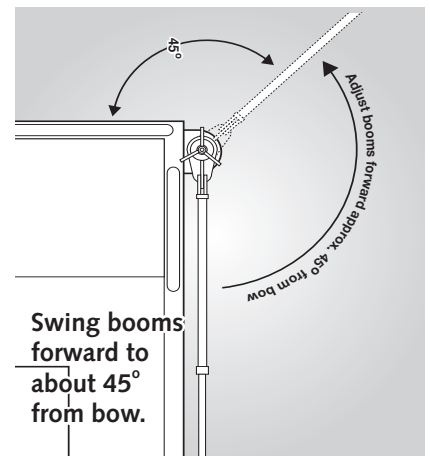
Please read your GPP instruction manual thoroughly for correct operation and safety procedure.

PREPARING THE BOAT FOR ELECTROFISHING

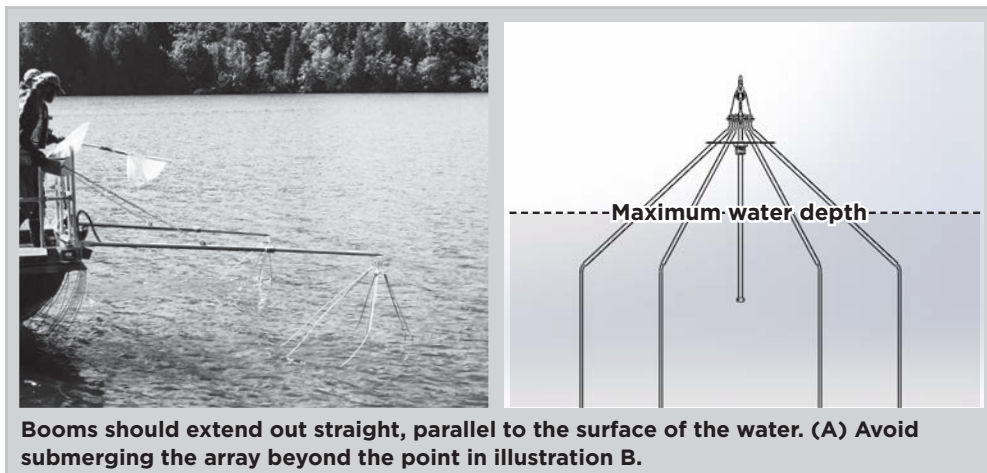
1. Raise and inspect the booms, boom extensions, and arrays to see that they are in good working order. When attaching the arrays, connect the safety line first, then attach the quick connector. Do not unfold your arrays at this time.
2. Loosen clutches and lift the booms from the underway position. Swing booms forward to about 45° from forward. Tighten boom clutch assemblies to hold booms in position. Adjust anode depth with chain adjustments, elements extended about 2ft. into the water.



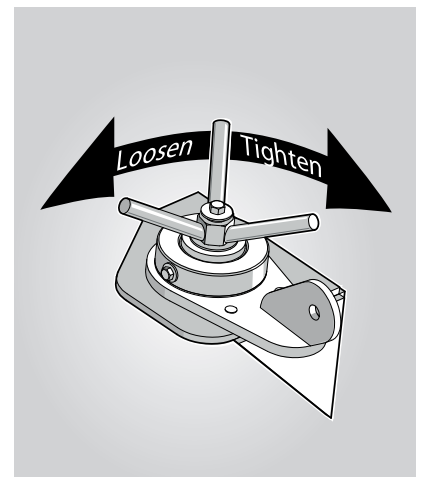
Boom holder with rubber securing strap



Swing booms forward to about 45° from bow.



Booms should extend out straight, parallel to the surface of the water. (A) Avoid submerging the array beyond the point in illustration B.



Tighten boom clutch assemblies to hold booms in position.

3. After the booms are adjusted, start the generator and allow it to warm up for a minute or two. Check to see if cooling water is being discharged with the exhaust.

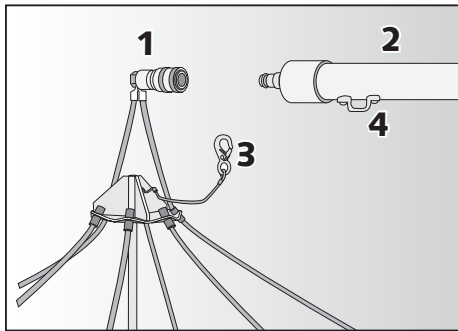
Consult the manual supplied with your electrofisher for connections and settings.

INSTRUCTIONS

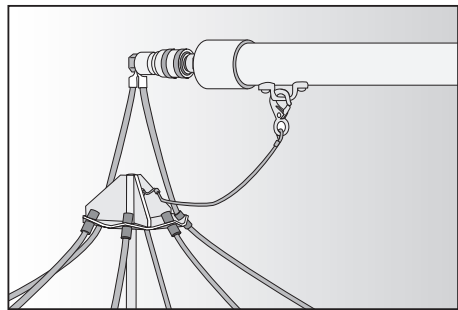
ELECTRODE CONNECTIONS

QUICK-CONNECTOR AND BOOMS

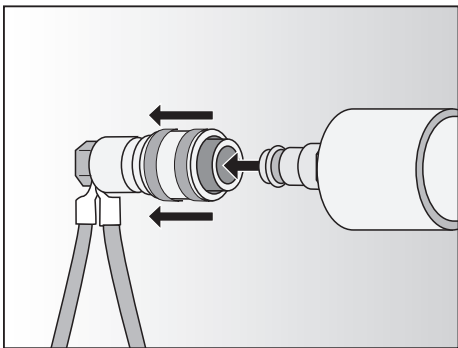
All Smith-Root electrode arrays come with a quick-connect connector that allows easy mounting of electrodes, yet maintains positive electrical contact while in operation.



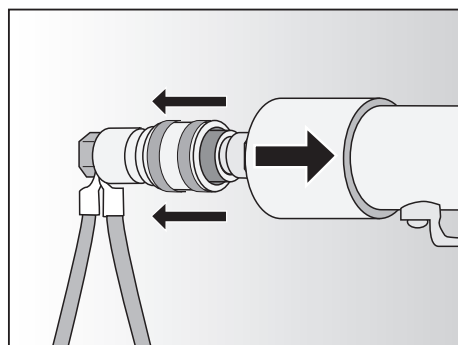
Quick-Connector (1) and boom (2), retaining cable clip (3), retaining ring (4)



Attach retaining cable clip before attaching array assembly to prevent losing array.



Pull flange back while inserting boom connector



Pull back on flange while pulling boom in opposite direction to release array.

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Fasten clasp on electrode to ring mounted on boom. This will ensure that electrode won't fall overboard, should connecting or disconnecting prove difficult while out on the water.

The quick-connector has a knurled flange that must be pulled rearward to accept the male connector on the end of the boom.

Once inserted, release the flange and test connection: boom should not pull free from connector without pulling flange back.

To release the boom, pull the quick-connector flange backwards while pulling the array free from the boom.

ELECTRODE CONNECTION MAINTENANCE

To insure proper operation of your electrode arrays the inner surfaces of the brass quick-connect fittings must be conductive. During normal operation, dirt and corrosive material build-up on the inner surfaces restricting conductivity.

Using a soft cloth with mild soapy water or a brass cleaner, clean the male fitting connected to the boom and the female fitting connected to the array, wiping away any build up.

Lastly, apply a lubricant such as petroleum jelly to prevent corrosion during storage.

ARRAY TYPES

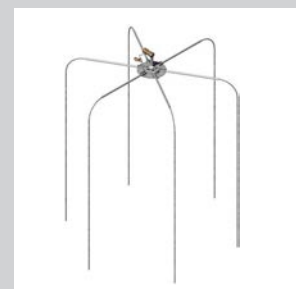
There are three electrode array options available: the **SAA-6 standard array** (left), the **AUA-6 advanced adjustable array** (center) and the **LPA-6 Low-profile, shallow water array** (right). All three models feature rugged construction, easy-to-clean stainless steel cables and the ability to fold for easy stowage.



SAA-6 (#06759)



AUA-6 (#09473)



LPA-6 (#07395)

BOOM AND ELECTRODE CONNECTION MAINTENANCE

To insure proper operation of your electrode arrays the inner surfaces of the brass quick-connect fittings must be conductive. During normal operation, dirt and corrosive material build-up on the inner surfaces restricting conductivity. Using a soft cloth with mild soapy water or a brass cleaner, clean the male fitting connected to the boom and the female fitting connected to the array, wiping away any build up.

Lastly, apply a lubricant such as petroleum jelly.

DISASSEMBLY AND INSTALLATION OF BOOM EXTENSIONS

Tools Needed:

- Large pair of Channel Lock pliers
- 10" adjustable open-end wrench (Crescent)
- #2 Phillips screwdriver
- 1/2" end wrench
- 1/8" or 3/32" hex wrench (Allen)
- Cable cutters
- Electrical tape

DISASSEMBLY PROCEDURE

1. Cut the boom wire at the circular metal connector or disconnect the wire from the terminal (depending on the model).
2. Loosen the outer nut on the strain relief at the clutch side of the boom. This should now allow the wire to move inside the strain relief.
3. Cut the boom cable at the strain relief (During re-assembly the cut boom cable between the strain relief and the circular metal connector or terminal can be used to pull the new boom cable into the boat).
4. Remove the plastic strain relief (Retain for reassembly).
5. With the white plastic boom extension screwed into the boom, remove the hex socket set screws located near the middle of the boom (Retain).
6. Remove the compression nut and rubber bushing from the large strain relief at the end of the boom (Retain).
7. Pull the entire assembly (boom extension, insulator and cable) out the end of the boom.
8. Inspect the strain reliefs and replace if necessary.

INSTRUCTIONS

REPLACEMENT BOOM EXTENSION

Boom Extension Kit consists of:

- Replacement pole
- Quick Connect Slug
- Chain Catch eyelet
- 15' cable

Connectors and lugs not included

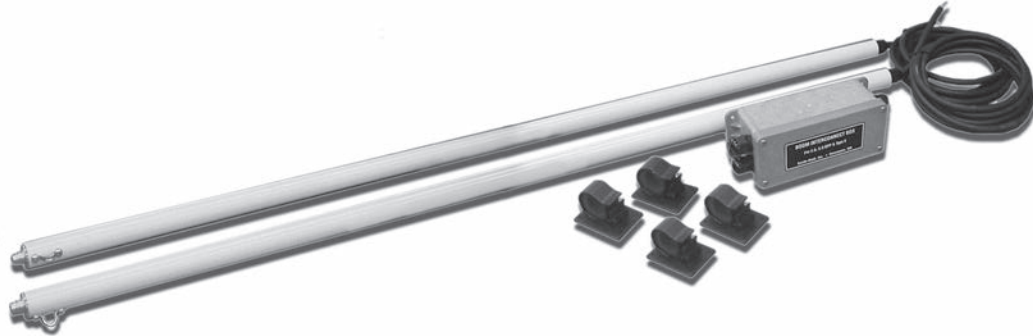
**Boom Extension Kit for 2.5, 5.0, 7.5 GPPs, VVP-15B,
Type VI-A, 1.5 KVA, APEX 06242**
Boom Extension Kit for 9.0 GPP 06243



INSTALLING REPLACEMENT BOOM EXTENSION

1. Clean the inside of the boom with plastic abrasive pad.
2. Loosely thread the large compression nut with the rubber bushing onto the end of the metal boom.
3. Run the wire into the threaded hole near the clutch and then through the boom and out the other end. This wire will be used to pull the new boom cable through the boom.
4. Strip back the insulation on the new boom cable 2-3 inches and tape the new boom cable to the 12 gauge wire.
5. Pull the new boom cable through the boom and out the threaded hole near the clutch.
6. Continue pulling the cable through the boom while inserting the new fiberglass boom extension into the metal boom.
7. The safety line eyelets on the end of the fiberglass boom extension should be facing down.
8. Be sure the fiberglass boom extension is all the way in the boom and that all of the boom cable's slack has been pulled through the boom.
9. Reinstall the cable strain relief near the clutch and tighten.
10. Tighten the large compression nut on the end of the metal boom. This should secure the fiberglass boom extension to the metal boom. If it is loose, you may need to wrap tape around the fiberglass boom extension.
11. Remove the plastic strain relief on the boat near the clutch and slide it over the new boom cable.
12. Tape the new boom cable to the old boom cable.
13. Pull the new boom cable through the hole on the boat near the clutch. Leave enough slack between the boom and the boat to allow full motion of the boom.
14. Reinstall the strain relief and tighten.
15. Cut the boom cable to the proper length and crimp a new lug to the cable or re-solder it to the metal circular connector.
16. Reconnect the boom cable.
17. Check the grounding cable between the aluminum boat hull and the metal boom with a continuity tester. The grounding cable insures that the metal of the boom will be at the same voltage potential as the boat hull and therefore eliminates any shock hazard from inside the boat to the boom.

LIGHT DUTY BOOM KIT



Light Duty Boom Kit Consists of:

- Two eight foot fiberglass Boom poles w/10' Cable
- 4 Plastic pole mounts
- Models 2.5/5.0 GPP, Type VI-A, VVP-15B, & 1.5 KVA Booms (06248) come with a Boom Interconnect Box
- Does not include Boom Clutches.

LIGHT DUTY BOOMS W/INTERCONNECT BOX

- Light Duty Boom Kit For 1.5KVA, 2.5/5.0 GPP, Type-VI, VVP-15B, APEX..... 06248
- Light Duty Boom Kit For 7.5 GPP.....06644
- Light Duty Boom Kit For 9.0 GPP..... 06645

ACCESSORIES



FOOT SWITCHES

A foot switch should be on the work deck for each netter, and an additional foot switch should be on the deck at the steering console for the boat operator.

- Single Foot Switch03309
- Dual Foot Switch.....03310



BOOM INTERCONNECT BOX

The boom interconnect box provides a safe connection between Electrofisher and Booms when used in a boat. Allows for various configurations of anode and cathode setup using electrode arrays and boat hull. This interconnect box is necessary to safely connect 1.5 KVA, 2.5 GPP, 5.0 GPP, 1.5 KVA, Type VI-A, and VVP-15B Electrofishers to Booms.

- Boom Interconnect Box 05591



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