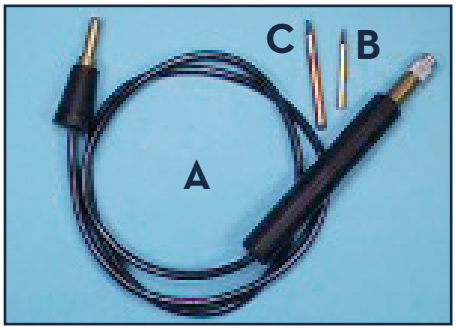
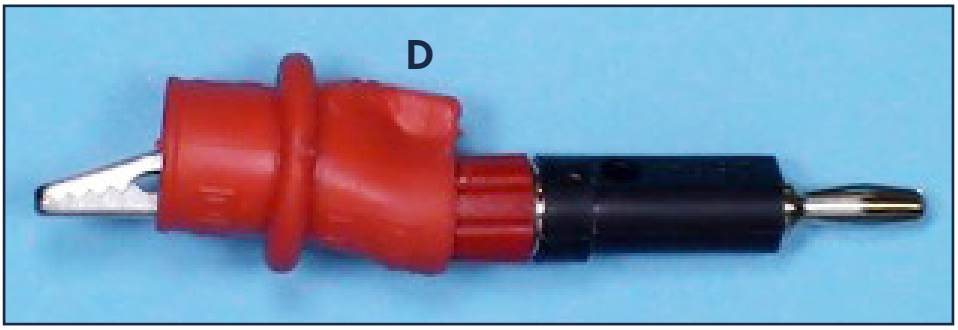
Great Lakes Spot Welder • Auxiliary Cable Instructions

Using the Auxiliary Cable to Solder and Heat Treat

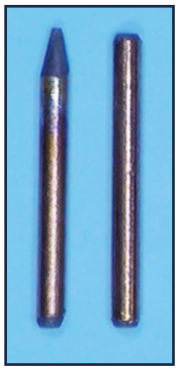




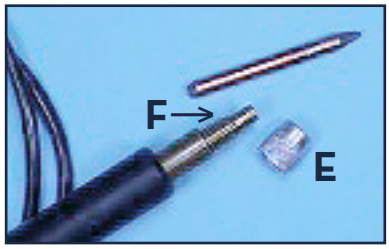
(A) Great Lakes Spot Welder Auxiliary Cable (240-062).
You will also need:

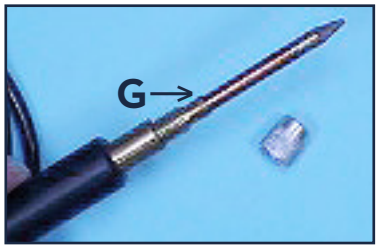
- Copper Heat-Treat Electrode Tip (B) (240-024) used for the heat treating procedure and,
- Carbon Soldering Tips (C) (240-061) for the Electro-soldering Application.

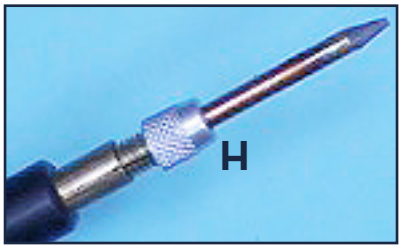
(D) The Auxiliary Plug-in Vise (240-056)) is used to hold Soldering Electrodes (Small: 240-026, Medium: 240-027, Large: 024-028, X-Large: 024-029) or the metal framework to be heated.



The Carbon Soldering Tip (240-061) should be ground, filed, or sanded to a point at one end of the rod. This may have to be repeated as flux builds up on the pointed end of the Carbon Tip.







For the soldering application, remove the threaded collar (E) from the Auxiliary Cable Clutch (F) on the handpiece and place the blunt end of the Carbon Soldering Tip into Handpiece Clutch (G).

The end of Carbon Soldering Tip will tightly seat only about 5-7mm into Handpiece Clutch (H). Then slide the threaded collar over Carbon Soldering Tip and tighten it to the threaded clutch.

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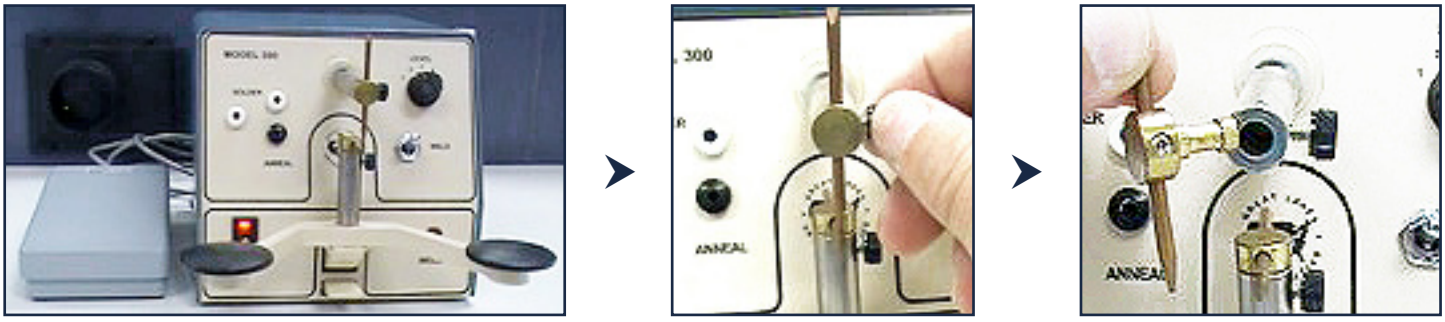
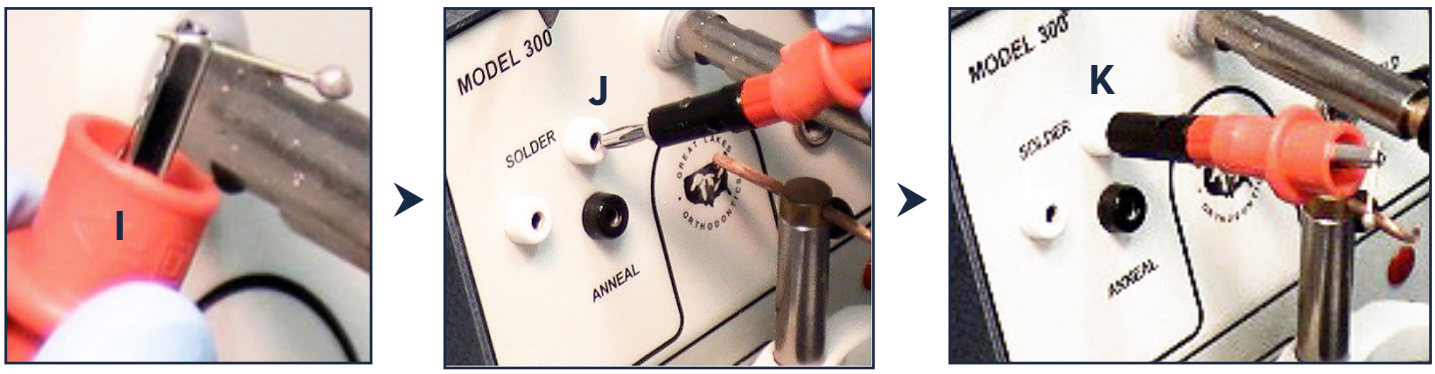
Great Lakes Spot Welder • Auxiliary Cable Instructions

Using the Auxiliary Cable to Solder and Heat Treat (continued-2)



Turn the power '**ON**' by pressing the top of the Power Switch Button of the Great Lakes Spot Welder. Loosen the thumb screw on the top electrode and remove it from the welder.

Insert the plug end of the Auxiliary Cable into the top plug where the electrode was removed. Tighten the thumb screw to secure the plug end of the cable to the welder.



The Alligator Clip of the Auxiliary Plug-in Vise is squeezed to open the clip part (**I**). Insert the wire end of the soldered electrode (S, M, L, XL) into the open end of the Alligator Clip. Place the plug end of the Auxiliary Plug-in Vise into the top, right white plug (**J**), with solder electrode pointing to the left side of Spot Welder (**K**).

Great Lakes Spot Welder • Auxiliary Cable Instructions

Using the Auxiliary Cable to Solder and Heat Treat (continued-3)

Adjust the welder dial on upper left side of the front of the machine to a **1** or **2** setting. The higher the setting, the quicker the metal parts being soldered will heat. **Do Not** overheat metals during this process. Press down the swing arm with the two black circular pads and lock in this position with the lock lever (**L**). This turns on the soldering feature of the welder.



Prepare metals to be soldered. Apply Wet Flux (240-002) to the frameworks being soldered and the solder ball at the end of the electrode being held with the Auxiliary Plug-in Vise. Also, wet the end of the Carbon Soldering Tip with tap water. Hold the model to position the solder ball end against the metal framework to be soldered. Then, touch the tip-end of the carbon tip to the solder ball while it is against the metal framework. This will connect the electric circuit and begin the soldering process.


Hold the Carbon Tip against the solder ball and metal on the model until desired solder flow is accomplished. The Carbon Tip will heat-up and glow **red** during this procedure. To conclude the process, move the model from the electrode wire in the Auxiliary Plug-in Vise and CarbonTip.

- **Caution: All metal parts involved in the soldering process are Hot! Allow adequate time to air cool.**
- **Remember: Turn off the electrical flow to the Auxiliary Cable and Auxiliary Plug-in Vise by pressing down on the swing arm with the two black circular pads.**

Great Lakes Spot Welder • Auxiliary Cable Instructions

Using the Auxiliary Cable to Solder and Heat Treat (continued-4)

To Finish: Remove the appliance from the model and place it in the ultrasonic cleaner (245-004) with cleaning solution (245-002) to remove flux residue.

Rinse, dry, then grind (086-012) and rubber wheel (086-032) to smooth as needed. Polish the framework with metal polish (230-010) and a 4-inch muslin buff (086-002) on a low-speed dental lathe (180-002) and vacuum unit (105-060).

Products referenced above are available at GreatLakesDentalTech.com:

245-004	Quantrex Q140 Ultrasonic Cleaner
245-002	Tartar and Light Stain Remover (1gal)
086-012	Heatless Grinding Wheel - 7/8" x 1/8" (50/pkg)
086-032	Red Flexies 7/8" - Fine Grit Knife Edge (100/pkg)
230-010	Metal Polish (1lb)
086-002	Loose Muslin Buff - 4" Diameter
180-002	Red Wing Lathe with Quick Chuck Installed
105-060	Handler Porta-Vac

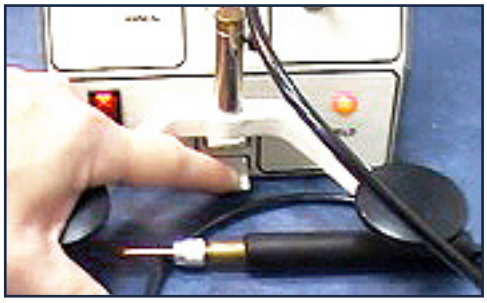
Heat Treating Feature

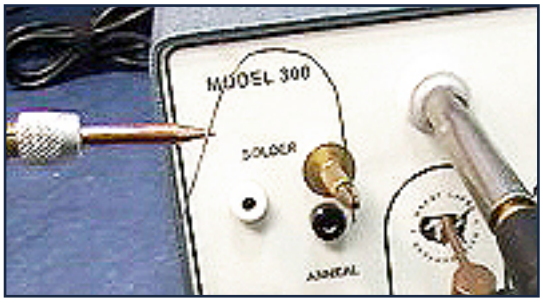
Insert blunt end of the Copper Heat-Treat Electrode into the Auxiliary Cable Clutch. Secure the electrode in place with the threaded collar. This component **Should NOT** be used for the soldering application.

Turn Power Switch to '**ON**' position and insert the plug end of the Auxiliary Cable into the top plug where the electrode was removed. Tighten the thumb screw to secure the plug end of the cable to the welder. Adjust the Welder Dial level to a **1** or **2** position. Insert the wire into the Alligator Clip of the Auxiliary Plug-in Vise. Place the plug end of the Auxiliary Plug-in Vise into the top, right white plug of the Welder.

Great Lakes Spot Welder • Auxiliary Cable Instructions

Heat Treating Feature (continued-2)





Press down the Swing Arm with Black Circular Pads and lock in this position with the Lock Lever using your fingertip. The red weld light should illuminate. Then, touch the wire held in the Auxiliary Plug-in Vise with the Copper Electrode. Heat to desired temperature.

Turn the Welder '**OFF**' and disconnect auxiliary parts when the process has been completed.

- **Caution: All metal parts involved in the soldering process are Hot! Allow adequate time to air cool.**
- **Remember: Turn off the electrical flow to the Auxiliary Cable and Auxiliary Plug-in Vise by pressing down on the swing arm with the two black circular pads.**