

## SAFETY

Read and understand this installation and operating manual as well as the controls manual before operating your kiln. If you have any questions please contact Evenheat Kiln at 989-856-2281 or at evenheat-kiln.com.

Kilns are as safe as any other electrical appliance when used under normal and proper operating conditions. To create and maintain this safe environment observe all safety precautions.

### Warning Symbol Descriptions

Warning symbols are used throughout this manual. These symbols alert the operator to certain hazards and important information. Pictured below are symbols used along with a description of each.



The Exclamation Point alerts you to particular cautions, hazards and information.



The Lightning Bolt alerts you to specific information regarding the risk of electric shock. Electric shock may result in injury or death.



The Heat Waves alert you to specific information regarding the risk of burn injury.

### Emergency Shut Off Provision



The kilns power supply connection (plug/receptacle, breaker or disconnect) acts as the emergency electrical power shut off. Access to these devices should be unobstructed and safe at all times.

All electrical installations for direct wired models (those without a plug/receptacle connection) must include a power disconnect near the kiln and that is easily accessible and safe for emergency power shutoff.

### Electrical Safety



A licensed electrician should be used for all electrical installation and service. All applicable local, state and federal electrical codes must be followed.

Use correct voltage, wire size and fuse or breakers. Kiln electrical requirements are located on the kiln nameplate. Make sure all electrical connections are tight. Avoid using aluminum wire.

Always use the proper electrical receptacle. Never alter the kiln cordset or cordset plug. Alterations can be dangerous. Alterations will void any warranties along with nullifying any Listing Agency markings.



Evenheat recommends that a voltage check be performed before placing the kiln into service, ideally before actual purchase. Operating voltage varies. The kilns operating voltage (printed on the kilns nameplate) must match the applied voltage (actual electrical service voltage). If it does not, do not install or operate the kiln as potential electrical and fire hazards exist. Contact Evenheat for guidance in such cases.

The kiln must be properly grounded.



Unplug or disconnect the kiln from the electrical service before accessing the chamber for servicing or vacuuming. Do not attempt to touch or replace the heating elements while the kiln is plugged in or connected to the electrical service. Electric shock may result in serious injury or death.

Never, ever use an extension cord to operate a kiln.



Your kiln is designed with a feature that allows for relay replacement without having to remove the entire kiln control enclosure: Relay Access Port (Pat. Pend.). A plate is used to cover this port. Except for servicing, this plate must be secured to the control enclosure at all times. Do not operate the kiln without this Relay Access Port Plate in place and secured to the control enclosure. Failure to do so may result in electric shock resulting in serious injury or death.

### Kiln Location Safety

The best location for the kiln is a non-combustible work surface. Work surfaces constructed entirely of metal are preferred.



Do not place or use kiln on combustible surface.

Place only on the metal stand provided by Evenheat Kiln, Inc.



For those using the kiln for vitrigraph work it is required that the kiln base be physically attached to the vitrigraph enabling structure to prevent potential safety hazards. It is also required that the vitrigraph enabling structure be of such a design as to be stable and physically secure.

For those wishing to use the V-8 Multi-Purpose kiln as a "Vitrigraph" Evenheat offers an accessory base intended for this purpose, part #00342.200. This accessory based is intended for use with vitrigraph operations only and includes a 2-3/4" opening in the base. Firing the kiln on any base that has not been provided by Evenheat Kiln, Inc. can be dangerous and is highly discouraged.



Do not use the Evenheat accessory #00342.200 vitrigraph base for any types of firing other than vitrigraph work.

The surface on which the kiln is placed shall be capable of safely supporting the combined weight of the kiln and kiln load.

Observe all building, fire and safety codes when installing the kiln.

Do not install the kiln closer than 12" (31cm) from combustible wall surface or object or 36" from any ceiling surface in all opened and closed positions.

Install in a covered, well ventilated area.

Never place the kiln in a small, enclosed area such as a closet, cabinet or very small room. The room in which the kiln is placed into service shall be capable of safely dissipating all heat produced by the kiln.

Do not place the kiln in any structure resembling a carport or screened in porch. Avoid areas that are subject to outdoors weather.

Never install a kiln outside. Avoid moisture.

It is the user's responsibility to be knowledgeable regarding any and all contaminants, produced by the ware during firing, and take steps to properly and legally contain and dispose of these contaminants.

It is the user's responsibility to provide ventilation capable of removing all gases, fumes and other airborne contaminants produced by the ware during firing safely from work the area and building structure.



Do not store flammable or combustible products near or in the same room the kiln such as gasoline, paint, aerosol cans, paper, curtains, plastics, etc. Better yet, store these items in another separate structure designed for this purpose.

Position the power supply cables, power supply conduit, controller cables, pyrometer thermocouple leads and other materials in such a way as not to create a tripping hazard around the kiln.

The area around the kiln should be free of obstructions that interfere with the proper and safe operation of the kiln.

Never place anything under or above the kiln for storage. Absolutely nothing should be propped against the kiln.

### Kiln Use Safety



The surface of the kiln is hot and burn injuries are possible. Keep all children and unsupervised personnel away. Always wear protective clothing, gloves and eyewear when operating and handling a hot kiln.



Use extreme care when accessing a functioning and/or hot kiln. Under no circumstances should you touch the heating elements with your body or any other devices like tools. Electrical shock may result in serious injury or death.



Use care when accessing or looking into a hot kiln, this includes looking through a cracked lid or peepholes. High heat escapes quickly and burn injury may result. When accessing or looking into a hot kiln, approach slowly and wear protective clothing and gloves designed to withstand high heat and eyewear capable of filtering Infrared and Ultraviolet light.



The vitrigraph process exposes the user to molten glass which is of very high temperature (1800°F and more) and severe burns can result. If you are using the kiln for the vitrigraph process you are advised to wear personal protective gear capable of withstanding these extreme temperatures.



If you are using the kiln for the vitrigraph process please note that molten glass will conduct electricity and personal protective gear must be chosen and used that is capable of insulating the user from potential electric shock.



Please note that the vitrigraph process exposes the user to potentially harmful Ultraviolet (UV) and Infrared (IR) light. Select eye protection that is capable of filtering both UV and IR light.

Protective clothing should be worn when operating the kiln and includes, but is not limited to, cotton clothing, heat resistant gloves and eyewear capable of filtering Infrared and Ultraviolet light.

Do not operate the kiln over the maximum temperature rating printed on the nameplate.

Never fire a kiln unattended beyond its anticipated firing time.

Never allow the power cord to touch the kiln. If the cord, plug or receptacle become damaged discontinue use and replace immediately.

It is recommended that a fire extinguisher, capable of dousing an electrical fire, be accessible in the event of fire. Smoke detectors within the kiln room are also recommended.

Keep the kiln lid and chamber closed when not in use.



It is the user's responsibility to have knowledge of the material intended to be fired. If you are unsure as to the safety of firing a particular material contact your materials supplier for guidance. If you remain unsure as to the safety of firing a particular material do not do it. Firing hazards include materials that explode or produce toxic gases. Finished ware hazards include materials containing lead. Materials containing lead should not be used for articles intended for food use.

Fire all ware according to the material manufacturer's instructions. Improper firing may result in damage to the kiln or ware.

Do not use the kiln to prepare food, heat a living space, dry clothes or ice laden articles or use as a storage device. The kiln is designed for one purpose and one purpose only: the firing of glass materials.

All kiln models not equipped with an automatic shutoff device (electronic control or kiln sitter) must not be allowed to exceed the rated operating temperature indicated on the kiln name tag. To prevent kiln from exceeding this maximum temperature disconnect it from the electrical power supply.

A kiln will remain very hot long after the firing is complete. All safety recommendations should be followed, even with the kiln unpowered, to avoid any burn injuries. Keep children and other unauthorized personnel away.

When firing is complete, and during periods of non-use, remove power from the kiln by unplugging or by throwing the disconnect or breakers to the OFF position.

#### **Kiln Maintenance Safety**



Disconnect electrical power from the kiln before performing any kiln maintenance. Failure to disconnect the electrical power supply may result in electrical shock which can cause serious injury or death.

Replace any worn, damaged or defective parts immediately with Evenheat Kiln replacement parts only. Discontinue use until parts are replaced.



Your kiln is designed with a feature that allows for relay replacement without having to remove the entire kiln control enclosure: Relay Access Port (Pat. Pend.). A plate is used to cover this port. Except for servicing, this plate must be secured to the control enclosure at all times. Do not operate the kiln without this Relay Access Port Plate in place and secured to the control enclosure. Failure to do so may result in electric shock resulting in serious injury or death.



When vacuuming the kiln use only HEPA filters on the vacuum. Prolonged exposure to brick dust and other refractory materials can cause lung injury.

Inspect all electrical service connections periodically for wear. Periodically check chamber jacket clamps for tightness. Tighten as necessary.

## V8 Kiln Setup and Placement

### V8 Kiln Location

Place your V8 Multi-Purpose kiln in a location that offers a level, stable non-combustible surface. The V8 should be placed no closer than 12" from any wall or 48" from any ceiling surface in all opened and closed positions. All flammable and combustible materials should be removed from the kiln area. Enjoy your kiln safely.



Place the metal base on your non-combustible work surface and insert the brick floor into the metal base as shown.  
*The floor looks much like the lid but does not have a coating or handles.*



Place the brick chamber square onto the floor as shown.



Place the brick lid, coating side down, square onto the chamber as shown.  
Your V8 is now completely assembled.

## Vitrigraph Set-up and Location

“Vitrigraph” is the term used to describe the process of heating glass to a molten state and allowing it to exit the floor of the kiln. It tends to do so in a string and this string of molten glass is manipulated by the user as it exits.



The vitrigraph process exposes the user to molten glass which is of very high temperature (1800°F and more) and severe burns can result. You are advised to wear personal protective gear capable of withstanding these extreme temperatures.



Molten glass will conduct electricity and personal protective gear must also be capable of insulating the user from potential electric shock.



The vitrigraph process exposes the user to potentially harmful Ultraviolet (UV) and Infrared (IR) light. Select eye protection that is capable of filtering both UV and IR light.

For those wishing to use the V8 Multi-Purpose kiln as a “Vitrigraph” Evenheat offers an accessory kiln base intended for this purpose, part #00342.167. This accessory base includes a 2-3/4” circular hole through the brick and metal stand. We do not recommend using non-Evenheat materials for Vitrigraph work as they may not provide the support, structural integrity and stability found in Evenheat factory products. Do not use the Evenheat accessory #00342.200 vitrigraph base for any types of firing other than vitrigraph work.



For those using the V8 for vitrigraph work it is required that the kiln base be physically attached to the vitrigraph enabling structure to prevent potential safety hazards. It is also required that the vitrigraph enabling structure be of such a design as to be stable and physically secure.

For those who may be interested in using vermiculite products for vitrigraph work: vermiculite is a fairly soft material that tends to fracture easily. The use of an easily fractured or fractured product is therefore not recommended by Evenheat as kiln stability is of great importance for safe operation. Evenheat does not use vermiculite in its products.



*Vermiculite is a mineral that is mined. Evenheat Kiln is under the impression that vermiculite is most often found in the ground with asbestos. Evenheat Kiln is also under the impression that a single vermiculite mine exists that is certified asbestos free. You are well advised to inquire as to the asbestos content of a vermiculite product you may wish to purchase.*



Vitrigraph Base Accessory – Evenheat Part #00342.200

## Kiln Operation

### Electrical Service Requirements

The North American V8 kiln operates from a standard 120V receptacle and will consume 14A. It is recommended that V8 be the only electrical appliance operating on the circuit.

The Global 230V V8 kiln will consume 9.5A.

### Plugging In the Kiln

Throw the kiln control panel power switch down to the OFF position. Plug the V8's power plug into your standard household outlet. As the V8 requires 14A/120V to operate it should be the only device plugged into the circuit.

We have designed the V8's power cable to run straight out the back of the control panel: mainly to keep it out of your way but also to help keep it away from the kiln itself. Once you plug it in make sure the power cable is not touching the kiln.

### Pre Fire

Evenheat suggests that you perform a test fire with your new kiln before putting it into service.

A pre fire gives you an opportunity to become familiar with the features and functions of the kiln before committing to an actual firing. It also allows your element to form a protective oxide barrier. A light lubricant was used in the production of your heating element. The pre fire will burn this off, almost immediately! You may notice a light smoke as this occurs. It's normal.

A separate control manual is included on the manuals disc included with your kiln. Refer to these manual(s) for controls programming instructions.



*Scan this QR code to view instructional programming videos for both the Evenheat Set-Pro and Rampmaster controls.*

*You will also find these instructional videos and manuals on our web site [www.evenheat-kiln.com](http://www.evenheat-kiln.com)*

Vent the lid of the kiln using a 1" shelf post (this allows the light smoke to escape) and program the control to reach 1200°F as fast as possible and hold for 15 minutes (see the included controls programming manual for instruction). When the kiln reaches 300°F close the lid entirely and allow it to continue climbing to 1200°F. Once the kiln reaches 1200°F it will begin to hold 15 minutes. As it's holding you will notice audible clicks. These clicks are made by the control relay turning the heating element on and off and it's a normal and welcome sound.

We would encourage you to repeat this pre fire procedure if you've never fired a kiln of this design before. You won't hurt anything. Kilns are wonderful machines and they're even more wonderful when you know what to expect and how to work them.

### Your Firing Surface

You will always want to fire your ware on a kiln shelf prepared with a kiln wash or glass separator. You may also choose to fire on many of the fiber "papers" available. You DO NOT want to fire your ware directly on the floor of the kiln. Doing so will most likely allow your ware to stick to the floor and damage it, and that's no fun. If you have not prepared your shelf do so now. If you're using Evenheat supplied shelves and wash there are separate instructions included with these items.

### **Loading the Kiln**

Throw the kiln control panel power switch to the OFF position and remove the lid.

Load your ware being mindful to avoid positioning the shelf or ware directly at the thermocouple. The thermocouple needs some space around it in order to operate properly.

Once all ware is loaded place the lid back on. When placing the lid back on be sure that your ware does not make contact with the lid. This is possible when using tall forming molds and large pieces and you'll want to avoid this as well.

### **Firing the V8**

Once the V8 has been properly loaded and closed you may now fire the kiln.

Throw the power switch, located on the kiln control panel, to the ON position. The temperature control will illuminate and programming of the control is now possible.

A separate instructional manual for the controls was included with your new V8. Please refer to this manual for all programming and operation details.

### **Unloading the V8**

Unload the V8 only once the kiln temperature has reached ambient room temperature.

Throw the kiln control power switch to the OFF position.

Remove the lid and unload your ware.

Once all ware has been unloaded place the lid back on the kiln.



## V8 Relay Maintenance (Replacement)

The kiln uses a device called a relay (a.k.a. contactor) to control power to the heating element. During use the relay continually turns on and off to maintain the proper kiln temperature. The relay is a service part and is likely to need replacing at some point.

To make servicing (replacement) of the relay as simple and as easy as possible Evenheat has provided an external, relay access port (Pat. Pend.). Unlike competing brands, it is not necessary to remove the entire control enclosure to gain access to the control relay. The relay access port allows relay replacement by simply removing the access plate located on the outside of the kiln control enclosure.

It is highly recommended that you use an Evenheat factory replacement relay. The Evenheat part number for the V8 replacement relay is #11801.200. Replacement with non-Evenheat factory parts may result in improper operation.



**Except for servicing, the relay access port plate must be secured to the control enclosure at all times. Do not operate the kiln without this Relay Access Port Plate in place and properly secured to the control enclosure. Failure to do so may result in electric shock resulting in serious injury or death.**

To replace the relay:

**Unplug the kiln.** *You should always unplug the kiln before any servicing.*



Locate the relay access port (Pat. Pend.) plate on the kiln control enclosure.



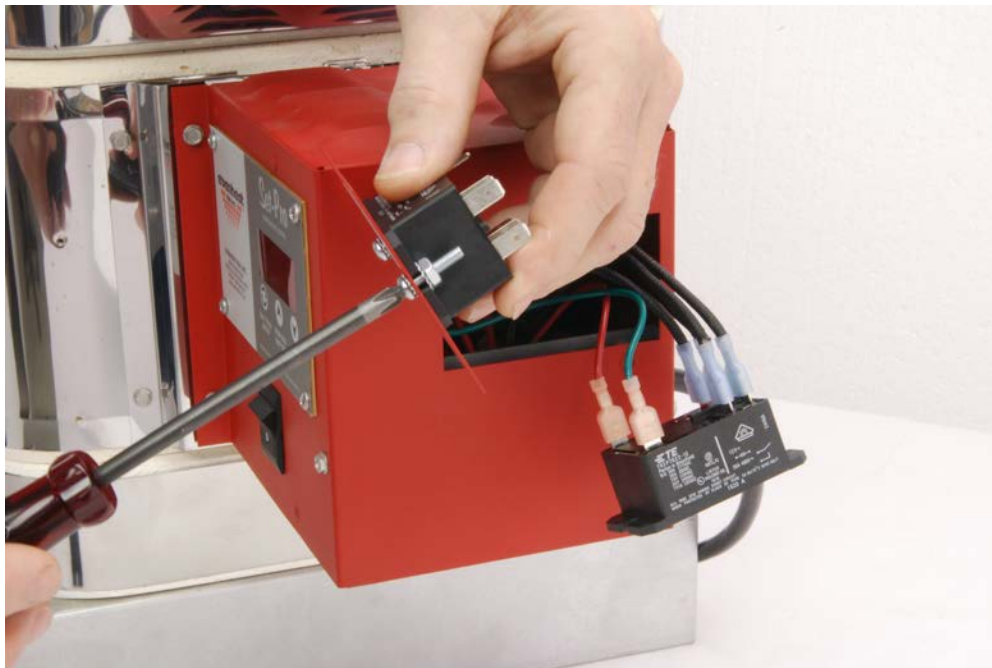
Remove the 2 screws that secure the relay access port to the control enclosure as shown.



Pull the relay access plate away from the control panel to expose the relay as shown.



Transfer the wires from the old relay to the new relay as shown. We recommend moving one wire at a time from the old relay to the new so as not to get confused on proper wire placement. *When removing wires from the relay it is best to pull and wiggle on the pink and blue terminals to free them from the relay. You will want to avoid pulling on the wires themselves.*



Remove the old relay from the access plate as shown.



Old relay shown removed from the access plate.



Attach the new relay to the relay access plate as shown.



Place the relay access plate back into the access port as shown and secure with the included screws as shown.

Relay replacement is now complete. That was easy!

### V8 Thermocouple Maintenance (Replacement)

The kiln uses a device called a thermocouple to sense the kiln temperature. While the thermocouple is quite rugged it is possible that replacement may be necessary at some point.

It is highly recommended that you use an Evenheat factory replacement thermocouple. The Evenheat part number for the V8 replacement thermocouple is #00343.300. Replacement with non-Evenheat factory parts may result in improper operation.

To replace the thermocouple:

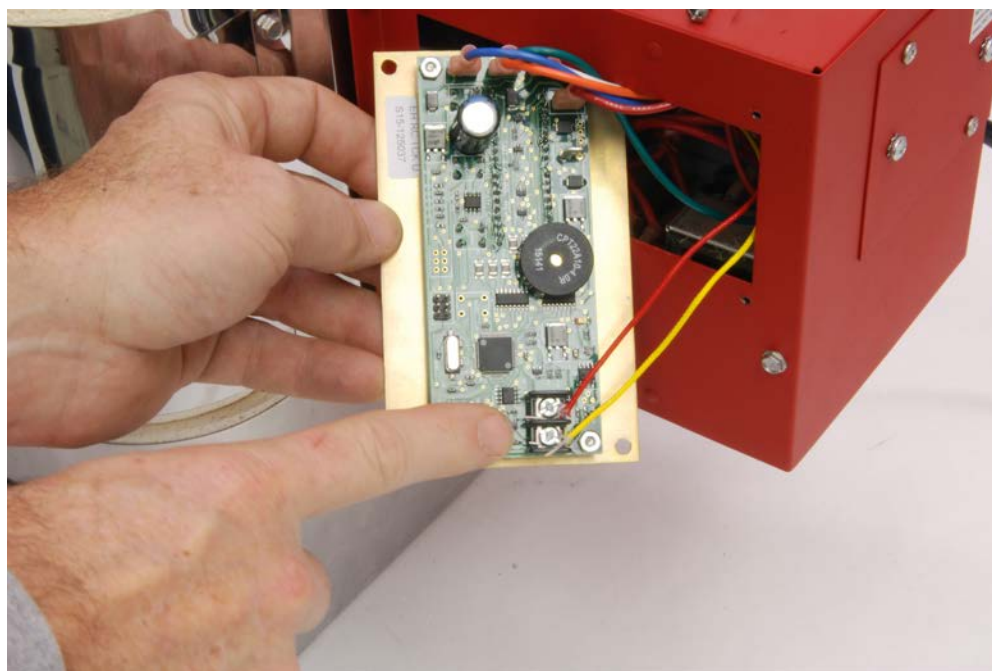
**Unplug the kiln.** *You should always unplug the kiln before any servicing.*



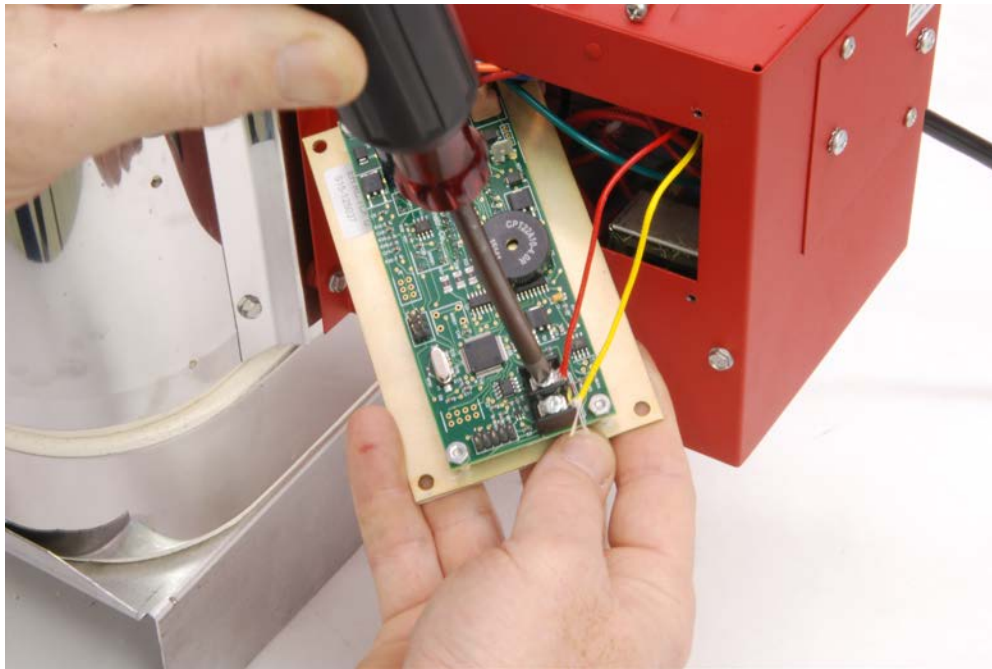
Pull the old thermocouple from the kiln as shown.



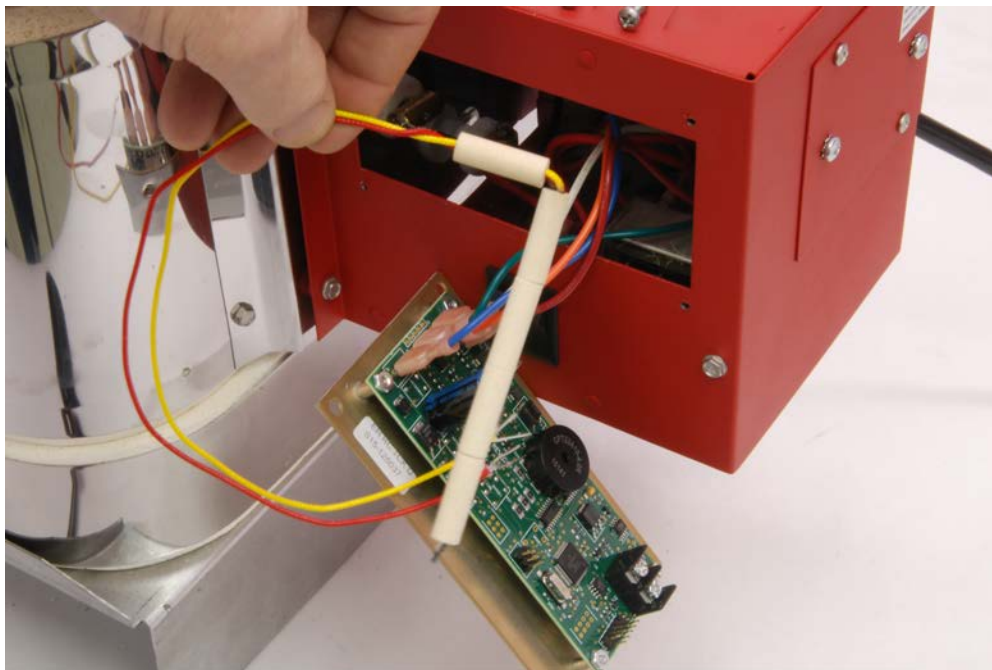
Remove the 4 screws that secure the kiln controller to the control enclosure as shown.



Pull the controller away from the enclosure to expose its back side and locate the thermocouple connections. The thermocouple connections will consist of red and yellow wires.

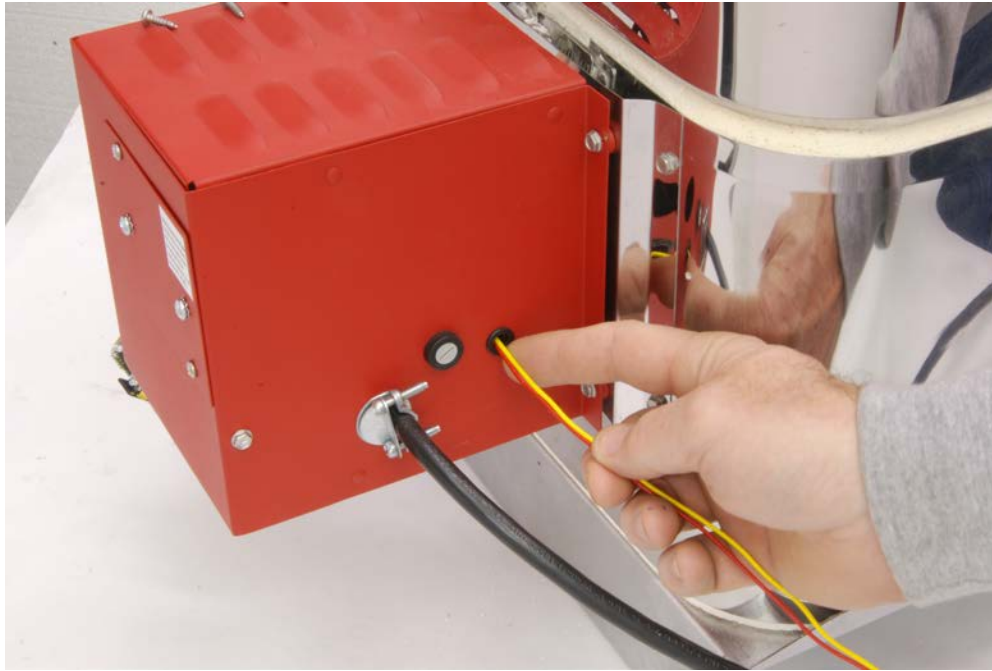


Remove the red and yellow thermocouple wires as shown.

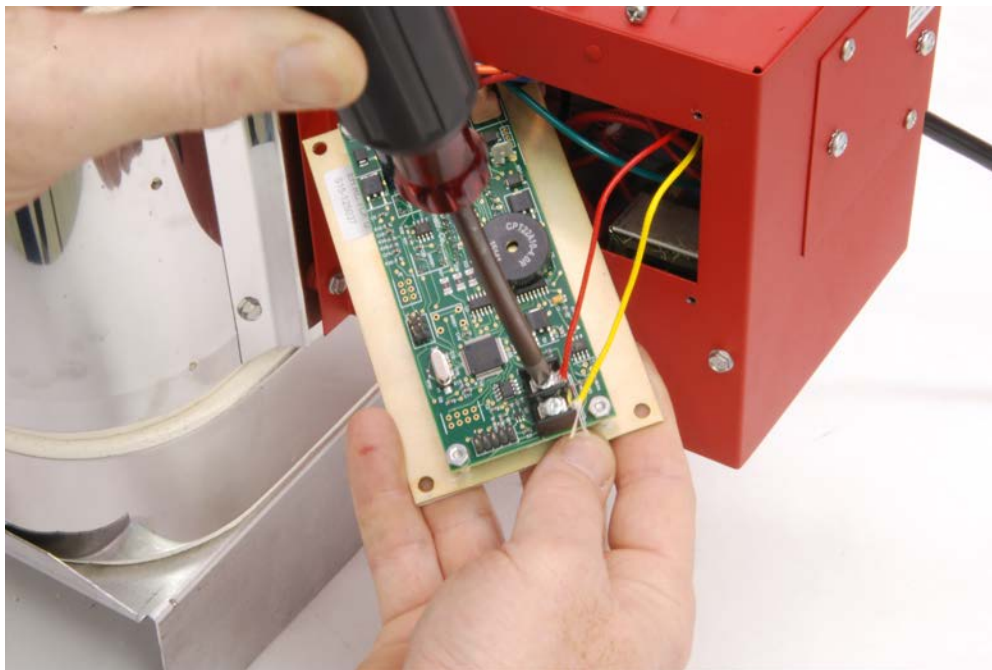


Pull the old thermocouple out from the back of the control enclosure. The old thermocouple is now free and may be discarded.





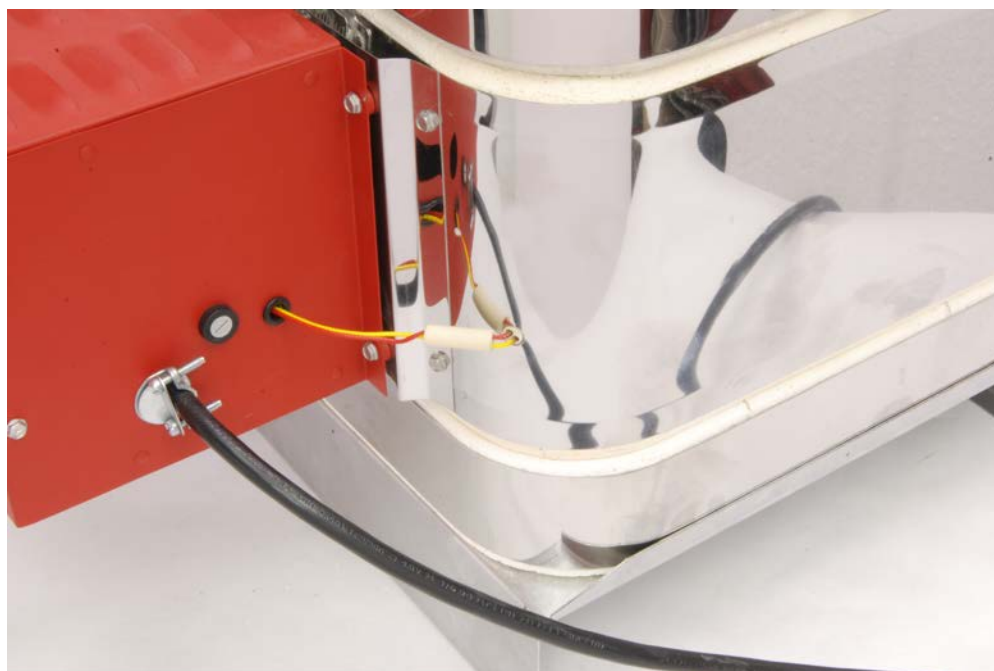
Insert the new thermocouple wires (the red and yellow wires) through the rear opening in the control enclosure as shown.



Connect the new thermocouple wires to the controller as shown. *Be mindful to connect the Red colored wire to the Red colored connection point (which is marked). Obviously the Yellow wire goes to the other connection point. If you hook it up backwards improper reading will result and you don't want to do that.*



Place the control back into the control enclosure and secure with screws as shown.



Insert the new thermocouple completely back into the kiln as shown.

Thermocouple replacement is now complete.