

One Paragon Drive  
Montvale, New Jersey 07645  
Tel: 201 573 1767  
Fax: 201 573 0808  
SNS-Arch-Eng.com

John M. Lignos, AIA, LEED AP  
Lorin J. Sonenshine, AIA  
Steven Napolitano, PE, LEED AP  
Robert G. Nocella, AIA

Helen Marie Logan, AIA, CID

**BULLETIN No. 1**

**PARTICULARS**

- 1.01 DATE: April 12, 2016
- 1.02 PROJECT: Interior Renovations to  
College Park Apartments  
Ramapo College of New Jersey
- 1.03 PHASE #1 BUILDINGS:
- | <u>Building:</u>  | <u>Date of Drawings Set Issue:</u> |
|-------------------|------------------------------------|
| International –F  | June 3, 2015                       |
| Mimosa – G        | April 7, 2015                      |
| Palm – E          | June 3, 2015                       |
| Elm – I           | June 3, 2015                       |
| Science House – H | June 3, 2015                       |
- 1.04 SNS PROJECT NUMBER: 4698.01

**TO: CONTRACTORS**

- 2.01 The following information contained in this Bulletin is issued to amend, clarify or supersede the drawings and specifications, as applicable, and shall become a part of the Contract Documents for the subject project as if fully incorporated and bound herein, with amendments and additions noted below.
- 2.02 This Bulletin consists of 3 pages and attachments as noted below.

**CLARIFICATIONS & CHANGES TO THE DRAWINGS**

- 3.01 Kitchen Equipment Schedule:
- 3.01.1 All kitchen ranges as specified on the equipment schedules as model # GE JBS60DF have been changed. Contractors shall furnish and install GE 30” free standing electric range with coil type electric burners, model number GE JB250DF-WW (29.8w x 48.8h x 28d). Contractors shall also furnish & install ‘Safe-T’ element at all ranges, attached are 3 pdf files for Safe-T Element.



3.02 Shower Drains:

- 3.02.1 The specified shower drain for fixture type 'SH1', JR Smith Model 2005 shall be replaced with Sioux Chief Manufacturing Company Model 825-2PPK.

3.03 Kitchen:

- 3.03.1 Contractor shall furnish and install new full height access panel at side of refrigerator to access the new water heater if required. See attached revised sketches for reference ((SK-3-31.1 & SK-3-31.2).
- 3.03.2 Furnish and install 1 ½" filler panel along side of upper cabinet and microwave, see attached sketches for reference (SK-3-31.1 & SK-3-31.2).

3.04 Fan Coil Units:

- 3.04.1 The supply and return lines serving the fan coil units shall be provided with an isolation valve and drain or flush port to allow for draining of the system. These should be located on the supply / return line risers in the crawl space below each hot water heater closet.
- 3.04.2 All new fan Coil units shall be provided with new isolation valves. Isolation valves shall be short handle ball valves. Gate valves are not acceptable.

3.05 Sprinkler:

- 3.05.1 All fire / sprinkler valves to be relocated from the crawl space into the new Janitors closets.
- 3.05.2 Contractors shall coordinate with reviewed and approved sprinkler shop drawings. Certain concealed side wall sprinkler heads and lines which were located in soffits have been revised and are now concealed ceiling heads and lines above ceilings. GC and construction managers shall review and coordinate with these drawings and omit soffits no longer required.

3.06 Stair vestibule:

- 3.06.1 The existing exposed 4"x4" wood post supporting the second floor bridge shall be wrapped and finished as those in the Holly building. GC shall visit the Holly building and match construction.

3.07 HWH Closets:

- 3.07.1 The floor drains indicated in the hot water heater closets shall be deleted from the project. In lieu of the floor drain, a drain pan shall be installed below each hot water heater. The drain pan shall be piped to the nearest existing floor drain in the crawl space.



3.08 Data / Telecom / USB:

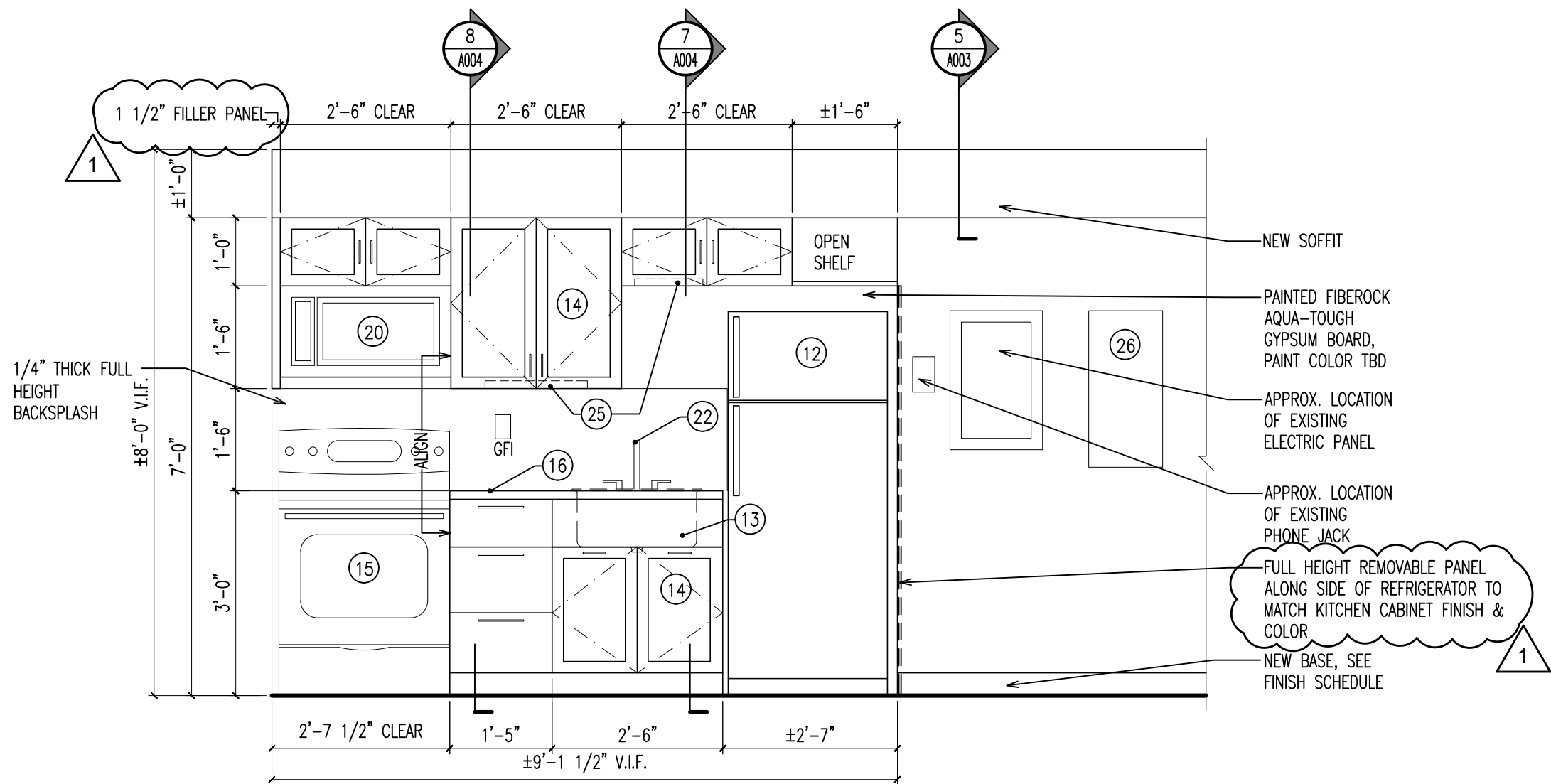
3.08.1 Sketch SK-3-31.3; indicates locations for Data/Telecom and USB outlets. The sketch shows locations for a single unit as reference, contractors shall follow per unit.

3.09 Floor Transitions:

3.09.1 Contractor shall verify that all gaps between walls of the module units have been filled with continuous F.T. wood blocking and fire stopping which meets U.L. Rating and Building Codes. If gaps are not filled, contractor shall fill gaps as noted. The transitions between the modules and rooms shall be level and smooth, without any change in elevation or saddle / transitions.

Attachments:

- Sketch SK-3-31.1
- Sketch SK-3-31.2
- Sketch SK-3-31.3
- Safe-T-Element Installation instructions (pdf attachment)
- Safe-T-Element Care & Use Manual (pdf attachment)
- Safe-T-Element Specifications (pdf attachment)





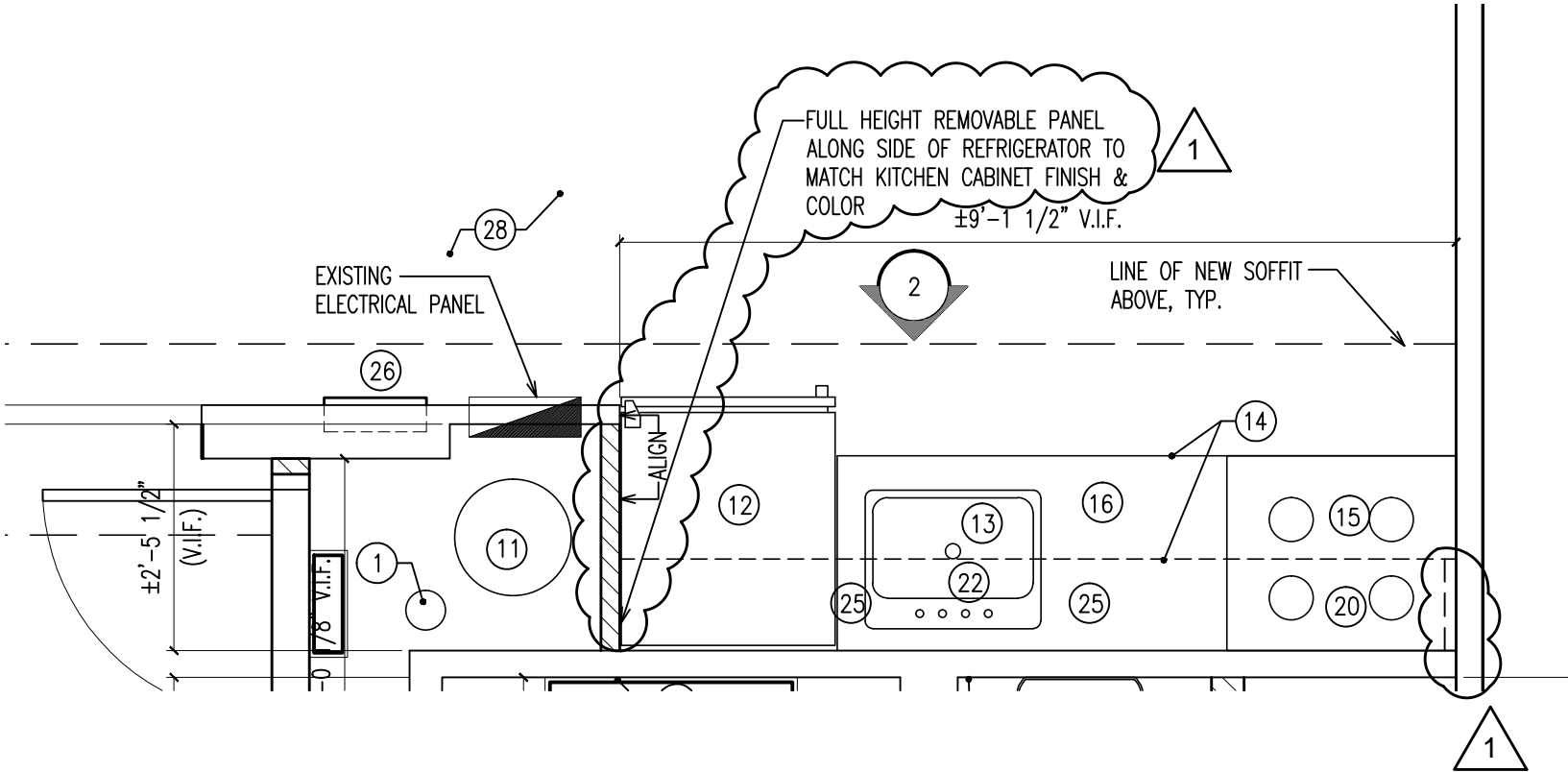
2

## TYPICAL KITCHEN ELEVATIONS



SCALE: 1/2" = 1'-0"

NOTE: COORDINATE EXACT LAYOUT PER BUILDING & UNIT

Date	Issue	Description	Project 4698.00	Date 03-31-16	Scale AS NOTED	Dwg. No.
04-12-16	1	ISSUED PER BULLETIN NO.1	 RAMAPO COLLEGE OF NEW JERSEY	INTERIOR RENOVATIONS TO COLLEGE PARK APARTMENTS RAMAPO COLLEGE OF NEW JERSEY PHASE 1 BUILDINGS	KITCHEN ELEVATION	 SNS Architects & Engineers, PC
						SK-3-31.1



**1 PARTIAL ENLARGED TYPICAL KITCHEN PLAN**  
SCALE : 1/2" = 1'-0"  
NOTE: COORDINATE EXACT LAYOUT PER BUILDING & UNIT

Date	Issue	Description	Project 4698.00	Date 03-31-16	Scale AS NOTED	Dwg. No.
04-12-16	1	ISSUED PER BULLETIN NO.1		INTERIOR RENOVATIONS TO COLLEGE PARK APARTMENTS RAMAPO COLLEGE OF NEW JERSEY PHASE 1 BUILDINGS	PARTIAL ENLARGED TYPICAL KITCHEN PLAN	 SK-3-31.2



Technical Overview of  
Pioneering Technology Corp.'s  
Safe-T-element® Cooking System

**safe T element®**  
*helps prevent cooking fires before they start*



Now available pre-installed on new stoves or as a  
retrofit on existing stoves

*Pioneering's award winning Safe-T-element® cooking system  
is engineered to help cooking fires before they start and  
reduce the amount of electricity required to cook.*

**Pioneering Technology Corp.**

220 Britannia Road East  
Mississauga, Ontario  
Canada, L4Z 1S6

[www.safetelement.com](http://www.safetelement.com)  
[www.pioneeringtech.com](http://www.pioneeringtech.com)

Call us toll free at 1-800-433-6026



## Safe-T-element® Technical Overview

### 1. CSA Certificate of compliance for Safe-T-element® as component electronic temperature control device

Issued: 18 January 2008

Applicable Standards

Certification Number (Listing number)

Product evaluated to the applicable CSA & ANSI/UL standards for use in Canada and the United States.  
401,501 rated 240VAC & Model PTI STExxx rated 120VAC.

1. CSA Standard C22.2 No 24-93-Temperature-indicating and-regulating equipment
  2. UL Standard No. 873-Electrical Temperature Indicating and regulating Equipment
- 1258071 (LR 115437-1)

### 2. CSA Certificate of compliance for Safe-T-element® installed in certified/approved cooking ranges & cook-top ranges

Issued: July 5, 2011

Applicable Standards

Certification Number

Product evaluated to the applicable CSA & ANSI/UL standards for use in Canada and the United States.

PTI STExxx installed in certified/approved cooking ranges & cooktops rated 120/240V, 60Hz.

1. CAN/CSA-C22.2 No.61-08- Household Cooking Ranges.
2. UL Std. No. 858 15th Edition-Household Electric Ranges

1769971

### 3. Australia/ New Zealand Standard

Issued: 03 October 2007

Applicable Standard

Test Report Number

Safety of household and similar electrical appliances  
Part 2.6: Particular requirements for stationary cooking ranges, hobs, ovens & similar appliances.  
AS/NZS 60335.2.6: 2002 +A1-A4  
AS/NZS 60335.1: 2002 + A1

32840

## Control Board

Relay-Rated Switching & Voltage

Input Voltage

Maximum set temperature

10-30Amps, 120/240VAC, Electrical Life: 100,000 cycles

120/240VAC, 50/60Hz

350° C +/- 15° C (662°F +/-59°F)

## Thermocouple Wire

Type

Material

Connector

E

Chromium-Constantan

High temperature ceramic male-female thermocouple wire connector

## Relay, Relay Extension & Power Wires

Type

Size

Rated Voltage

Terminals

CSA SEW-2, 200° C (392° F)

16AWG (7 Strands)

600V

16-14AWG, 600V, 105° C (221° F)

## Plates

Material

Finish

Cast-Iron ASTM-30

High temperature black coating



# Safe-T-element® Installation Instructions

**For: PTI STEZA (2x2 Burner Configuration) &  
PTI STEZB (3x1 Burner Configuration)**

Revision K (May. 3 2012)





## TABLE OF CONTENTS

<b>1. PREPARATION.....</b>	<b>3</b>
1.1 General Safety Instructions.....	3
1.2 Before You Start.....	3
1.3 Tools & Equipment Needed.....	4
1.4 Safe-T-element® Components.....	4
1.5 Optional Components.....	5
<b>2. INSTALLATION.....</b>	<b>8</b>
2.1 Preparing For Installation.....	8
2.2 Installing Safe-T-element® Plates.....	9
2.3 Mounting the Safe-T-element® Controller.....	11
2.4 Connecting Power to the Safe-T-element® Controller.....	12
2.5 Connecting the Elements to the Safe-T-element® Controller.....	13
2.6 Wiring Diagram.....	14
2.7 Connecting the Temperature Sensors to the Safe-T-element® Controller.....	15
2.8 Reassembly.....	16
2.9 Testing.....	17
2.10 Applying the Installation Label.....	17
<b>3. FRONT-MOUNTED CONTROL SWITCH STOVES.....</b>	<b>18</b>
3.1 Preparation for Installation.....	18
3.2 Mounting the Safe-T-element® Controller.....	18
3.3 Connecting Power to the Safe-T-element® Controller.....	19
3.4 Connecting the Elements to the Safe-T-element® Controller.....	19
<b>4. LOCATION of SAFE-T-ELEMENT® CONTROLLER IN SPECIAL CASES.....</b>	<b>22</b>
<b>5. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER PACK ID # 27.....</b>	<b>23</b>
5.1 Tools & Equipment Needed.....	23
5.2 Pack ID # 27-Components.....	23
5.3 Installation.....	23
<b>6. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER PACK ID # 10.....</b>	<b>26</b>
6.1 Tools & Equipment Needed.....	26
6.2 Pack ID # 10-Components.....	26
6.3 Installation.....	26
6.3a Preparing for Installation.....	26
6.3b Installing the Adapter.....	27
<b>7. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER KIT PACK ID # 11.....</b>	<b>29</b>
<b>8. INSTRUCTIONS FOR INSTALLING THERMOCOUPLE ADAPTER ON SHALLOW-DECK STOVES.....</b>	<b>30</b>
<b>9. NON-ROUND (OBLONG)SHAPED 4-TURN 6" (SMALL) ELEMENT- SPIDER MODIFICATION.....</b>	<b>31</b>
<b>10. SAFE-T-ELEMENT® REPLACEMENT PARTS.....</b>	<b>33</b>
<b>11. TROUBLESHOOTING.....</b>	<b>35</b>
10.1 Common Questions.....	35
10.2 Getting Help.....	35

# 1. PREPARATION

## 1.1 General Safety Instructions

### Safety First!



Have your Safe-T-element<sup>®</sup> installed by a qualified service technician. Follow the installation and servicing instructions provided with this product.



Read this manual carefully before installing the Safe-T-element<sup>®</sup> to reduce the risk of electric shock, fire, burn hazard or other injury.



Extreme care must be used because of the high voltages used by the stove and this product. Disconnect the power to the stove before removing the rear cover.



Do not repair or replace any part of this product unless it is specifically recommended in this manual.

Save these instructions for future reference. If you are installing this unit for someone else, give the Care and Use Manual to that person for future reference.

## 1.2 Before You Start



**WARNING:** Shock hazard present due to high voltages.



Disconnect power to stove before installing this product. Ensure that the power to the stove remains OFF during the entire duration of the Safe-T-element<sup>®</sup> installation.



Ensure that the burners are cool before attempting to install this product.

### 1.3 Tools and Equipment Needed

Power Drill  
 5/32" Drill bit  
 #1 Phillips screwdriver  
 #2 Phillips screwdriver  
 Flat head screwdriver  
 Needle nose pliers  
 3/8" Nut Driver




### 1.4 Safe-T-element® Components

Quantity 2+2 Configuration PTI STEZA	Quantity 3+1 Configuration PTI STEZB	Description
2	1	Large Safe-T-element® plate
2	3	Small Safe-T-element® plate
1	1	Safe-T-element® Controller
4	4	Controller mounting supports (+2 extras)
4	2	Large plate bracket
4	6	Small plate bracket
24	24	M3x5mm Bracket Screws (+ 2 extras)
4	4	M3x6mm Bracket Screws (packaged separately)
4	4	M3x12mm Thermocouple Wire Bracket Screws
2	2	Nylon cable clip
4	4	Nylon cable tie
2	1	Thermocouple assembly for large plate
2	3	Thermocouple assembly for small plate
4	4	Thermocouple bracket
4	4	Thermocouple wire includes: 1 blue, 1 red, 1 yellow & 1 brown
1	1	Wire set includes: A. Power wire set Includes: 1 Black 1 White B. Relay wire set Includes: 1 Blue 1 Red 1 Yellow 1 Brown C. Extension wire set Includes: 1 Blue 1 Red 1 Yellow 1 Brown

Quantity 2+2 Configuration PTI STEZA	Quantity 3+1 Configuration PTI STEZB	Description
1	1	Care and Use Guide
1	1	Warning Sheet
1	1	Drill Template
2	2	0.250" tab, #10 Ring Terminal Adapter
4	4	White Insulating Sleeves for Straight-type female terminal (+2 extras)
4	4	White Insulating Sleeves for Flag or right-angled type female terminal (+2 extras)
1	1	Thermocouple Wire Kit for Shallow Deck Stoves: Stainless Steel Straps-4pcs. (+5 extras)
1	1	Installation Sticker

## 1.5 Optional Components:

Some stoves may require an adapter kit for the installation of the Safe-T-element<sup>®</sup> Controller. The following is a partial list of adapter kits available. Please contact Pioneering Technology if unsure whether an adapter kit is required for your stove.

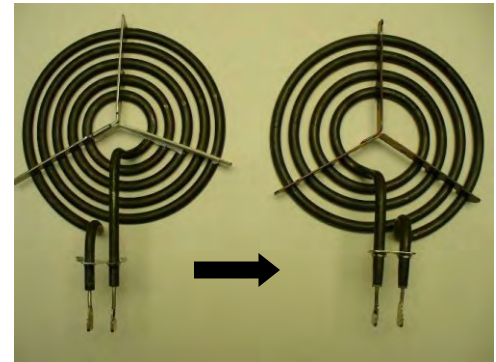
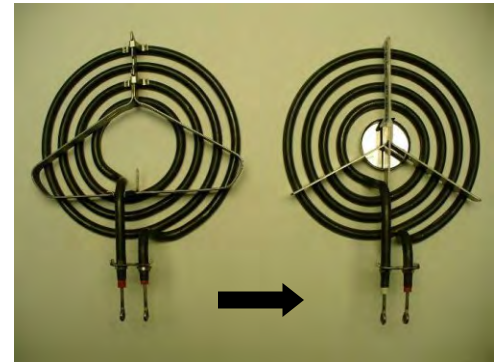
Pack ID No.	Description	Parts Included in Kit
PID-27 	Universal Adapter for shallow rear compartment stoves	<ul style="list-style-type: none"> <li>1 pc. External mounting bracket</li> <li>4pcs. #8 x 1/2" self-tapping screws</li> <li>4pcs. Nylon cable ties</li> </ul>
PID-10 	Adapter for Whirlpool ranges with shallow rear compartment	<ul style="list-style-type: none"> <li>1 pc. External mounting bracket + 1pc. cover plate</li> <li>3pcs. #8 x 1/2" self-tapping screws</li> <li>2pcs. Nylon cable ties</li> <li>1pc. Nylon cable clip</li> </ul>
PID-11 	Adapter for GE ranges with shallow rear compartment	<ul style="list-style-type: none"> <li>1 pc. Mounting bracket</li> <li>1 #10 x 1/2" self-tapping screw</li> </ul>

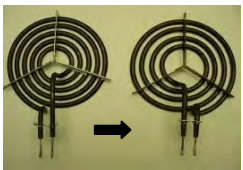
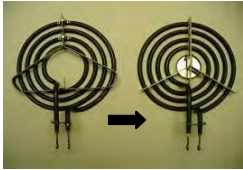
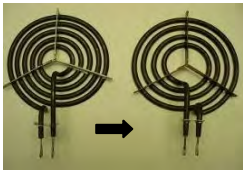

Ensure that the Safe-T-element® is compatible with the stove. Some stove models may require the replacement of the elements or the use of an adapter kit.

### Check the construction of the burners.

The Safe-T-element® plates cannot be mounted to element with a 'delta' or triangular spider. The element will need to be replaced with compatible elements with the 3 legged spider.

The Safe-T-element® small plates are not compatible with some stoves that have **small 6" elements with 5 turns** of the element coil. They must be replaced with compatible 4-turn elements. The new elements must have the same or lower power rating.



Part/Assembly	Adapter Kit Package	Qty	Pack ID #	Package Figure
<b>2x2 Element Configuration:</b>				
5-Turn 6" Element	Replacement 6" 4-Turn 'equivalent' element	2	PID-12	
Delta Spider 6" & 8" Element	Replacement 6" and 8" Y-spider 'equivalent' element 6" element 8" element	4	PID-13	
<b>3x1 Element Configuration:</b>				
5-Turn 6" Element	Replacement 6" 4-Turn 'equivalent' element	3	PID-14	
Delta Spider 6" & 8" Element	Replacement 6" and 8" Y-spider 'equivalent' element 6" element 8" element	4	PID-15	

**IMPORTANT!**

**This document describes a typical installation.  
There are slight variations from stove model to model which must be  
accommodated. Please contact Pioneering Technology for  
assistance.**

## 2. INSTALLATION

### 2.1 Preparing For Installation

1. Before disconnecting anything test the surface elements and oven to ensure they are functional. To prevent injury do not allow elements to get hot. Turn elements off when slightly warm.
2. Disconnect power to stove.



**DANGER:**  
**Failure to disconnect power will result in a  
hazardous situation.**

3. Remove screws securing the rear cover of the stove. (Fig. 2-1)

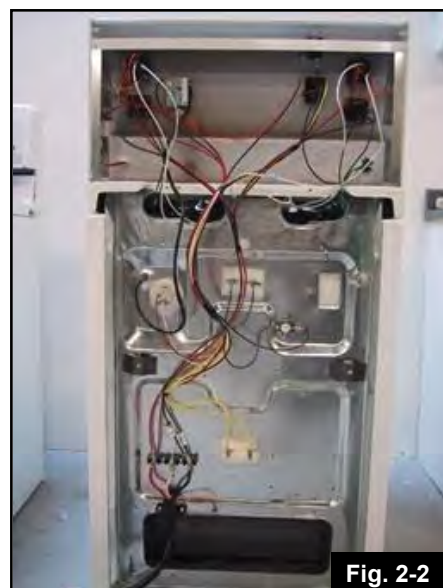
**For Front-mounted Control Switch Stoves, please  
refer to Section: 3 on Page: 17**

4. Inspect all existing wiring for damage or excessive grease buildup. (Fig. 2-2)



**DANGER:**  
**Do not proceed with the installation if there is  
any damage to wiring or excessive grease  
buildup.**

To avoid risk of personal injury or property damage,  
have the stove serviced before proceeding with the  
installation if either of these conditions is found.

**Fig. 2-1****Fig. 2-2**



## 2.2 Installing Safe-T-element® Plates

### 1. IMPORTANT!

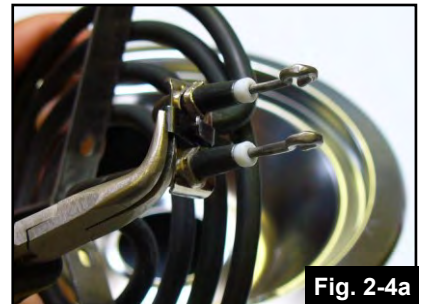
Verify that the power supply to the stove is disconnected and the burner elements are cool.



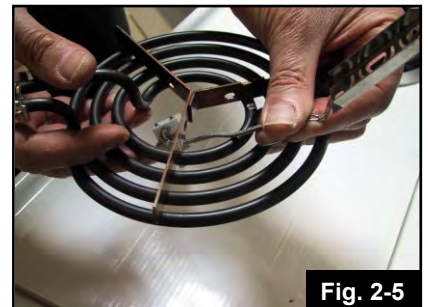
2. Remove burner element from its socket. (Fig.2-3)



3. Remove its center cover piece. If its welded to the spider, snip it with aviation snips. (Fig.2-4)  
If the element has a spring clip near the prongs then remove that clip as well. (Fig.2-4a)



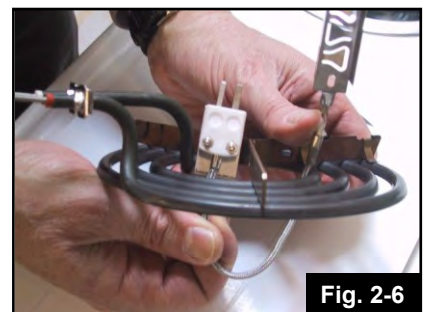
4. Put the thermocouple wire through the gap in the element as shown, carefully, holding it by the wire only. (Fig.2-5)



### CAUTION!

**HOLD & BEND THE THERMOCOUPLE WIRE ONLY. DO NOT HOLD OR BEND THE WIRE WITH THE THERMOCOUPLE BRACKET AS IT MAY BREAK THE THERMOCOUPLE JUNCTION ON THE BRACKET.**  
(Fig.6)

5. Put the other end through the next gap as shown carefully, holding it by the wire only. (Fig.2-6)



6. Hold the thermocouple wire bracket in place.(Fig.2-7) Where possible, the bracket must be mounted behind the existing element grounding bracket. Where this is not possible, the temperature sensor bracket may be mounted in front of the element grounding bracket provided the following requirements are met:

- The thermocouple bracket can be mounted in a position where it can hook onto the element grounding bracket to prevent movement; and,
- A minimum spacing of ½ inch is left between the thermocouple bracket and the exposed terminals of the element.

**NOTE:** The kit includes 2 different sized thermocouple wires. Ensure you mount the correct one for the element.

**If the deck of the stove is shallow, you may not be able to install the thermocouple wire bracket on the element. Please refer to Section 6, for instructions on how to install the thermocouple wire bracket.**

7. Secure the temperature sensor bracket to the element using the M3x12mm screws. (Fig.2-8)

8. Place the Safe-T-element® plate top-side down. Place burner element top-side down on the Safe-T-element® plate. The electrical connections for the element must be placed opposite the notch in the plate. (Fig.2-9)

9. Loosely secure the Safe-T-element® plate to the burner element using thermocouple assembly bracket and 2 M3x5mm screws using the #1 Phillips screw driver. (Fig.2-10)

10. Use 2 additional brackets to secure the plate to the element. Tighten the 6 screws until the bracket is snug against the plate. Be careful not to over tighten the screws. If the M3x5mm screws do not screw into the plate use the longer M3x6mm screws. If using an electric screwdriver ensure that the torque setting is set between 2 & 3.

11. Repeat the above steps for the other 3 burner elements.

12. Use 2 additional brackets to secure the plate to the element. Tighten the 6 screws until the bracket is snug against the plate. Be careful not to over tighten the screws. (Fig.2-11)

13. Repeat the above steps for the other 3 burner elements.

**NOTE:** In some installations, the 4-turn 6" small element is not truly round (oblong shaped) and will not fit on the small Safe-T-element® plate. The Safe-T-element® kit will still work without replacing these elements. Refer to page: 26, Section: 7 on how to install the small plate by modifying the spider arms.

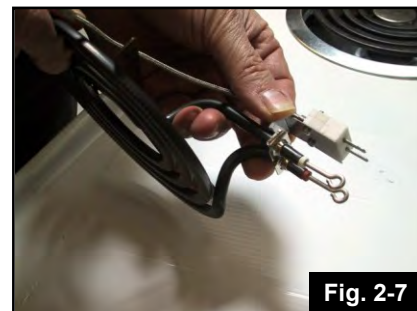


Fig. 2-7

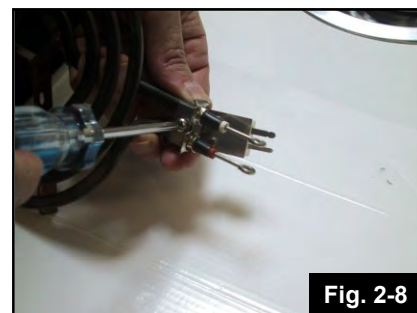


Fig. 2-8

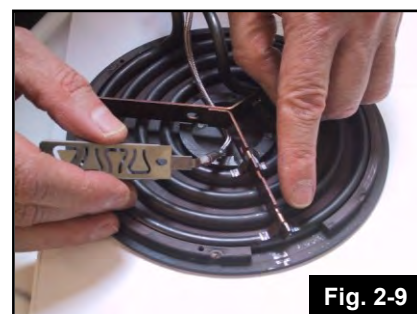


Fig. 2-9

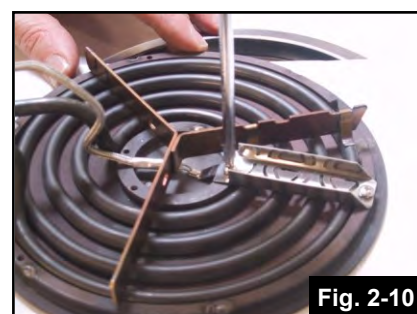


Fig. 2-10



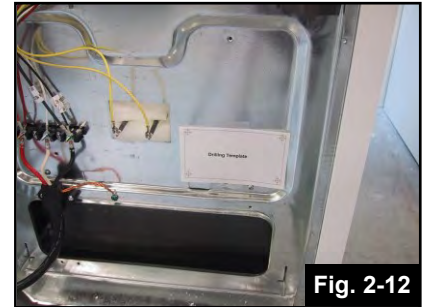
Fig. 2-11



## 2.3 Mounting the Safe-T-element® Controller :

1. Place the adhesive back drill template for the Safe-T-element® Controller in the lowest possible location INSIDE the stove rear compartment. The photo (Fig. 2-12) shows a typical mounting location.

**For Front-mounted Control Switch Stoves, please refer to Section: 3.2 on Page: 18**



**Fig. 2-12**



### **IMPORTANT**

**The Safe-T-element® Controller location must meet the following requirements:**

- It must be placed as low as possible in the rear compartment of the stove in order to minimize exposure to heat.
- In no case should the template be placed directly above the terminals for the oven element as heat escaping from the opening may cause the Safe-T-element® Controller to over-heat.
- A minimum 1 inch gap is maintained between the Safe-T-element® Controller and any other stove component such as terminal blocks, oven components, etc.
- The Safe-T-element® Controller and all wires are completely enclosed in the rear compartment.
- Stoves which have a shallow rear compartment will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove). Please refer to Section: 4 on page:23 for more details on installation of this kit.
- A minimum of ¼ inch is maintained between the tallest component on the Safe-T-element® Controller and the rear cover.
- If the range has a narrow vertical lower rear cover (terminal guard cover), mount the controller behind that cover. Please refer to Section 8.1 on page:28 for more details.
- If the range has 2 piece rear covers, mount the controller behind the upper left portion of the range. Please refer to Section 8.2 on page:28 for more details.

2. Drill 4 holes using a **5/32"** drill bit. (Fig.2-13)



### **WARNING**

**Be careful to drill through the rear panel only. Drilling deeper than ½ inch will cause damage to the oven wall.**

3. Remove the template. Insert the Safe-T-element® Controller mounting supports as shown in Fig.2-14. (Insert wide end of support into hole)



**Fig. 2-13**



**Fig. 2-14**

4. To avoid any static electricity discharge to the Controller which can damage it, start by grounding yourself by touching the range. Then remove the Controller carefully from the anti-static bag. Hold the board by the relays or by its edges (Fig.2-15). Avoid touching other components on the Controller or its back. Secure the Controller to the supports as shown.(Fig.2-15) Ensure each support is fully inserted.



### WARNING

Apply pressure only from the left and right edges. Pressure to the middle of the board will cause it to flex and may damage the circuit.

## 2.4 Connecting Power to the Safe-T-element® Controller (Refer to Wiring Diagram Section: 2.7)



### WARNING

The Safe-T-element® Controller is designed to operate on 120VAC only, DO NOT apply or connect it to 220VAC!

For front-mounted control switch stoves, please refer to Section: 3.3

1. Connect the BLACK wire to terminal P1 on the Safe-T-element® Controller. (Fig.2-16)
2. Locate the fuse for the 120VAC outlet on the stove. Disconnect the wire which goes to the 120VAC outlet. (Fig.2-17)
3. Connect the BLACK wire from the STE Controller to the fuse holder. (Fig.2-19)

**NOTE:** For stoves without a fuse or where the fuse is not accessible, the BLACK wire from the Safe-T-element® Controller may be connected directly to the BLACK wire from the power cord at the terminal block. If necessary use ring terminal adapter provided. (Fig.2-18). Remove the nut securing the internal black wire using a 3/8" Nut Driver. Place the adapter on the terminal block & replace the nut.

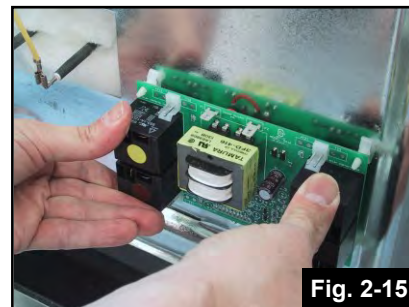


Fig. 2-15

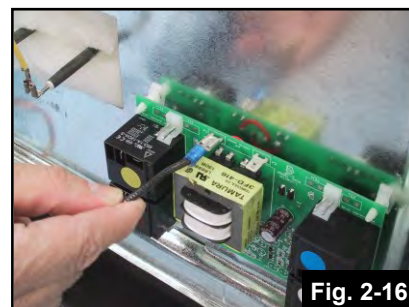


Fig. 2-16

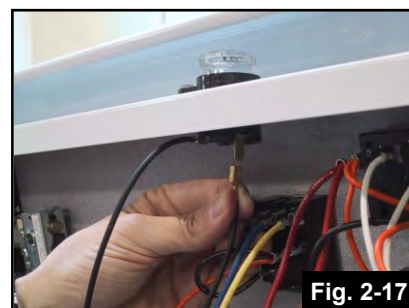


Fig. 2-17

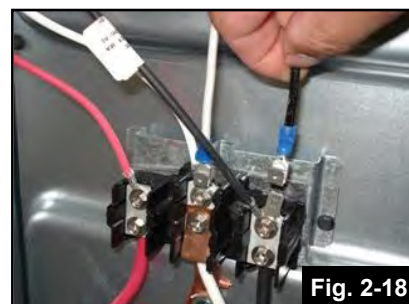


Fig. 2-18



Fig. 19

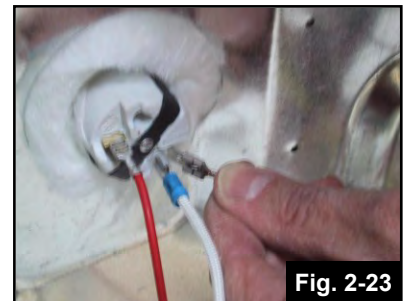
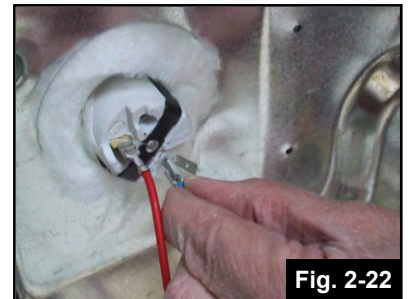
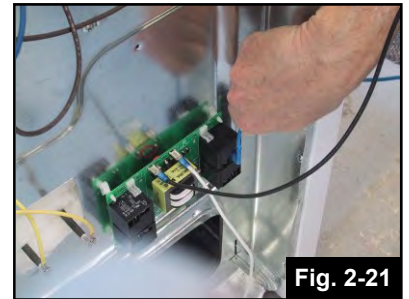
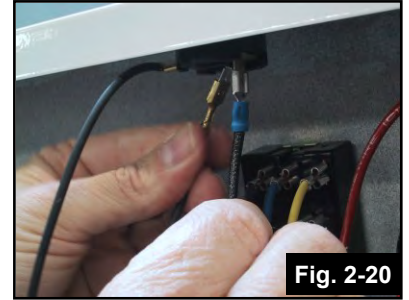
4. Re-connect the wire from the 120V outlet to the piggyback connection on the Safe-T-element® wire. (Fig.2-20)

5. Connect the WHITE wire to the P2 terminal on the Safe-T-element® Controller. (Fig. 2-21)

6. Remove the white wire to the oven light. Connect the Safe-T-element® wire to the oven light. (Fig.2-22)

**NOTE:** For stoves without an oven light or where the oven light is not accessible, the White wire from the Safe-T-element® Controller may be connected directly to the white wire from the power cord. If necessary use ring terminal adapter provided. (Fig.18). Remove the nut securing the internal white wire. Place the adapter on the terminal block & replace the nut.

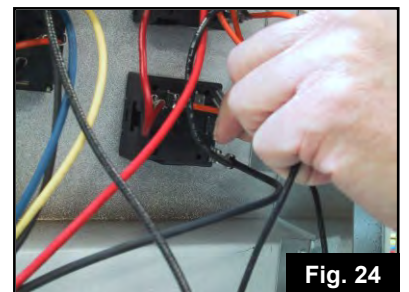
7. Re-connect the wire to the light. (Fig.2-23)



## 2.5 Connecting the Elements to the Safe-T-element® Controller (Refer to Wiring Diagram Section:2.7)

**NOTE:** For Front-mounted Control Switch Stoves, please refer to Section: 3.4

1. Connect the flag-type connector on the BLUE relay wire to the one terminal on the upper-right relay of the Safe-T-element® Controller (when looking at the Safe-T-element® Controller from the back of the stove). (Fig.2-24)
2. Locate the temperature control dial for the **front-left element**. (when looking at the electric stove from the front). Disconnect the wire going from the dial to that burner element.





3. Connect the other end of the BLUE relay wire to the front-left temperature control dial. (Fig.2-25)
4. Apply the provided white insulating sleeve for straight-type female terminal to the female connector on the wire coming from the front-left element. If the female connector on the element wire is a flag-type, use the white insulating sleeve for flag-type female terminals. Connect the insulated male terminal of BLUE relay extension wire provided to this insulated female terminal of the element wire. (Fig.2-26)



**WARNING!**

**To prevent possible fire or electric shock ensure that the blue male connector of the relay extension wire completely covers the connection.**

5. Connect the other end of the BLUE relay extension wire to the other terminal of the **upper-right relay** of the Safe-T-element® Controller. (Fig. 2-27)
6. Using the RED wire repeat steps 1 through 5 to connect the **rear-left element** (looking at the stove from the front) to the **lower-right** relay of the Safe-T-element® Controller.
7. Using the BROWN wire repeat steps 1 through 5 to connect the **rear-right** element (looking at the stove from the front) to the **lower-left** relay of the Safe-T-element® Controller.
8. Using the YELLOW wire repeat steps 1 through 5 to connect the **front-right element** (looking at the stove from the front) to the **upper-left** relay of the Safe-T-element® Controller.



**WARNING!**

**It is essential that each colored relay & relay extension wire is correctly connected to the corresponding colored relay or channel.**

**NOTE:** Some stoves may have the H1 & H2 terminals of the temperature control dial covered by a white insulator. This insulator must be removed completely to connect the relay wire. (Fig.2-28)

- 9 . Secure all the wires using cable ties to keep the installation safe and tidy. (Fig.2-29)

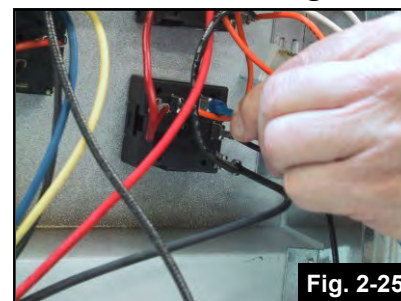


Fig. 2-25

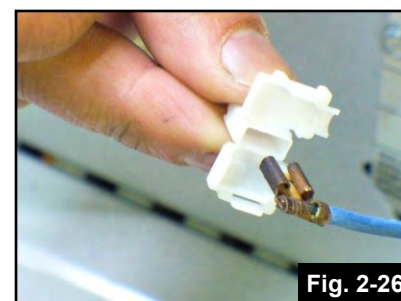


Fig. 2-26

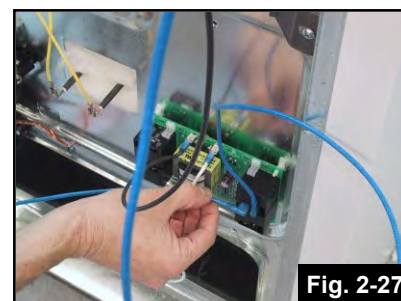


Fig. 2-27

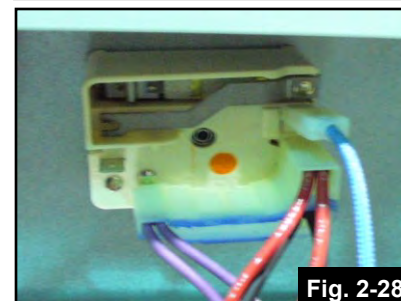


Fig. 2-28

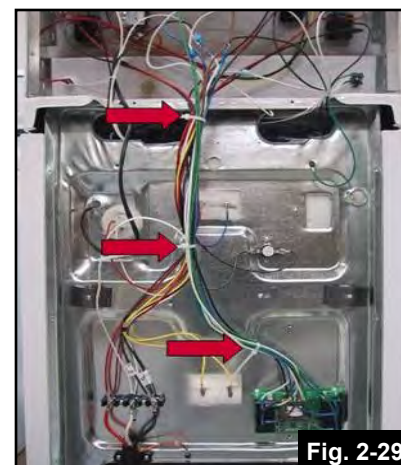
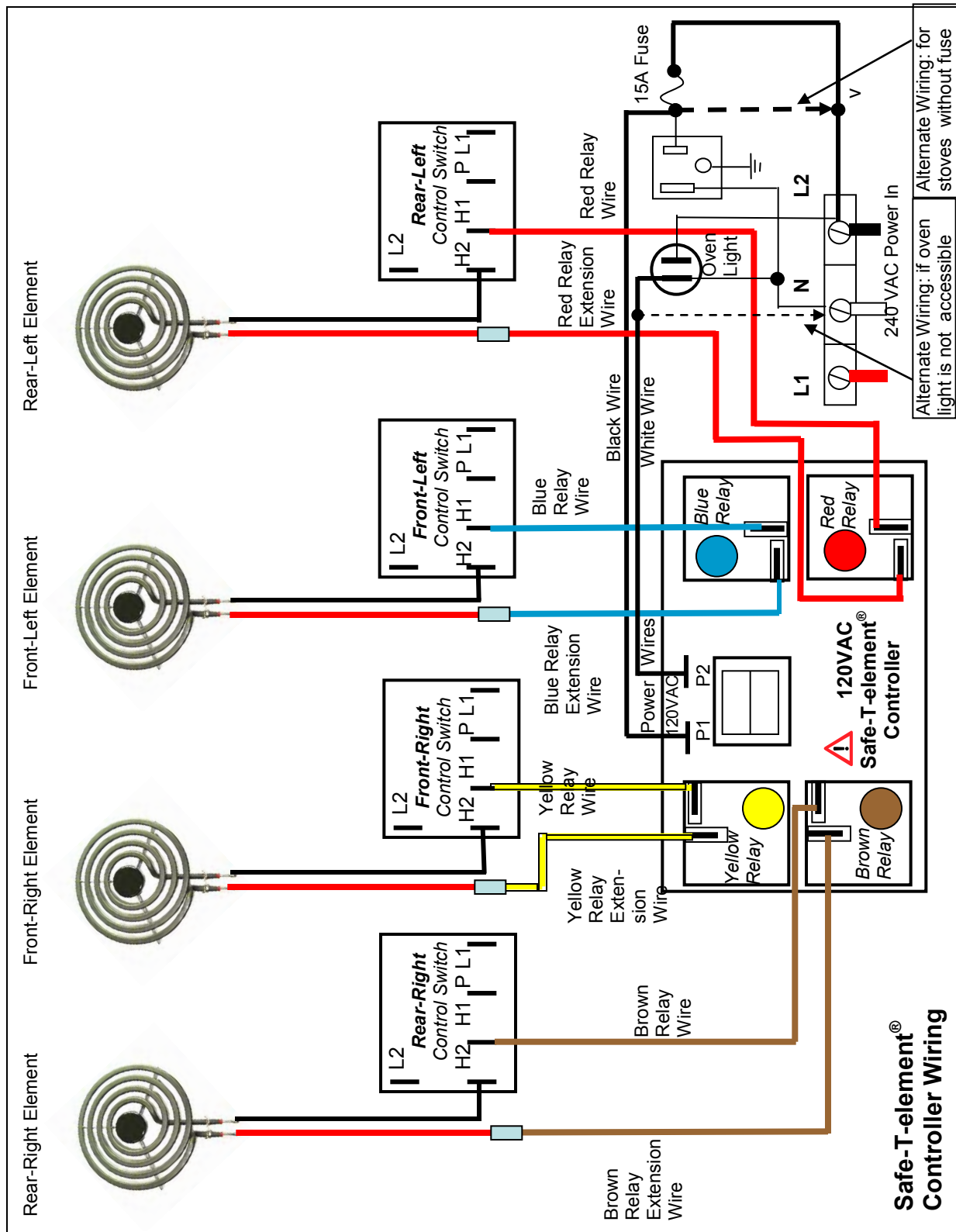


Fig. 2-29

## 2.6 Wiring Diagram



**WARNING!**

It is essential that each colored relay & relay extension wire is correctly connected to the corresponding colored relay or channel.

## 2.7 Connecting the Temperature Sensors to the Controller

### A. For Ranges with Lift-up Cook-top

1. New ranges have lift-up cook-top that can be lifted up and supported in the up position by the two side supports when lifted. This can help to connect & route the thermocouple wires underneath easier. When lowering the cook-top, be careful not to pinch your fingers.
2. Securely wrap & twist the thermocouple wires under the cook top around the existing coil element wires at least 2 to 3 times to avoid them contacting the drip pans or the burner box which may cause them to overheat. (Fig 2-30a, Fig 2-30b)

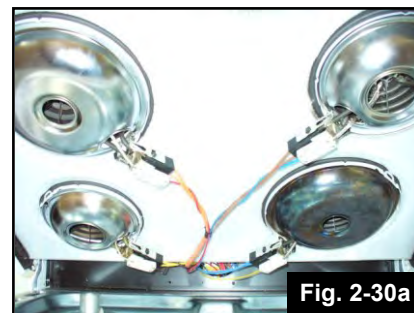


Fig. 2-30a

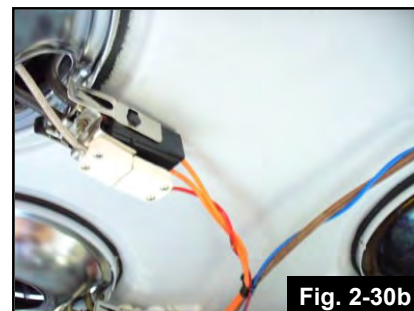


Fig. 2-30b

### B. For Ranges with Fixed Cook-top

1. These stove have channels on the sides which house the existing element wires as shown (Fig. 2-31) run the thermocouple wire inside the channel.
2. If there are no channels, remove the drip-pans completely to access & wrap the wires at least 2 times around the existing element wires to avoid them contacting the drip pans or the burner box which may cause them to overheat. .

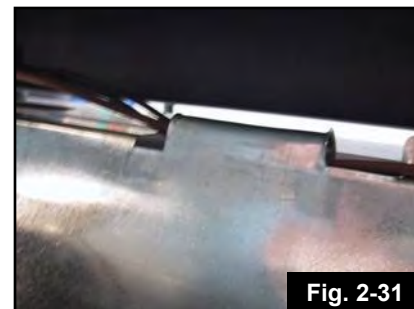


Fig. 2-31

The thermocouple wires should have just enough slack (Fig. 2-32a) or length to allow the user to disconnect the thermocouple wire when cleaning the drip pans.

2. Re-install the drip pan as shown. (Fig.2-32a)

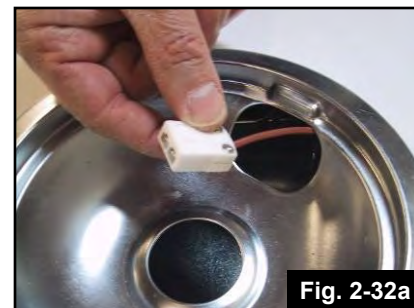


Fig. 2-32a

3. Connect the thermocouple wire to the thermocouple on the plate. (Fig.2-32b)

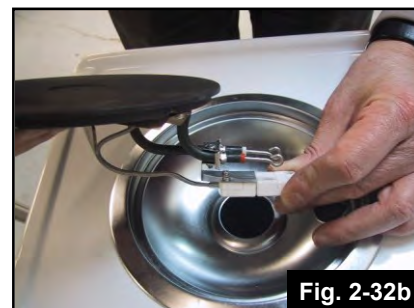


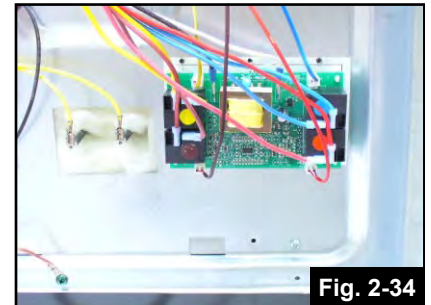
Fig. 2-32b



**WARNING! Ensure that the thermocouple wires do not touch the drip-pan or the burner box.**



4. Re-install the element. (Fig.2-33)
5. Connect the blue thermocouple wire to the upper-right terminal of the Safe-T-element<sup>®</sup> Controller ie. same channel as the blue relay wires for that element). (Fig.2-34)
6. Repeat for the 3 other elements. (**Brown thermocouple wire to the lower-left, Yellow thermocouple wire to the upper-left & Red thermocouple wire to the lower-right terminal of the controller**)
7. Pull all excess thermocouple wire from the back of the stove. Roll them up & tie them together near the Safe-T-element<sup>®</sup> Controller using one of the cable-ties provided.



**WARNING!** It is essential that each colored thermocouple wire is correctly connected to the corresponding colored relay or channel.

## 2.8 Reassembly

1. Remove a screw (if present) on the rear-right side (or left side depending on which side the Safe-T-element<sup>®</sup> controller was mounted) on the stove. (Fig.2-35)
2. Secure the thermocouple wires using a cable clamp and the screw, so that it does not come into contact with any exposed live terminals (Fig.2-36)



**WARNING!** Be careful not to damage any of the wires during reassembly. Any wire damaged during the installation must be replaced prior to applying power to the stove.

3. Replace the rear cover.
6. Re-connect the power cord.



## 2.9 Testing

1. Place your hand on the front-right plate and turn on the element. Ensure that the light for that element lights up.
2. Feel for heat from the plate. **Be extremely careful during this test as the element may heat up very quickly.** Move your hand away at the first sign of heat.
3. Turn off the element. Repeat for other elements. Do not turn on all the elements at the same time to test. By doing so it is not possible to check if the wiring is correct.
4. Installation is complete.

## 2.10 Applying the Installation Label

1. Hand write the installation date, the Manufacturer's Rep. & the installer's name on the installation label.
2. Apply the installation label (Fig 2-36a) right next to the nameplate label of the range (Fig 2-36b). This label is usually found on the left or right wall behind the drawer beneath the oven door. If there is no drawer, apply the label behind the porcelain back-guard as shown in Fig. 2-36c. This label must be applied for Pioneering Technology to honor the one-year warranty from the installation date of the product.

Safe-T-element® MODEL # PTI STE	
Serial no: <u>12345</u>	Installation Date: <u>Aug 25, 2010</u>
Manufacturer's Rep: <u>ABC Service Company Inc.</u>	

**Fig. 2-36a**



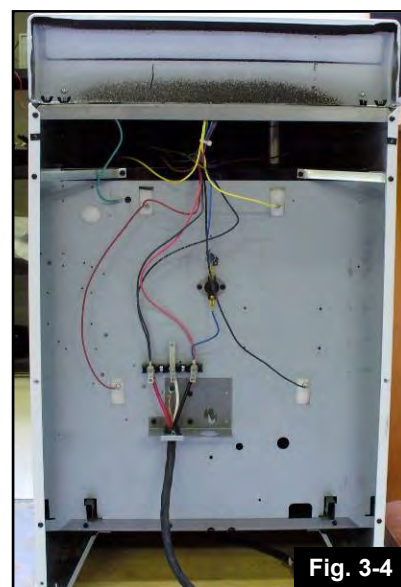
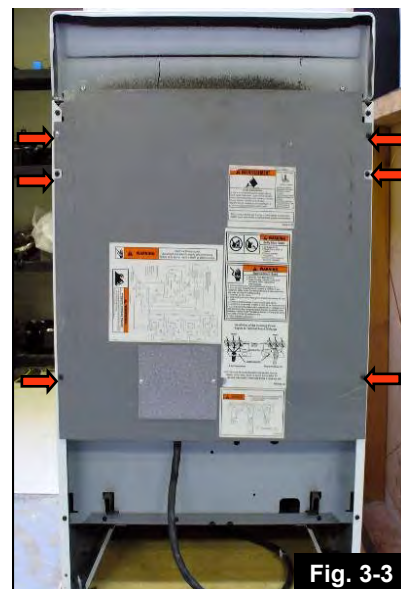
**Fig. 2-36b**



**Fig. 2-36c**



### 3. Front-Mounted Control Switch Stoves (Fig.3-1, 3-2)

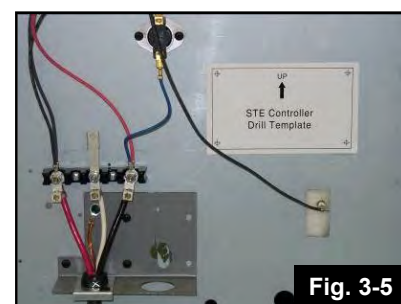


#### 3.1 Preparation for Installation

Remove screws securing the rear cover of the stove.  
(Fig.3-3)

#### 3.2 Mounting the Safe-T-element® Controller. (Fig. 3-4, 3-5, 3-6)

For **Slide-in stoves** the controller will have to be mounted below the top wire opening behind the rear cover.



### 3.3 Connecting Power to the Safe-T-element® Controller (Fig. 3-7, 3-8)

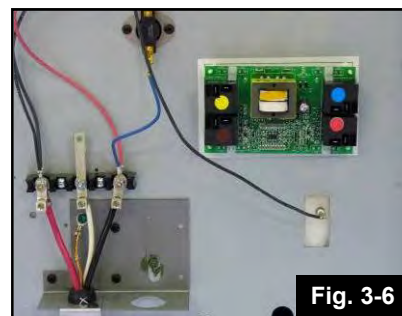


Fig. 3-6

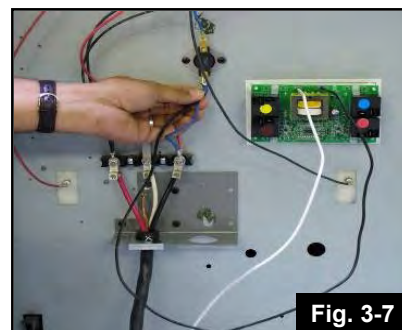


Fig. 3-7

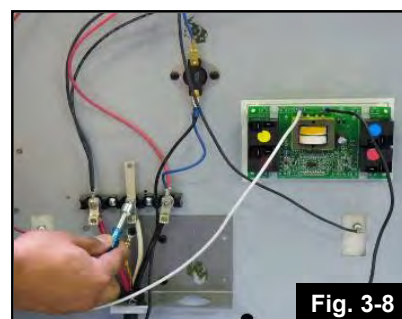


Fig. 3-8

### 3.4 Connecting the elements to the Safe-T-element® Controller

1. Connect the flag connector on the RED relay wire to one terminal on the lower-right relay of the Safe-T-element® Controller (when looking at the STE controller from the back). (Fig.3-9)
2. Route the wire through the space above the oven and over to the front mounted temperature control dials. (Fig.3-10)

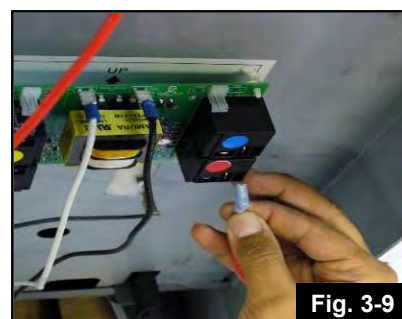


Fig. 3-9

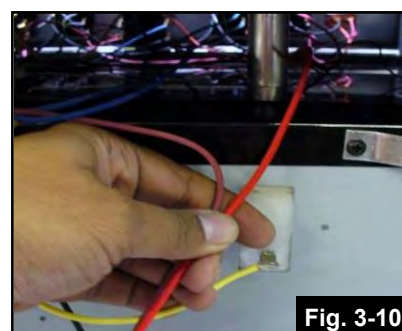
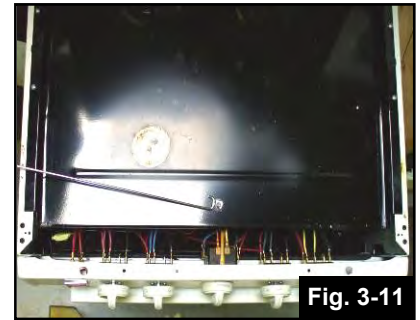
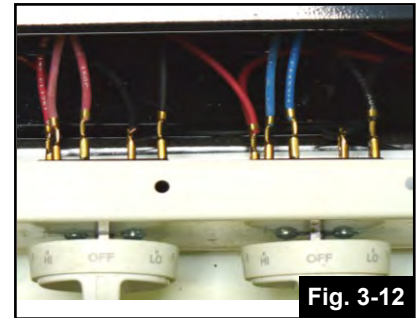


Fig. 3-10

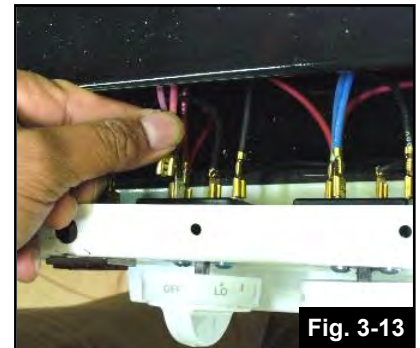
3. Remove the top panel to access the front mounted temperature control dials. (Fig.3-11)



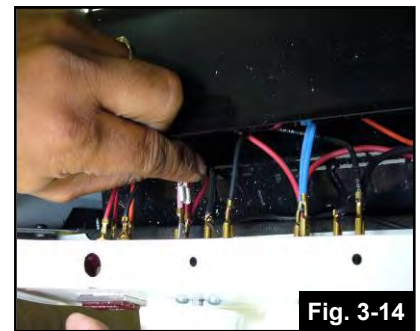
4. Locate the temperature control dial for the **rear-left element** (when looking at the stove from the front) (Fig.3-12)



5. Disconnect the wire going from the dial to the cook element. (Fig.3-13)



6. Connect the other end of the RED relay wire to the temperature control dial. (Fig.3-14)

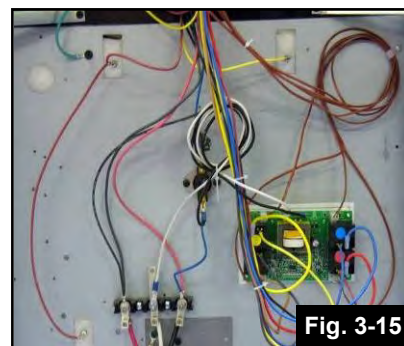


7. Apply the white insulating sleeve for straight-type female terminal to the female connector on the wire coming from the rear-left element. If the female connector on the wire is a flag-type, using the white insulating sleeve for flag-type female terminals. Connect the insulated male terminal of RED relay extension wire provided to this insulated female terminal.

**DANGER**

To prevent possible fire or electric shock ensure that the blue male connector of the relay extension wire completely covers the connection.

8. Connect the other end of the RED relay extension wire to the other terminal of the **lower-right relay** of the Safe-T-element<sup>®</sup> Controller.
9. Using the BLUE wire repeat steps 1 through 5 to connect the **front-left element** (when looking at the stove from the front) to the **upper-right relay** of the Safe-T-element<sup>®</sup> Controller.
10. Using the BROWN wire repeat steps 1 through 5 to connect the **rear-right element** (when looking at the stove from the front) to the **lower-left relay** of the Safe-T-element<sup>®</sup> Controller.
11. Using the YELLOW wire repeat steps 1 through 5 to connect the **front-right element** (when looking at the stove from the front) to the **upper-left relay** of the Safe-T-element<sup>®</sup> Controller.
12. Secure all the wires using cable ties to keep the installation safe and tidy. (Fig.3-15)

**Fig. 3-15**

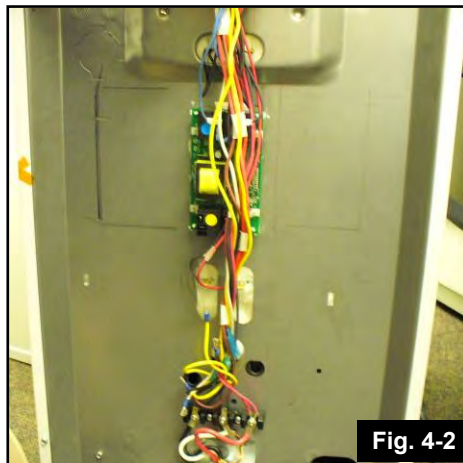


#### 4. Location of Safe-T-element® Controller in special cases

##### 4.1 Location of Safe-T-element® Controller on ranges with vertical back cover.

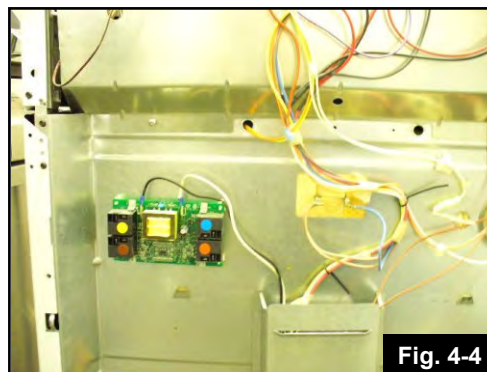
Some ranges have a narrow vertical back cover (Fig.4-1)

In some cases the controller can be installed vertically (Fig. 4-2) and avoids the use of an adapter kit. This can be done if the rear cover is at least 2" deep. In these instances do not use the relay extension wires. Instead use one of the element wire to connect directly to the relays on the controller. If the rear cover is less than 2" deep please refer to the instructions for using an adapter kit.

**Fig. 4-1****Fig. 4-2**

##### 4.2 Location of the Safe-T-element® Controller board on some Ranges that have 2 piece back covers.

Some ranges have 2 piece back covers (Fig. 4-3) If the lower back cover is not deep enough to accommodate the controller it needs to be mounted in the upper left portion of the range back as shown in Fig. 4-4 & Fig. 4-5 on these ranges. If the rear cover is less than 2" deep please refer to the instructions for using an adapter kit.

**Fig. 4-3****Fig. 4-4****Fig. 4-5**

## 5. Installation Instructions for Safe-T-element® Universal Controller Adapter – Pack ID # 27 For Ranges with Shallow Rear Compartments

Some stoves have a shallow rear compartment (less than 2" deep) and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove.

### 5.1 Tools and Equipment Needed

Aviation snips  
Pliers  
Power drill

### 5.2 Pack ID # 27 Components

Your Pack ID # 27 Safe-T-element® Controller Adapter kit includes the following:

Quantity	Description
1	Safe-T-element® Controller universal mounting bracket
3	#8 x 1/2" metal self-tapping screw
4	Nylon cable tie

NOTE: The images shown are representative of a typical installation. Some applications may differ slightly in appearance and location of the adapter bracket.

### 5.3 Installation



1. Disconnect power to stove.

**DANGER:**  
Failure to disconnect power will result in a hazardous situation.

2. After removing rear lower cover place it on a flat surface and place the adapter against the edge at the desired location. (Fig.5-1)

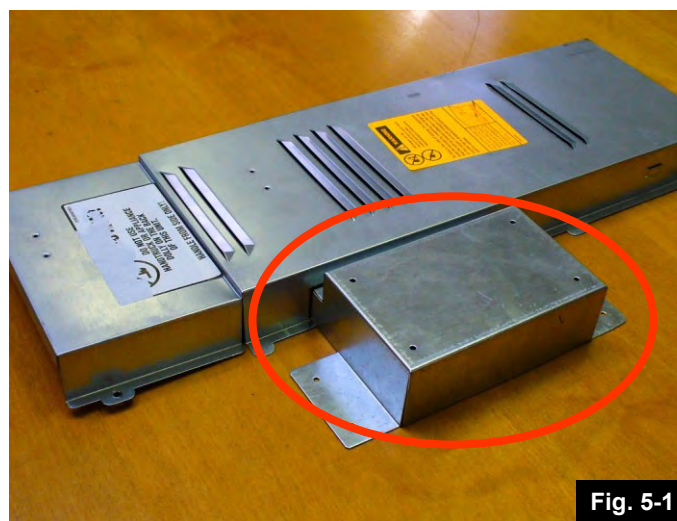


Fig. 5-1

3. Mark edges of bracket opening with a solid line on sides and a dotted line on the top.

#### 4.3b Installing the Adapter

1. Cut along solid lines.

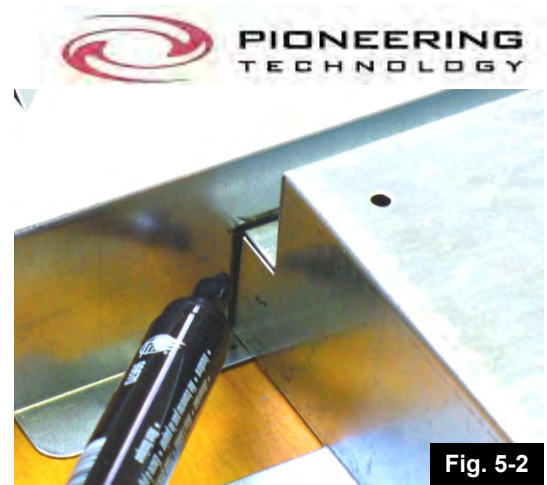


Fig. 5-2

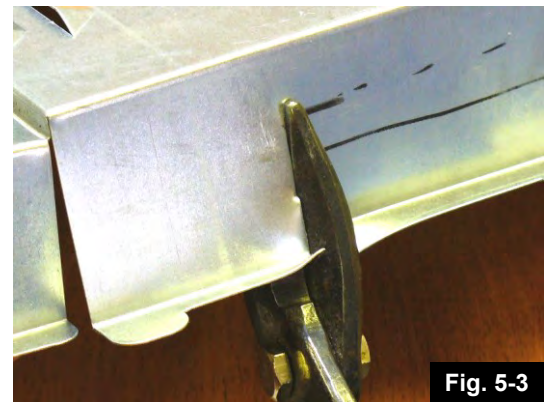


Fig. 5-3

2. Bend the cover outward along the dotted line.

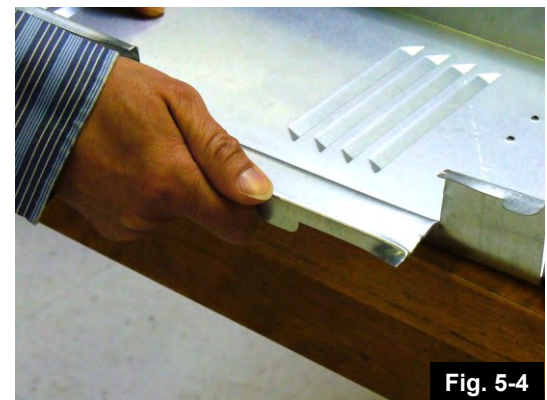


Fig. 5-4

3. Cut off the extra material about 3/8" from the bend.

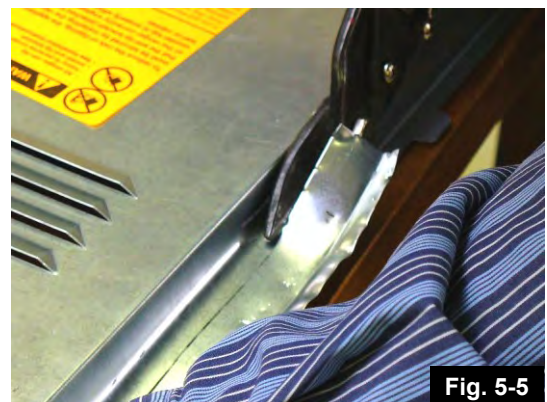


Fig. 5-5



4. Using pliers bend the cut edge upward and flat against the side of the cover.



Fig. 5-6

5. Install the Control Board in the Adapter and connect wires as previously described in these instructions.

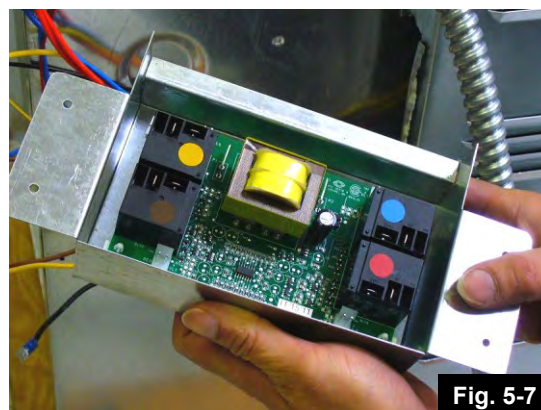


Fig. 5-7

6. Re-install rear cover being careful not to pinch any wires. Use the supplied cable ties to hold the wires in a neat bundle. Place the adapter against the rear of the stove and the rear cover such that the opening slides into the hole cut into the rear cover. Use the self-tapping screws to secure the adapter in place.



Fig. 5-8

7. Completed installation.



Fig. 5-9



## 6. Installation Instructions for Safe-T-element® Controller Adapter – Pack ID # 10 For Some Whirlpool Ranges

Some Whirlpool stoves such as model WERE3000 or similar have a shallow rear compartment and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove.

### 6.1 Tools and Equipment Needed

Aviation snips  
Needle nose pliers  
Power drill  
1/8" drill bit  
Metal punch

### 6.2 Pack ID # 10 Components

Quantity	Description
1	Safe-T-element® Controller mounting bracket + Cover
3	# 8 x 1/2" metal self-tapping screw
1	Nylon cable clip
2	Nylon cable tie

### 6.3 Installation

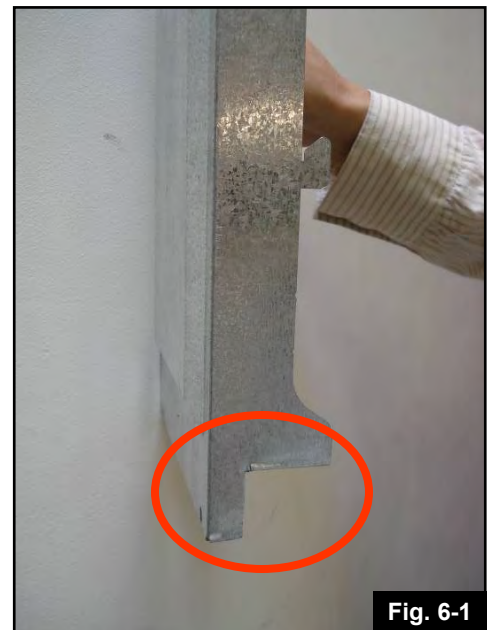
#### 6.3a Preparing for Installation

1. Disconnect power to stove.



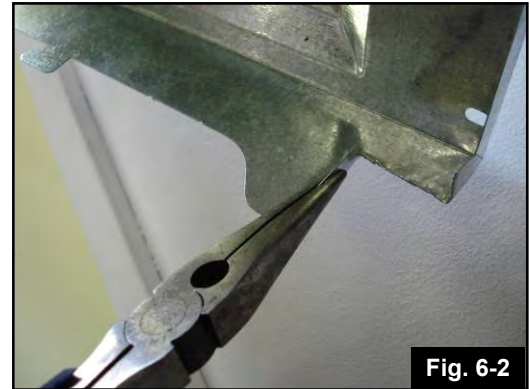
**DANGER:**  
Failure to disconnect power will result in a hazardous situation.

2. After removing lower cover cut a notch out of the lower-right corner of the cover approximately 1¼" wide by 1¼" high. (Fig.6-1)



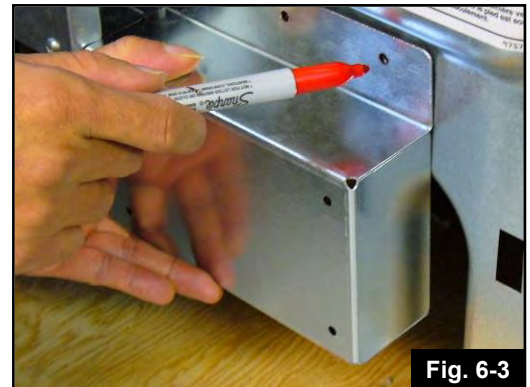
**Fig. 6-1**

3. Bend approximately 1/4" of the cover inward at the top of the cut to prevent the sharp edge of the cover from coming in contact with the wires.



### 6.3b Installing the Adapter

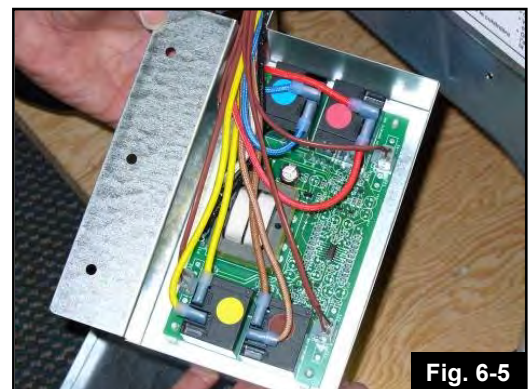
1. Hold the bracket in place as shown in the picture and mark the three holes using a pencil or marker.



2. Use a metal punch to mark the center of the holes and drill three 1/8" holes.



3. Mount the Safe-T-element® Controller on the bracket bringing all the wires out the opening. Use a cable tie to secure the wires.



4. Place cover on the back of the bracket.

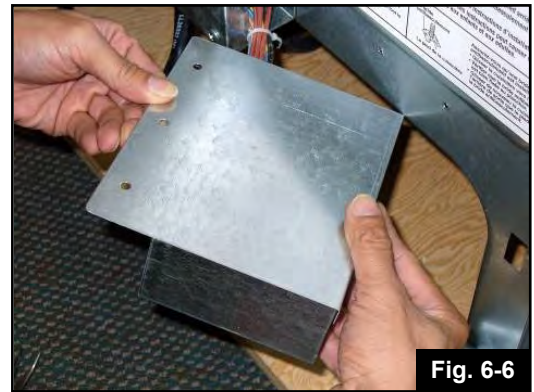


Fig. 6-6

5. Mount the Adapter using 3 screws provided.

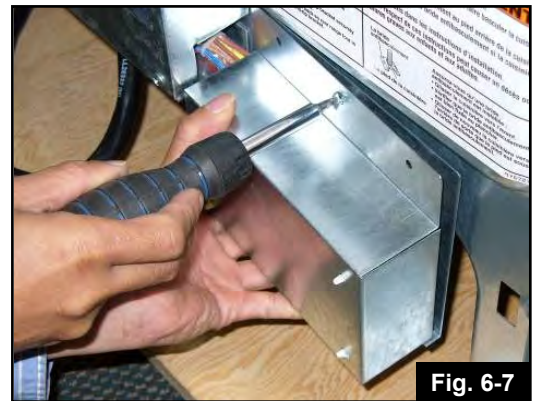


Fig. 6-7

6. Use the cable clamp and screw provided to secure the thermocouple wires away from the power terminals. Use an existing hole in the stove if possible.

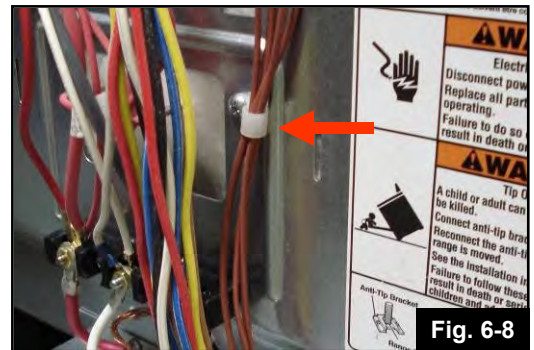


Fig. 6-8

7. After completing the rest of the Safe-T-element® installation reinstall the lower rear cover. Ensure that there are no exposed electrical wires.

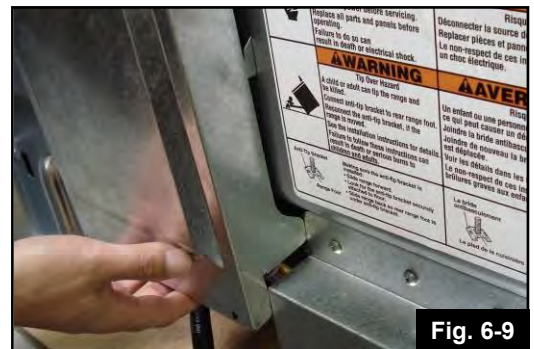


Fig. 6-9



## 7. Installation Instructions for Safe-T-element® Controller Adapter– Pack ID # 11 For Some GE Ranges

Some GE stoves have a very shallow rear compartment and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Safe-T-element® Controller behind the rear panel. Please contact Pioneering Technology if one is required for your stove.

### Installation

1. Disconnect power to stove.



**WARNING:** Failure to disconnect power will result in a hazardous situation.

2. Remove stove rear panel. (Fig.7-1, 7-2)



Fig. 7-1



Fig. 7-2

3. Mount the Safe-T-element® Controller on the adapter plate, using the PCB supports. (Fig.7-3)

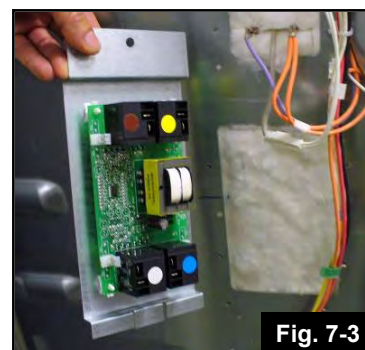


Fig. 7-3

4. Secure the bottom edge of the adapter plate and use the screw provided to hold the top. (Fig.7-4)

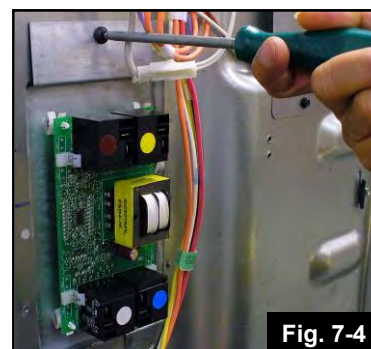


Fig. 7-4

5. Connect the power wires, relay wires and the thermocouple wires to the Safe-T-element® Controller as previously described in these instructions. Re-install rear cover.

## 8. Instructions for Installing Thermocouple Bracket on the Elements of Shallow Deck Stove.

**The thermocouple bracket cannot be attached to the burner element if the deck of the stove is shallow.**

The thermocouple bracket needs to be attached to the long prong of the element to prevent the Safe-T-element® plate from rocking on the stove top.

Components supplied for this fix:

Stainless steel straps- 4 pcs.

First install the Safe-T-element® plate on the element. (Fig.8-1)

The burner element has 2 prongs- a long and short prong. Attach the strap as shown midway on the element's long prong. Insert the thermocouple wire as shown. (Fig.8-2)

Wrap the strap around the prong as shown. (Fig.8-3, 8-4)

Repeat the above steps for the rest of the burner elements.

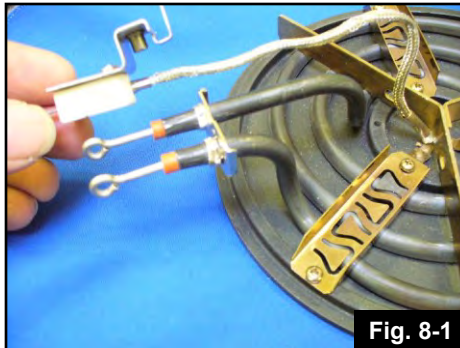


Fig. 8-1

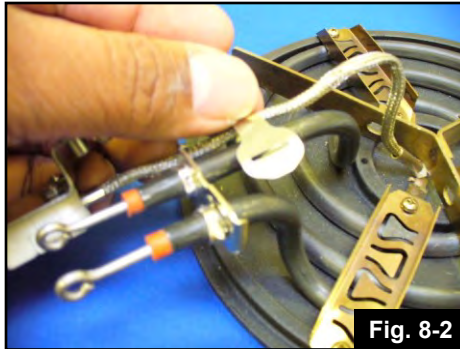


Fig. 8-2

Straighten the 'C' portion of the thermocouple bracket as shown. This is done in order to prevent it from catching on the drip pan when the Safe-T-element® plate is removed from the stove for cleaning

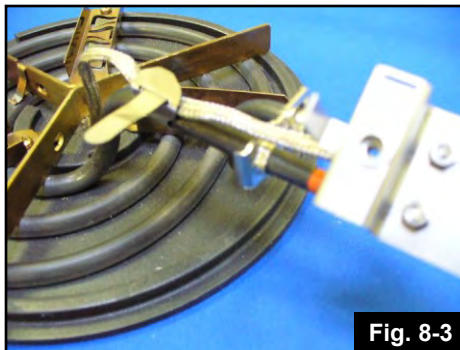


Fig. 8-3

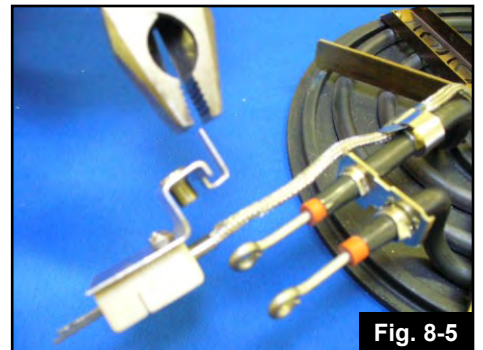


Fig. 8-5

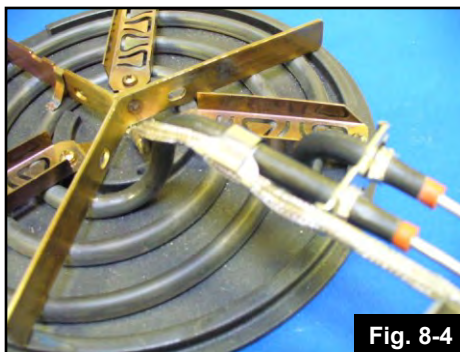


Fig. 8-4

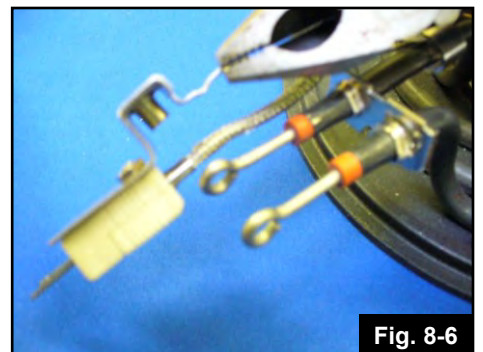


Fig. 8-6



## 9. Non-Round (Oblong) Shaped 4-turn 6" (Small) Element-Spider Modification

In some installations, the 4-turn 6" small element is not truly round & will not fit on the small Safe-T-element<sup>®</sup> plate. The Safe-T-element<sup>®</sup> will still work without replacing these coils using the following steps.

Tools required: Pliers and flat head screw driver.

### Installation Procedure:

1. The small element has 3 spider arms - 1, 2 & 3. Spider arms 2 and 3 have notched endings while spider arm 1 does not have a notched ending (Fig. 9-1).

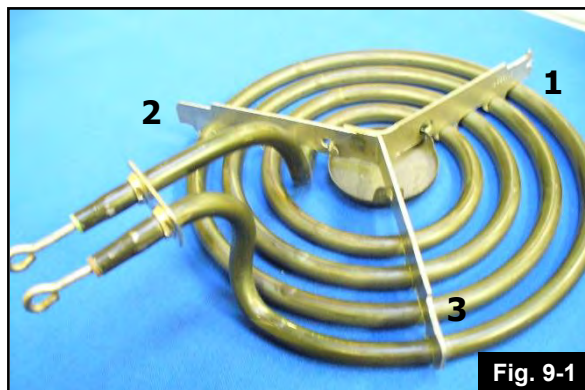


Fig. 9-1

2. Mark notches A, B on spider arms 2 & 3 and notch C on inner spider arm 3 (Fig. 9-2, 9-3 & 9-4).

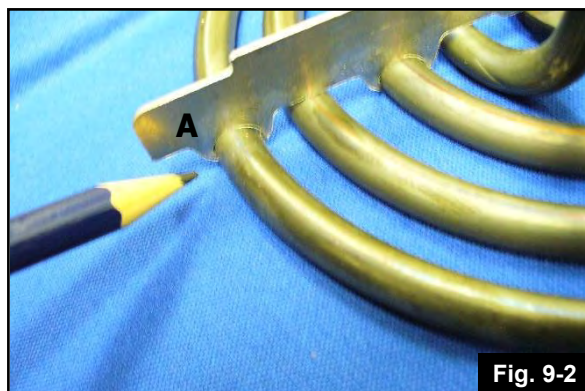


Fig. 9-2

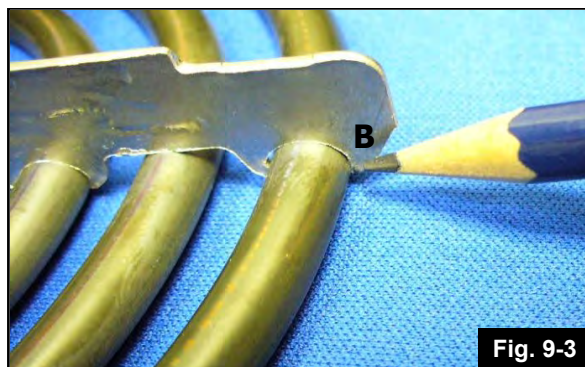


Fig. 9-3

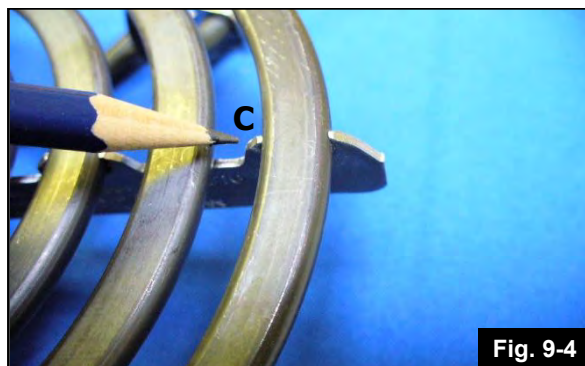
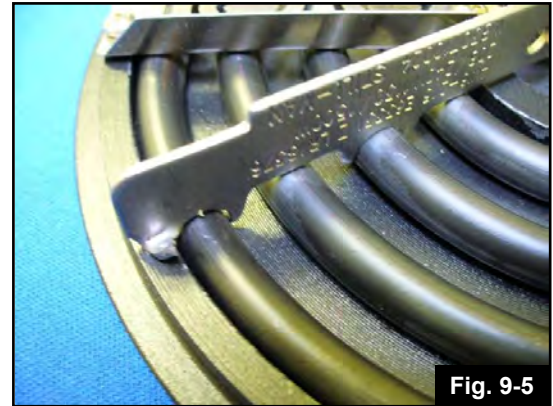
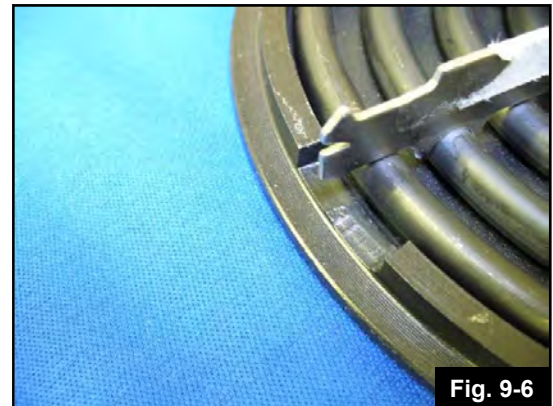


Fig. 9-4

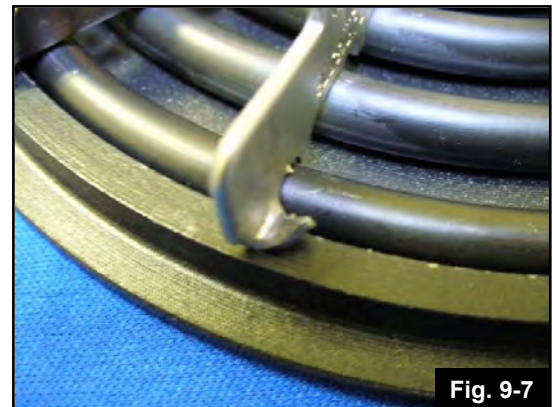
3. Start by bending notches A, B and C with pliers (Fig 9-5, 9-6).



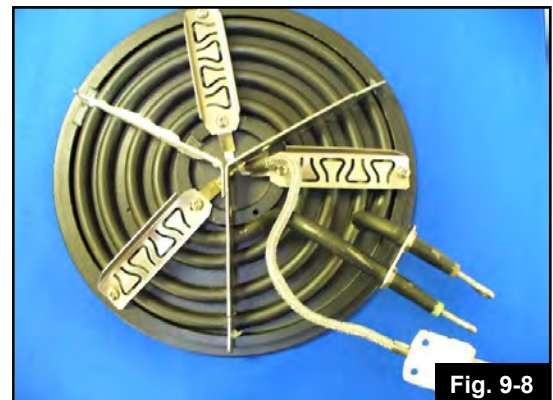
4. Align the coil element such that spider arm 1 is in line with the opening in the plate's inner ring as shown (Fig. 9-7). Install the first 2 retaining brackets to hold the coil to the plate making sure that they are only "hand tightened". Ensure that one of these is the thermocouple wire bracket.









5. Fit the coil into the small plate using a screw driver to push/pry the portion of the coil that overhangs the cast-iron plate until it snaps into the inner ring of the plate (Fig. 9-8).






6. Install the 3rd retaining bracket tightening it AND the first two that were previously hand tightened.



## 10.0 Safe-T-element® Replacement Parts (order by Pack ID #'s)

Part/Assembly	Replacement Parts)	Qty	Pack ID #	Package Figure
Controller Board and PCB supports	Control Board	1	PID-1	
	PCB supports	4		
Small Plate, Mounting and Thermocouple wires	Small plate	1	PID-2	
	Small mounting bracket	2		
	Small mounting bracket with short-end of thermocouple wire	1		
	Mounting bracket screws (M3x5mm)	6		
Large Plate, Mounting Brackets and Thermocouple wires	Large Plate	1	PID-3	
	Large mounting bracket	2		
	Large mounting bracket with short-end of thermocouple wire	1		
	Mounting bracket screws (M3x5mm)	6		
Large Plate Thermocouple wire with Mounting Bracket	Large mounting bracket with short-end of thermocouple wire	1	PID-4	
	Thermocouple wire connector bracket	1		
	Mounting bracket screws	2		
Small Plate Thermocouple wire with Mounting Bracket	Small mounting bracket with short-end of thermocouple wire	1	PID-5	
	Thermocouple wire connector bracket	1		
	Mounting bracket screws (M3x5mm)	2		
Relay wires	Relay wire set	4	PID-6	

Part/Assembly	Replacement Parts)/ Adapter Kit Package	Qty	Pack ID #	Package Figure
<b>Power Wires</b>	Power wire set	<b>2</b>	PID-7	
<b>Extended Relay Wires</b>	Extended relay wire set	<b>4</b>	PID-8	
<b>Thermocouple Wires</b>	Type E thermocouple wire set (Red, Blue, Yellow, Brown)	<b>4</b>	PID-9	



## 11. TROUBLESHOOTING

### 11.1 Common Questions

PROBLEM	POSSIBLE CAUSE/SOLUTION
Stove does not operate	Cord not plugged into wall. Ensure power cord is plugged into outlet.
	Fuse has blown or circuit breaker has tripped. Check stove fuses and breaker at panel.  <b>WARNING:</b> Do not reset breaker/replace fuse until cause is identified and corrected. Failure to do so may result in injury or damage.
One element does not operate	Thermocouple wire connection broken. Ensure thermocouple wire connected. Check thermocouple wire for damage.
One or more of the elements get too hot (up to 450°C/ 842°F)	It is normal to have hot spots on the plate if the Safe-T-element® is operated without a pot or pan. The Safe-T-element® is designed to keep the <i>average</i> temperature of the plate at approximately 350°C (662°F). If the element is operated without a pot or pan then there may be some hot spots due to irregular heating by the element below. This is normal provided that the highest temperature does not exceed 450°C (842°F).
One or more of the elements get too hot (greater than 450°C / 842°F)	Thermocouple wire has a short circuit. Check wire for damage. Replace if necessary.
	Safe-T-element® is not connected properly. Check wiring and ensure thermocouple and relay wires are connected correctly.
	Controller defective. Replace controller and test again.

### 11.2 Getting Help

If you require assistance with the installation of **Safe-T-element®** please call **Pioneering Technology Corp.** at toll free: **1-800-433-6026** or **905-712-2061 x 228** between the hours of 9:00am and 5:00pm EST or email: **service@pioneeringtech.com**.



# safeTelement®

*helps prevent cooking fires before they start*

## Care and Use Manual

### Limited Warranty

For Optimum Cooking Results, Safety and Energy Efficiency

Models PTI STEZA, PTI STEZB, PTI STEZC & PTI STEZD

**NEVER LEAVE COOKING UNATTENDED**



**PIONEERING TECHNOLOGY CORP.**

220 BRITANNIA RD E. - MISSISSAUGA, ON - L4Z 1S6 - TEL (905) 712 2061

Version: B Jun 20 11

# Contents

● Important Safety Instructions.....	Page 2
● Introduction.....	Page 3
● Getting Started.....	Page 4
● Care & Maintenance.....	Page 6
● Troubleshooting.....	Page 9
● Warranty.....	Page 10

## IMPORTANT SAFETY INSTRUCTIONS

- Read all instruction before use.
- Never leave food cooking on the stovetop unattended.
- Keep cooking area clean and clear of combustibles (e.g. potholders, towels, rags, drapes and food packing).
- Keep children and pets away from cooking areas by creating a three-foot (one-meter) ‘kid-free zone’ around the stove.
- Wear short, close fitting or tightly rolled sleeves when cooking. Loose clothing can dangle onto stove burners and catch fire.
- Turn pot handles inward so they can’t be bumped and children can’t grab them.
- Never use a wet oven mitt, as it presents a scald danger if the moisture in the mitt is heated.
- The Safe-T-element® plate will not glow red at any temperature. Therefore, the stove panel element indicator light will be your best way to determine if an element is on.
- The Safe-T-element® may take 30 minutes to cool after use due to the elements large thermal mass.

**Note:** Please read all the above instructions and follow basic precautions suggested by the National Fire Protection Associations (NFPA)

## INTRODUCTION

Congratulations on your purchase of the Safe-T-element® cooking system. The Safe-T-element® cooking system is a patented product upgrade for electric coiled stovetops, engineered to help prevent cooking fires before they start while reducing the amount of electricity required to cook. A regular stove element on high without Safe-T-element can reach a dangerously high temperature of 700C/1291F. No one needs 700C/1291F when oil ignites at as low as 370C/698F.

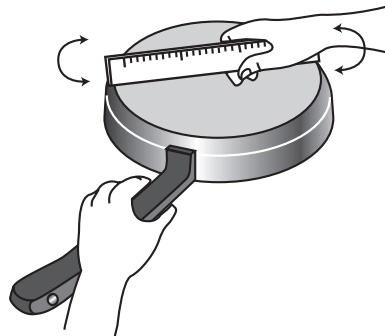
The Safe-T-element® “Control Unit” inside the stove controls the temperature of the plate cover allowing it to only reach a maximum of 350C/662F. When the plate reaches a temperature of 350C/662F, it automatically shuts the stove off and conversely as it cools to just below 350C/662F the stovetop is turned on again. At this temperature, it is more than enough for efficient and effective cooking, while not allowing most household materials to ignite.

The Safe-T-element® helps to prevent kitchen stove fires but is only one of the four key benefits you will appreciate. In addition, you will have greater control over your element’s temperature for improved cooking results, ease in keeping your stove-top and element cavity clean, reduced energy consumption and therefore lower electric bills. It is important to note that a little experimentation may be required to familiarize yourself with the various temperature levels while using the technology.

# GETTING STARTED

## 1. ARE YOU USING THE RIGHT COOKWARE

How economically you cook depends on the quality of the cookware you use, especially the flatness of the bottom of the pot.



*Check for flatness by rotating a ruler across the bottom of the pot.*

Basically, the pot should be slightly larger than the hotplate and have a level, thick and sturdy bottom. Attempt to match large pots with large burners, small pots with small burners for optimal cooking results.

### Recommended Characteristics:

- Flat bottom and straight sides
- Tight fitting lids
- Pan/pot is well balanced
- Pan/pot is made of material that is a good conductor of heat



### Poor Characteristics:



*Curved and warped pan/pot bottoms*



*Pan/pot overhangs Safe-T-element® plate by more than 2.5 cm (1")*



*Heavy handle tilts pan/pot*



*Pan/pot is smaller than the Safe-T-element® plate*

## 2. COOKING WITH THE SAFE-T-ELEMENT®

It is important to note that no behavioral change is required when cooking with the Safe-T-element®. However, a little experimentation may be required to familiarize yourself with the various temperature levels while using the device. DO NOT cook food directly on the Safe-T-element® plate without using cookware.

Since the Safe-T-element® cycles on and off at 350C (662F), the plate will never have a red glow like the unprotected element does at higher temperatures. Therefore, the stove panel element indicator light will be the best way to determine if an element is on.

### How would like your food done?

Control Setting	TYPES OF COOKING
Max	Start most foods; bring water to a boil; pan-broiling; frying.
Medium	Maintain a slow boil; thicken sauces and gravies; steam vegetables.
Medium Low	Keep foods cooking; poaching; stewing.
Low	Keep foods warm; melt; simmer.

## COOKING PERFORMANCE WITH SAFE-T-ELEMENT®

The Safe-T-element® plate is slightly larger in diameter than the burner element so the heat is dispersed evenly across the plate rather than being focused on just three or four rings. This factor along with the type of utensil material and quality can result in a longer initial heat up time. However, once the plate is fully heated up, there should be no obvious difference in cooking time. The plate retains heat and energy savings can be achieved by turning the controls off and using the retained heat to finish cooking.

**NOTE:** *To improve cooking performance please use the right cookware. Refer to point 1 “Are you using the right cookware”.*



## CARE & MAINTENANCE

### 1. BEFORE COOKING WITH THE SAFE-T-ELEMENT®

Before being used for the first time, the Safe-T-element® should be heated up on maximum setting for approximately 4 minutes without any utensil. During this 'curing' process, the protective coating is hardened and obtains its maximum strength.

*NOTE: There may be a slight odor the first time you use your stove-top elements with the Safe-T-element® plate installed. This should dissipate after the first use. For daily cooking use dry pots only. Keep wet utensils or objects with condensation, such as pot lids, away from Safe-T-element®.*

### 2. CLEANING YOUR SAFE-T-ELEMENT®

1. Ensure burner is cool before attempting to clean.
2. Use damp cloth or sponge with mild detergent to clean surface of burner and surrounding plate. Never use harsh abrasives or steel wool pad on any part of the Safe-T-element®.
3. Thoroughly wipe soap from heating element and towel dry.
4. For best results clean your elements and drip pans regularly.

#### **For hard-to-remove stains, please try one of the following options:**

##### **Option #1 - Vegetable Oil:**

1. Apply vegetable oil sparingly on each safe-T-element® cast iron plate and spread it around the entire surface of the plate.
2. Turn the hood vent ON to allow for the minimal amount of smoke created to escape.
3. Turn the power of burners ON Med-HI.
4. Allow the burners to be ON for roughly 5 minutes. This will help break up the grease/rust on the burner.
5. Turn the burners OFF after roughly 5 minutes.
6. Once the burners are cool, clean the cast iron plates with mild soap and towel dry.

##### **Option #2: - Electrol Range Solid Element Cleaner:**

In those instances where spotting or rusting has occurred there is a product that can be applied that can help to maintain the original matte black appearance.

##### **Directions for use:**

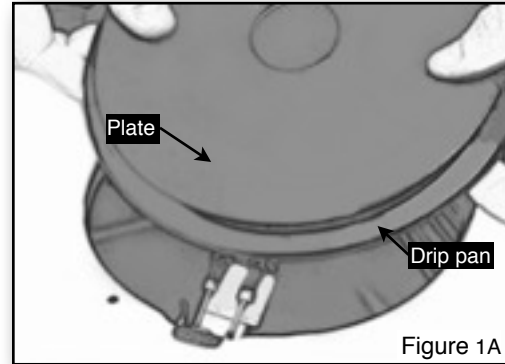
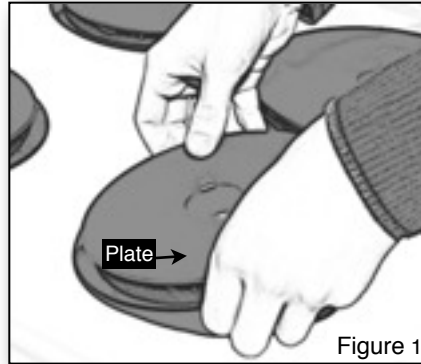
1. Turn on the hood vent first as some smoke and a strong smell will occur. This is normal and is non-toxic and will eventually disappear.
2. Prior to applying Electrol clean the plates with a soapy, non-abrasive scouring pad.
3. Dry the plates thoroughly.
4. Apply Electrol sparingly to a lukewarm element.
5. Spread polish evenly with a paper towel or dry cloth.
6. Turn the element ON a Med-Hi setting for 3-5 minutes to bake the polish in.
7. When the element is completely cool, rub lightly with a paper towel to remove any excess polish.

*Note: If you are interested in **Option #2**, please contact us for more information.*

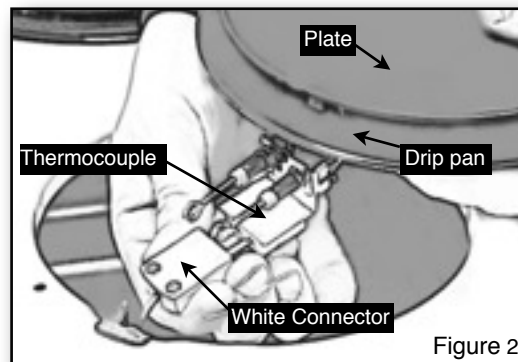
### 3. CLEANING THE DRIP PAN BELOW THE SAFE-T-ELEMENT®:

1. Gently remove plate and element from element socket by lifting edge of plate up and removing from socket hole.

*Note: on some models it may be easier to lift and remove both the plate and the drip pan together.*

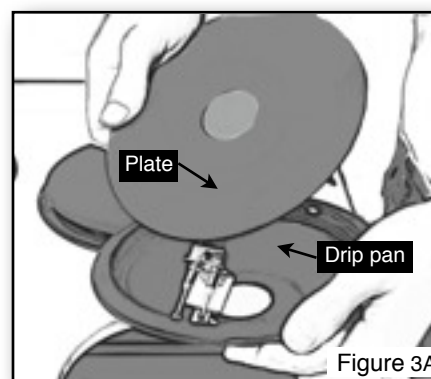
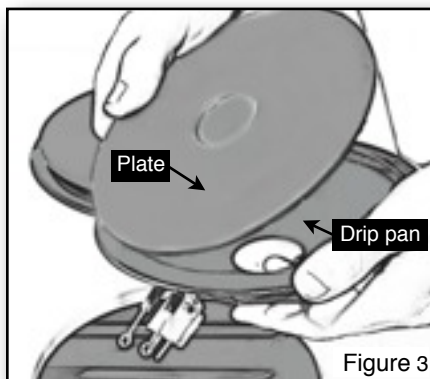


2. Disconnect thermocouple wire attached to plate.



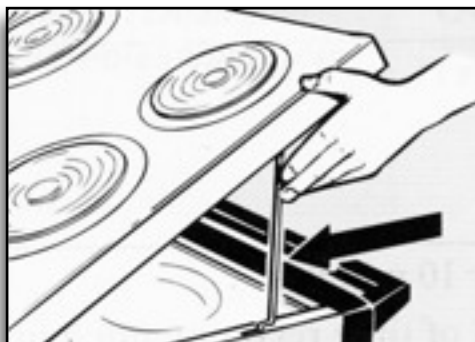
*Important:  
Remove one plate at a time,  
clean drip pan and reconnect  
before removing next element.*

3. Place Safe-T-element® plate with coiled element attached to one side while cleaning the drip pan and other areas below the stove top.



*Note: Clean one plate at a time and then reconnect. To replace plate and element, reconnect thermocouple wire to white connector. Connectors positive (+) and negative (-) teeth must line up. The two connectors must be completely plugged in.  
Simply slide the heating element back into socket and press down firmly on the plate. It is very important that each thermocouple is connected to the right white connector assigned for that particular burner. (Refer to Figure 2)*

#### 4. CLEANING UNDER THE COOKTOP: *(available on select models)*



##### **Lift-Up Cooktop**

***The entire cooktop may be lifted up and supported in the up position for easier cleaning***

The Surface units do not need to be removed; however, you may remove one to make raising the cooktop easier. There are two side supports that lock into


After cleaning under the cooktop with warm, mild soap with water and a clean cloth, lower the cooktop. Be careful not to pinch your fingers.

To lower the cooktop, push the rods back and gently lower the cooktop until it rests in place.

*Note: Be sure all surface units are turned off before raising the cooktop*

## TROUBLESHOOTING

 Read this BEFORE you call for service.

 The Safe-T-element® device is a carefully engineered product. Many times what may appear to be a reason to call for service is, under certain conditions, a normal operating characteristic of the device.

TROUBLE	PROBABLE CAUSE	REMEDY
<b><i>Entire stove does not operate</i></b>	Blown fuse/tripped circuit breaker.	Replace fuse/reset circuit breaker.
	Loose/corroded circuit connection.	Clean and tighten connections.
	Cord/plug not attached to wall outlet.	Make sure cord/plug is plugged tightly into outlet.
	Power Outage.	Check house lights to be sure.
<b><i>Safe-T-element® plates do not heat</i></b>	Control knob set too low.	Turn knob slightly higher until it starts heating.
	Safe-T-element® thermocouple disconnected.	Remove plate and ensure thermocouple (white connector) is connected to the brown wire. **
	Incorrect element knob is turned on.	Ensure the correct element knob is turned on.
	Safe-T-element® plate not seated properly.	Straighten terminals on end of coil element. **
<b><i>Safe-T-element® plate too hot</i></b>	Incorrect temperature setting on the control knob.	Lower temperature setting until proper amount of heat is obtained.
	Safe-T-element® thermocouple wire is connected to the wrong white connector.	Ensure thermocouple wire is connected to the right white connector. (Refer to Figure 2)

**\*\* Ensure knob is set to OFF and the Safe-T-element® plates are completely cool.**

## WARRANTY

Pioneering Technology Corp. warrants that the product is free from defects in materials and workmanship when operated and maintained according to the instructions provided for a period of:

- One (1) year from date of purchase for residential use
- Ninety (90) days from date of purchase for commercial use

This warranty does not cover physical damage caused by improper installation, misuse, neglect or accident.

This warranty is VOID if this product has been altered or modified in any way. The Safe-T-element® must be installed by a qualified service technician.

For service under this warranty contact your Safe-T-element® distributor or Pioneering Technology Corp. at:

**Pioneering Technology Corp. - Service Dept.**

220 Britannia Rd. E

Mississauga, Ontario

Canada L4Z 1S6

Tel: (800) 433-6026 or (905) 712-2061 ext. 228

Email: [service@pioneeringtech.com](mailto:service@pioneeringtech.com)

[www.safetelement.com](http://www.safetelement.com)

THERE ARE NO OTHER WARRANTIES. PIONEERING TECHNOLOGY CORP. DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHERS WHICH VARY FROM STATE TO STATE.

EXCEPT AS STATED HEREIN, IN NO EVENT SHALL PIONEERING TECHNOLOGY CORP. BE LIABLE FOR ANY DAMAGES WHATSOEVER WHETHER BASED ON CONTRACT, TORT, WARRANTY OR OTHER EQUITABLE GROUNDS, INCLUDING, WITHOUT LIMITATION, OR OTHER PECUNIARY LOSS, ARISING OUT OF THE USE OR INABILITY TO USE THIS PRODUCT, EVEN IF PIONEERING TECHNOLOGY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Pioneering Technology's entire liability and your exclusive remedy shall be at Pioneering Technology's option, either (a) return of the price paid for the product or (b) repair or replacement of the product that does not meet Pioneering Technology's Limited Warranty and which is returned to Pioneering Technology. In no event shall Pioneering Technology's liability exceed the purchase price of the product.



One Paragon Drive  
Montvale, New Jersey 07645  
Tel: 201 573 1767  
Fax: 201 573 0808  
SNS-Arch-Eng.com

John M. Lignos, AIA, LEED AP  
Lorin J. Sonenshine, AIA  
Steven Napolitano, PE, LEED AP  
Robert G. Nocella, AIA

Helen Marie Logan, AIA, CID

**BULLETIN No. 1**

**PARTICULARS**

- 1.01 DATE: April 12, 2016
- 1.02 PROJECT: Interior Renovations to  
College Park Apartments  
Ramapo College of New Jersey
- 1.03 PHASE #1 BUILDINGS:
- | <u>Building:</u>  | <u>Date of Drawings Set Issue:</u> |
|-------------------|------------------------------------|
| International –F  | June 3, 2015                       |
| Mimosa – G        | April 7, 2015                      |
| Palm – E          | June 3, 2015                       |
| Elm – I           | June 3, 2015                       |
| Science House – H | June 3, 2015                       |
- 1.04 SNS PROJECT NUMBER: 4698.01

**TO: CONTRACTORS**

- 2.01 The following information contained in this Bulletin is issued to amend, clarify or supersede the drawings and specifications, as applicable, and shall become a part of the Contract Documents for the subject project as if fully incorporated and bound herein, with amendments and additions noted below.
- 2.02 This Bulletin consists of 3 pages and attachments as noted below.

**CLARIFICATIONS & CHANGES TO THE DRAWINGS**

- 3.01 Kitchen Equipment Schedule:
- 3.01.1 All kitchen ranges as specified on the equipment schedules as model # GE JBS60DF have been changed. Contractors shall furnish and install GE 30” free standing electric range with coil type electric burners, model number GE JB250DF-WW (29.8w x 48.8h x 28d). Contractors shall also furnish & install ‘Safe-T’ element at all ranges, attached are 3 pdf files for Safe-T Element.



3.02 Shower Drains:

- 3.02.1 The specified shower drain for fixture type 'SH1', JR Smith Model 2005 shall be replaced with Sioux Chief Manufacturing Company Model 825-2PPK.

3.03 Kitchen:

- 3.03.1 Contractor shall furnish and install new full height access panel at side of refrigerator to access the new water heater if required. See attached revised sketches for reference ((SK-3-31.1 & SK-3-31.2).
- 3.03.2 Furnish and install 1 ½" filler panel along side of upper cabinet and microwave, see attached sketches for reference (SK-3-31.1 & SK-3-31.2).

3.04 Fan Coil Units:

- 3.04.1 The supply and return lines serving the fan coil units shall be provided with an isolation valve and drain or flush port to allow for draining of the system. These should be located on the supply / return line risers in the crawl space below each hot water heater closet.
- 3.04.2 All new fan Coil units shall be provided with new isolation valves. Isolation valves shall be short handle ball valves. Gate valves are not acceptable.

3.05 Sprinkler:

- 3.05.1 All fire / sprinkler valves to be relocated from the crawl space into the new Janitors closets.
- 3.05.2 Contractors shall coordinate with reviewed and approved sprinkler shop drawings. Certain concealed side wall sprinkler heads and lines which were located in soffits have been revised and are now concealed ceiling heads and lines above ceilings. GC and construction managers shall review and coordinate with these drawings and omit soffits no longer required.

3.06 Stair vestibule:

- 3.06.1 The existing exposed 4"x4" wood post supporting the second floor bridge shall be wrapped and finished as those in the Holly building. GC shall visit the Holly building and match construction.

3.07 HWH Clostes:

- 3.07.1 The floor drains indicated in the hot water heater closets shall be deleted from the project. In lieu of the floor drain, a drain pan shall be installed below each hot water heater. The drain pan shall be piped to the nearest existing floor drain in the crawl space.



3.08 Data / Telecom / USB:

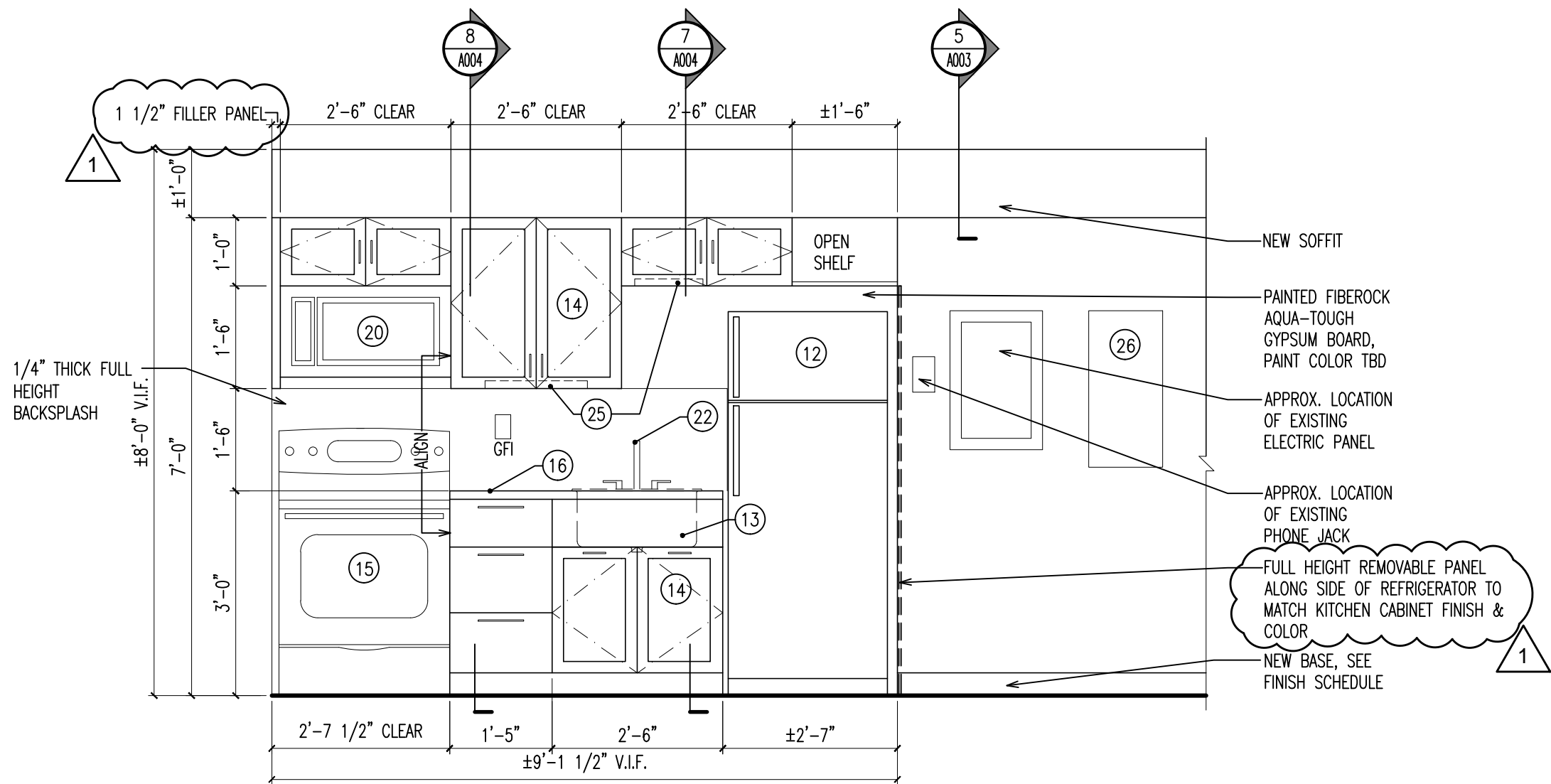
3.08.1 Sketch SK-3-31.3; indicates locations for Data/Telecom and USB outlets. The sketch shows locations for a single unit as reference, contractors shall follow per unit.

3.09 Floor Transitions:

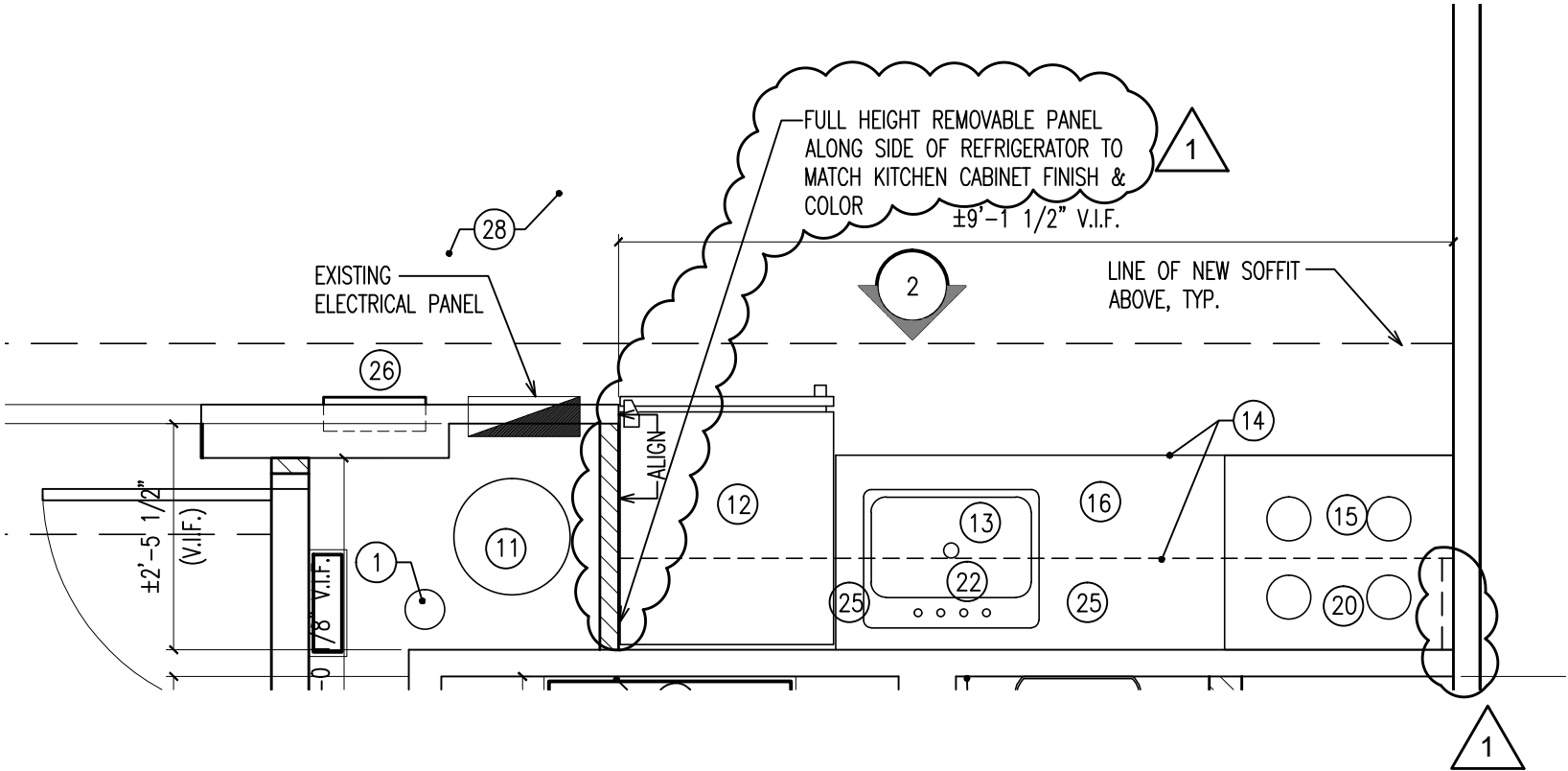
3.09.1 Contractor shall verify that all gaps between walls of the module units have been filled with continuous F.T. wood blocking and fire stopping which meets U.L. Rating and Building Codes. If gaps are not filled, contractor shall fill gaps as noted. The transitions between the modules and rooms shall be level and smooth, without any change in elevation or saddle / transitions.

Attachments:



- Sketch SK-3-31.1
- Sketch SK-3-31.2
- Sketch SK-3-31.3
- Safe-T-Element Installation instructions (pdf attachment)
- Safe-T-Element Care & Use Manual (pdf attachment)
- Safe-T-Element Specifications (pdf attachment)



**2 TYPICAL KITCHEN ELEVATIONS**  
SCALE: 1/2" = 1'-0"  
NOTE: COORDINATE EXACT LAYOUT PER BUILDING & UNIT



**1 PARTIAL ENLARGED TYPICAL KITCHEN PLAN**  
SCALE : 1/2" = 1'-0"  
NOTE: COORDINATE EXACT LAYOUT PER BUILDING & UNIT

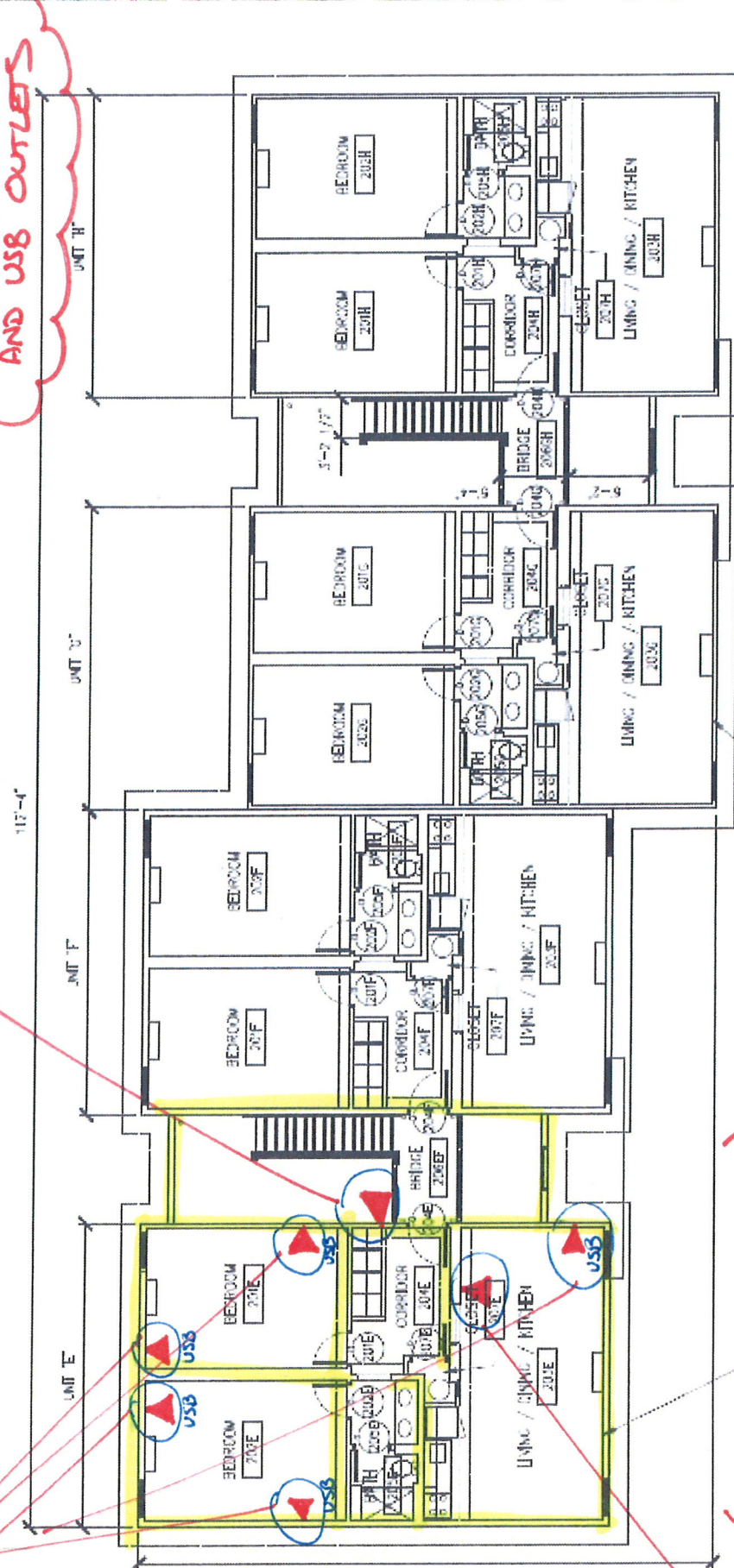
Date	Issue	Description	Project 4698.00	Date 03-31-16	Scale AS NOTED	Dwg. No.
04-12-16	1	ISSUED PER BULLETIN NO.1		INTERIOR RENOVATIONS TO COLLEGE PARK APARTMENTS RAMAPO COLLEGE OF NEW JERSEY PHASE 1 BUILDINGS	PARTIAL ENLARGED TYPICAL KITCHEN PLAN	 SK-3-31.2



Cat 6 R/GLO (TYPICAL EACH APARTMENT)

WAP (TYPICAL EACH VESTIBULE)

4/7/10 LOCATIONS FOR DATA/TELECOM AND USB OUTLETS

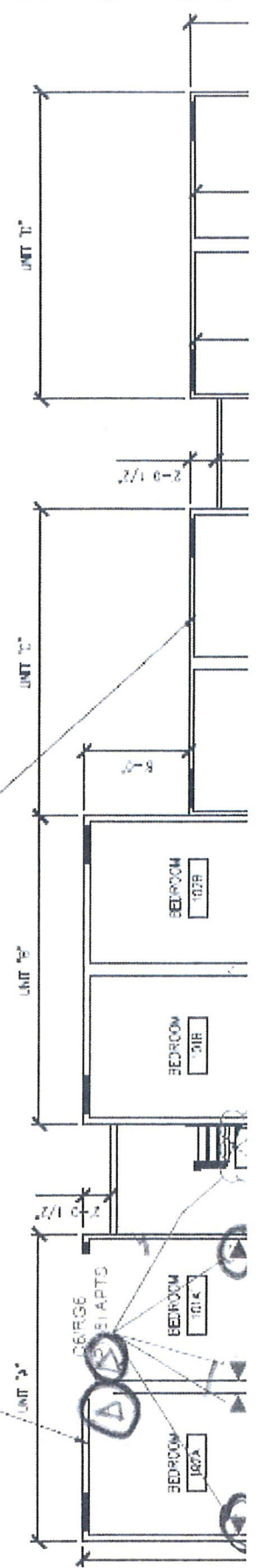


Cat 5e (TYPICAL EACH APARTMENT)

TYPICAL ALL UNITS & ALL BLDGS  
 REGRATE NEW INTERIOR 5/8" GYPSUM WALL BOARD (IMPACT RESISTANT FIRST 4'-0" AFF.) ON EXISTING WALLS. BEFORE WALL BOARD INSTALLATION, CONFIRM THAT BATT INSULATION IS NOT DAMAGED AND IS ADEQUATE. REPLACE BATT INSULATION AS REQUIRED.

SK - 3-31.3  
 N.T.S.

2 SECOND FLOOR PLAN  
 1/8" = 1'-0"



# safeTelement®

*helps prevent cooking fires before they start*

## Care and Use Manual

### Limited Warranty

For Optimum Cooking Results, Safety and Energy Efficiency

Models PTI STEZA, PTI STEZB, PTI STEZC & PTI STEZD

**NEVER LEAVE COOKING UNATTENDED**



**PIONEERING TECHNOLOGY CORP.**

**220 BRITANNIA RD E. - MISSISSAUGA, ON - L4Z 1S6 - TEL (905) 712 2061**

Version: B Jun 20 11

# Contents

● Important Safety Instructions.....	Page 2
● Introduction.....	Page 3
● Getting Started.....	Page 4
● Care & Maintenance.....	Page 6
● Troubleshooting.....	Page 9
● Warranty.....	Page 10

## IMPORTANT SAFETY INSTRUCTIONS

- Read all instruction before use.
- Never leave food cooking on the stovetop unattended.
- Keep cooking area clean and clear of combustibles (e.g. potholders, towels, rags, drapes and food packing).
- Keep children and pets away from cooking areas by creating a three-foot (one-meter) ‘kid-free zone’ around the stove.
- Wear short, close fitting or tightly rolled sleeves when cooking. Loose clothing can dangle onto stove burners and catch fire.
- Turn pot handles inward so they can’t be bumped and children can’t grab them.
- Never use a wet oven mitt, as it presents a scald danger if the moisture in the mitt is heated.
- The Safe-T-element® plate will not glow red at any temperature. Therefore, the stove panel element indicator light will be your best way to determine if an element is on.
- The Safe-T-element® may take 30 minutes to cool after use due to the elements large thermal mass.

**Note:** Please read all the above instructions and follow basic precautions suggested by the National Fire Protection Associations (NFPA)

## INTRODUCTION

Congratulations on your purchase of the Safe-T-element® cooking system. The Safe-T-element® cooking system is a patented product upgrade for electric coiled stovetops, engineered to help prevent cooking fires before they start while reducing the amount of electricity required to cook. A regular stove element on high without Safe-T-element can reach a dangerously high temperature of 700C/1291F. No one needs 700C/1291F when oil ignites at as low as 370C/698F.

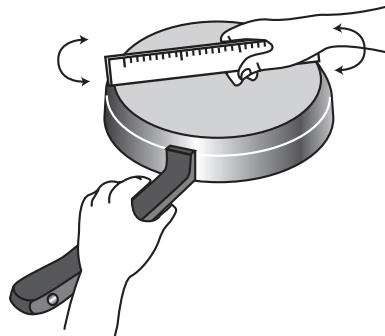
The Safe-T-element® “Control Unit” inside the stove controls the temperature of the plate cover allowing it to only reach a maximum of 350C/662F. When the plate reaches a temperature of 350C/662F, it automatically shuts the stove off and conversely as it cools to just below 350C/662F the stovetop is turned on again. At this temperature, it is more than enough for efficient and effective cooking, while not allowing most household materials to ignite.

The Safe-T-element® helps to prevent kitchen stove fires but is only one of the four key benefits you will appreciate. In addition, you will have greater control over your element’s temperature for improved cooking results, ease in keeping your stove-top and element cavity clean, reduced energy consumption and therefore lower electric bills. It is important to note that a little experimentation may be required to familiarize yourself with the various temperature levels while using the technology.

# GETTING STARTED

## 1. ARE YOU USING THE RIGHT COOKWARE

How economically you cook depends on the quality of the cookware you use, especially the flatness of the bottom of the pot.



*Check for flatness by rotating a ruler across the bottom of the pot.*

Basically, the pot should be slightly larger than the hotplate and have a level, thick and sturdy bottom. Attempt to match large pots with large burners, small pots with small burners for optimal cooking results.

### Recommended Characteristics:

- Flat bottom and straight sides
- Tight fitting lids
- Pan/pot is well balanced
- Pan/pot is made of material that is a good conductor of heat



### Poor Characteristics:



*Curved and warped pan/pot bottoms*



*Pan/pot overhangs Safe-T-element® plate by more than 2.5 cm (1")*



*Heavy handle tilts pan/pot*



*Pan/pot is smaller than the Safe-T-element® plate*



## 2. COOKING WITH THE SAFE-T-ELEMENT®

It is important to note that no behavioral change is required when cooking with the Safe-T-element®. However, a little experimentation may be required to familiarize yourself with the various temperature levels while using the device. DO NOT cook food directly on the Safe-T-element® plate without using cookware.

Since the Safe-T-element® cycles on and off at 350C (662F), the plate will never have a red glow like the unprotected element does at higher temperatures. Therefore, the stove panel element indicator light will be the best way to determine if an element is on.

### How would like your food done?

Control Setting	TYPES OF COOKING
Max	Start most foods; bring water to a boil; pan-broiling; frying.
Medium	Maintain a slow boil; thicken sauces and gravies; steam vegetables.
Medium Low	Keep foods cooking; poaching; stewing.
Low	Keep foods warm; melt; simmer.

## COOKING PERFORMANCE WITH SAFE-T-ELEMENT®

The Safe-T-element® plate is slightly larger in diameter than the burner element so the heat is dispersed evenly across the plate rather than being focused on just three or four rings. This factor along with the type of utensil material and quality can result in a longer initial heat up time. However, once the plate is fully heated up, there should be no obvious difference in cooking time. The plate retains heat and energy savings can be achieved by turning the controls off and using the retained heat to finish cooking.

**NOTE:** *To improve cooking performance please use the right cookware. Refer to point 1 “Are you using the right cookware”.*

## CARE & MAINTENANCE

### 1. BEFORE COOKING WITH THE SAFE-T-ELEMENT®

Before being used for the first time, the Safe-T-element® should be heated up on maximum setting for approximately 4 minutes without any utensil. During this 'curing' process, the protective coating is hardened and obtains its maximum strength.

*NOTE: There may be a slight odor the first time you use your stove-top elements with the Safe-T-element® plate installed. This should dissipate after the first use. For daily cooking use dry pots only. Keep wet utensils or objects with condensation, such as pot lids, away from Safe-T-element®.*

### 2. CLEANING YOUR SAFE-T-ELEMENT®

1. Ensure burner is cool before attempting to clean.
2. Use damp cloth or sponge with mild detergent to clean surface of burner and surrounding plate. Never use harsh abrasives or steel wool pad on any part of the Safe-T-element®.
3. Thoroughly wipe soap from heating element and towel dry.
4. For best results clean your elements and drip pans regularly.

#### **For hard-to-remove stains, please try one of the following options:**

##### **Option #1 - Vegetable Oil:**

1. Apply vegetable oil sparingly on each safe-T-element® cast iron plate and spread it around the entire surface of the plate.
2. Turn the hood vent ON to allow for the minimal amount of smoke created to escape.
3. Turn the power of burners ON Med-HI.
4. Allow the burners to be ON for roughly 5 minutes. This will help break up the grease/rust on the burner.
5. Turn the burners OFF after roughly 5 minutes.
6. Once the burners are cool, clean the cast iron plates with mild soap and towel dry.

##### **Option #2: - Electrol Range Solid Element Cleaner:**

In those instances where spotting or rusting has occurred there is a product that can be applied that can help to maintain the original matte black appearance.

##### **Directions for use:**

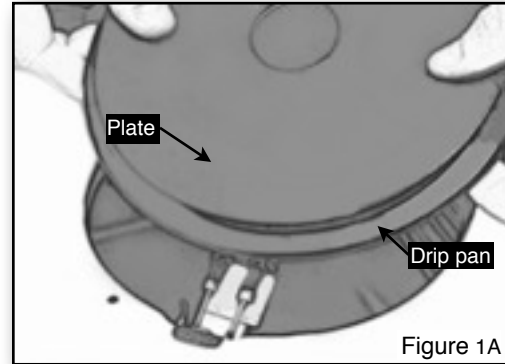
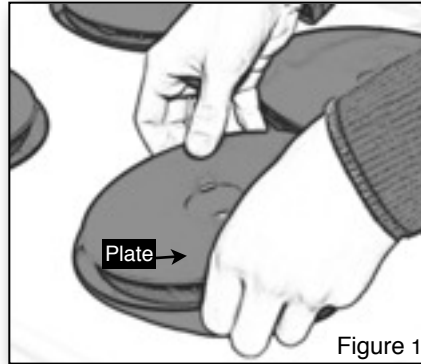
1. Turn on the hood vent first as some smoke and a strong smell will occur. This is normal and is non-toxic and will eventually disappear.
2. Prior to applying Electrol clean the plates with a soapy, non-abrasive scouring pad.
3. Dry the plates thoroughly.
4. Apply Electrol sparingly to a lukewarm element.
5. Spread polish evenly with a paper towel or dry cloth.
6. Turn the element ON a Med-Hi setting for 3-5 minutes to bake the polish in.
7. When the element is completely cool, rub lightly with a paper towel to remove any excess polish.

*Note: If you are interested in **Option #2**, please contact us for more information.*

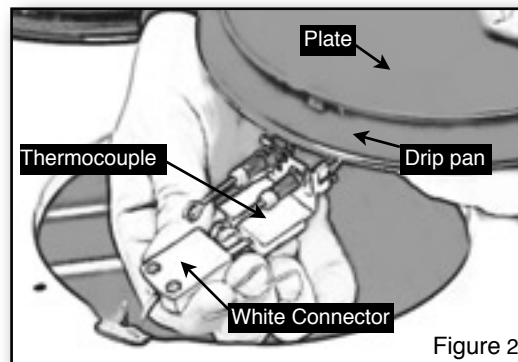
### 3. CLEANING THE DRIP PAN BELOW THE SAFE-T-ELEMENT®:

1. Gently remove plate and element from element socket by lifting edge of plate up and removing from socket hole.

*Note: on some models it may be easier to lift and remove both the plate and the drip pan together.*

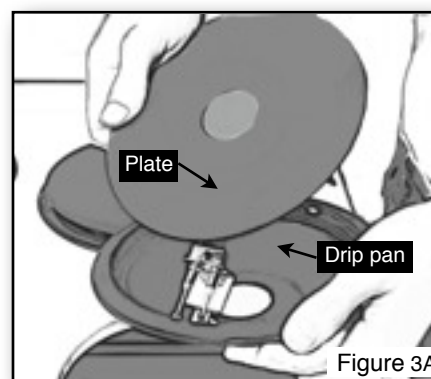
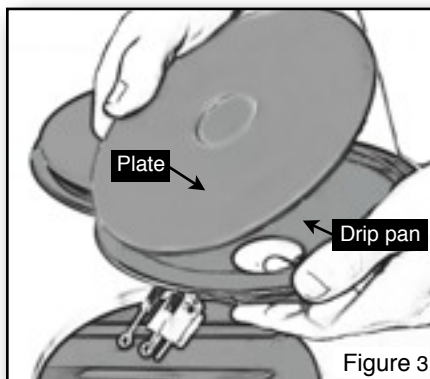


2. Disconnect thermocouple wire attached to plate.



*Important:  
Remove one plate at a time,  
clean drip pan and reconnect  
before removing next element.*

3. Place Safe-T-element® plate with coiled element attached to one side while cleaning the drip pan and other areas below the stove top.



*Note: Clean one plate at a time and then reconnect. To replace plate and element, reconnect thermocouple wire to white connector. Connectors positive (+) and negative (-) teeth must line up. The two connectors must be completely plugged in.  
Simply slide the heating element back into socket and press down firmly on the plate. It is very important that each thermocouple is connected to the right white connector assigned for that particular burner. (Refer to Figure 2)*

#### 4. CLEANING UNDER THE COOKTOP: *(available on select models)*



##### **Lift-Up Cooktop**

***The entire cooktop may be lifted up and supported in the up position for easier cleaning***

The Surface units do not need to be removed; however, you may remove one to make raising the cooktop easier. There are two side supports that lock into


After cleaning under the cooktop with warm, mild soap with water and a clean cloth, lower the cooktop. Be careful not to pinch your fingers.

To lower the cooktop, push the rods back and gently lower the cooktop until it rests in place.

*Note: Be sure all surface units are turned off before raising the cooktop*

## TROUBLESHOOTING

 Read this BEFORE you call for service.

 The Safe-T-element® device is a carefully engineered product. Many times what may appear to be a reason to call for service is, under certain conditions, a normal operating characteristic of the device.

TROUBLE	PROBABLE CAUSE	REMEDY
<b><i>Entire stove does not operate</i></b>	Blown fuse/tripped circuit breaker.	Replace fuse/reset circuit breaker.
	Loose/corroded circuit connection.	Clean and tighten connections.
	Cord/plug not attached to wall outlet.	Make sure cord/plug is plugged tightly into outlet.
	Power Outage.	Check house lights to be sure.
<b><i>Safe-T-element® plates do not heat</i></b>	Control knob set too low.	Turn knob slightly higher until it starts heating.
	Safe-T-element® thermocouple disconnected.	Remove plate and ensure thermocouple (white connector) is connected to the brown wire. **
	Incorrect element knob is turned on.	Ensure the correct element knob is turned on.
	Safe-T-element® plate not seated properly.	Straighten terminals on end of coil element. **
<b><i>Safe-T-element® plate too hot</i></b>	Incorrect temperature setting on the control knob.	Lower temperature setting until proper amount of heat is obtained.
	Safe-T-element® thermocouple wire is connected to the wrong white connector.	Ensure thermocouple wire is connected to the right white connector. (Refer to Figure 2)

**\*\* Ensure knob is set to OFF and the Safe-T-element® plates are completely cool.**



## WARRANTY

Pioneering Technology Corp. warrants that the product is free from defects in materials and workmanship when operated and maintained according to the instructions provided for a period of:

- One (1) year from date of purchase for residential use
- Ninety (90) days from date of purchase for commercial use

This warranty does not cover physical damage caused by improper installation, misuse, neglect or accident.

This warranty is VOID if this product has been altered or modified in any way. The Safe-T-element® must be installed by a qualified service technician.

For service under this warranty contact your Safe-T-element® distributor or Pioneering Technology Corp. at:

**Pioneering Technology Corp. - Service Dept.**

220 Britannia Rd. E

Mississauga, Ontario

Canada L4Z 1S6

Tel: (800) 433-6026 or (905) 712-2061 ext. 228

Email: [service@pioneeringtech.com](mailto:service@pioneeringtech.com)

[www.safetelement.com](http://www.safetelement.com)

THERE ARE NO OTHER WARRANTIES. PIONEERING TECHNOLOGY CORP. DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHERS WHICH VARY FROM STATE TO STATE.

EXCEPT AS STATED HEREIN, IN NO EVENT SHALL PIONEERING TECHNOLOGY CORP. BE LIABLE FOR ANY DAMAGES WHATSOEVER WHETHER BASED ON CONTRACT, TORT, WARRANTY OR OTHER EQUITABLE GROUNDS, INCLUDING, WITHOUT LIMITATION, OR OTHER PECUNIARY LOSS, ARISING OUT OF THE USE OR INABILITY TO USE THIS PRODUCT, EVEN IF PIONEERING TECHNOLOGY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Pioneering Technology's entire liability and your exclusive remedy shall be at Pioneering Technology's option, either (a) return of the price paid for the product or (b) repair or replacement of the product that does not meet Pioneering Technology's Limited Warranty and which is returned to Pioneering Technology. In no event shall Pioneering Technology's liability exceed the purchase price of the product.



# Safe-T-element® Installation Instructions

**For: PTI STEZA (2x2 Burner Configuration) &  
PTI STEZB (3x1 Burner Configuration)**

Revision K (May. 3 2012)



## TABLE OF CONTENTS

<b>1. PREPARATION.....</b>	<b>3</b>
1.1 General Safety Instructions.....	3
1.2 Before You Start.....	3
1.3 Tools & Equipment Needed.....	4
1.4 Safe-T-element® Components.....	4
1.5 Optional Components.....	5
<b>2. INSTALLATION.....</b>	<b>8</b>
2.1 Preparing For Installation.....	8
2.2 Installing Safe-T-element® Plates.....	9
2.3 Mounting the Safe-T-element® Controller.....	11
2.4 Connecting Power to the Safe-T-element® Controller.....	12
2.5 Connecting the Elements to the Safe-T-element® Controller.....	13
2.6 Wiring Diagram.....	14
2.7 Connecting the Temperature Sensors to the Safe-T-element® Controller.....	15
2.8 Reassembly.....	16
2.9 Testing.....	17
2.10 Applying the Installation Label.....	17
<b>3. FRONT-MOUNTED CONTROL SWITCH STOVES.....</b>	<b>18</b>
3.1 Preparation for Installation.....	18
3.2 Mounting the Safe-T-element® Controller.....	18
3.3 Connecting Power to the Safe-T-element® Controller.....	19
3.4 Connecting the Elements to the Safe-T-element® Controller.....	19
<b>4. LOCATION of SAFE-T-ELEMENT® CONTROLLER IN SPECIAL CASES.....</b>	<b>22</b>
<b>5. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER PACK ID # 27.....</b>	<b>23</b>
5.1 Tools & Equipment Needed.....	23
5.2 Pack ID # 27-Components.....	23
5.3 Installation.....	23
<b>6. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER PACK ID # 10.....</b>	<b>26</b>
6.1 Tools & Equipment Needed.....	26
6.2 Pack ID # 10-Components.....	26
6.3 Installation.....	26
6.3a Preparing for Installation.....	26
6.3b Installing the Adapter.....	27
<b>7. INSTALLATION INSTRUCTIONS FOR SAFE-T-ELEMENT® CONTROLLER ADAPTER KIT PACK ID # 11.....</b>	<b>29</b>
<b>8. INSTRUCTIONS FOR INSTALLING THERMOCOUPLE ADAPTER ON SHALLOW-DECK STOVES.....</b>	<b>30</b>
<b>9. NON-ROUND (OBLONG)SHAPED 4-TURN 6" (SMALL) ELEMENT- SPIDER MODIFICATION.....</b>	<b>31</b>
<b>10. SAFE-T-ELEMENT® REPLACEMENT PARTS.....</b>	<b>33</b>
<b>11. TROUBLESHOOTING.....</b>	<b>35</b>
10.1 Common Questions.....	35
10.2 Getting Help.....	35

# 1. PREPARATION

## 1.1 General Safety Instructions

### Safety First!



Have your Safe-T-element<sup>®</sup> installed by a qualified service technician. Follow the installation and servicing instructions provided with this product.



Read this manual carefully before installing the Safe-T-element<sup>®</sup> to reduce the risk of electric shock, fire, burn hazard or other injury.



Extreme care must be used because of the high voltages used by the stove and this product. Disconnect the power to the stove before removing the rear cover.



Do not repair or replace any part of this product unless it is specifically recommended in this manual.

Save these instructions for future reference. If you are installing this unit for someone else, give the Care and Use Manual to that person for future reference.

## 1.2 Before You Start



**WARNING:** Shock hazard present due to high voltages.



Disconnect power to stove before installing this product. Ensure that the power to the stove remains OFF during the entire duration of the Safe-T-element<sup>®</sup> installation.



Ensure that the burners are cool before attempting to install this product.

### 1.3 Tools and Equipment Needed

Power Drill  
 5/32" Drill bit  
 #1 Phillips screwdriver  
 #2 Phillips screwdriver  
 Flat head screwdriver  
 Needle nose pliers  
 3/8" Nut Driver

### 1.4 Safe-T-element® Components




Quantity 2+2 Configuration PTI STEZA	Quantity 3+1 Configuration PTI STEZB	Description
2	1	Large Safe-T-element® plate
2	3	Small Safe-T-element® plate
1	1	Safe-T-element® Controller
4	4	Controller mounting supports (+2 extras)
4	2	Large plate bracket
4	6	Small plate bracket
24	24	M3x5mm Bracket Screws (+ 2 extras)
4	4	M3x6mm Bracket Screws (packaged separately)
4	4	M3x12mm Thermocouple Wire Bracket Screws
2	2	Nylon cable clip
4	4	Nylon cable tie
2	1	Thermocouple assembly for large plate
2	3	Thermocouple assembly for small plate
4	4	Thermocouple bracket
4	4	Thermocouple wire includes: 1 blue, 1 red, 1 yellow & 1 brown
1	1	Wire set includes: A. Power wire set Includes: 1 Black 1 White B. Relay wire set Includes: 1 Blue 1 Red 1 Yellow 1 Brown C. Extension wire set Includes: 1 Blue 1 Red 1 Yellow 1 Brown



Quantity 2+2 Configuration PTI STEZA	Quantity 3+1 Configuration PTI STEZB	Description
1	1	Care and Use Guide
1	1	Warning Sheet
1	1	Drill Template
2	2	0.250" tab, #10 Ring Terminal Adapter
4	4	White Insulating Sleeves for Straight-type female terminal (+2 extras)
4	4	White Insulating Sleeves for Flag or right-angled type female terminal (+2 extras)
1	1	Thermocouple Wire Kit for Shallow Deck Stoves: Stainless Steel Straps-4pcs. (+5 extras)
1	1	Installation Sticker

## 1.5 Optional Components:

Some stoves may require an adapter kit for the installation of the Safe-T-element<sup>®</sup> Controller. The following is a partial list of adapter kits available. Please contact Pioneering Technology if unsure whether an adapter kit is required for your stove.

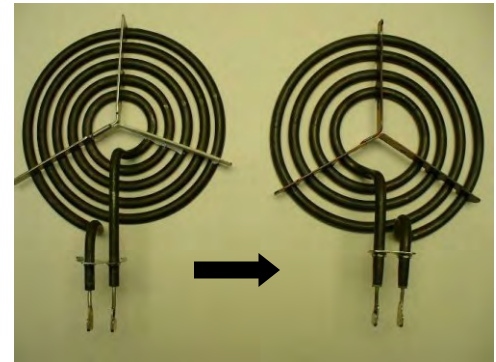
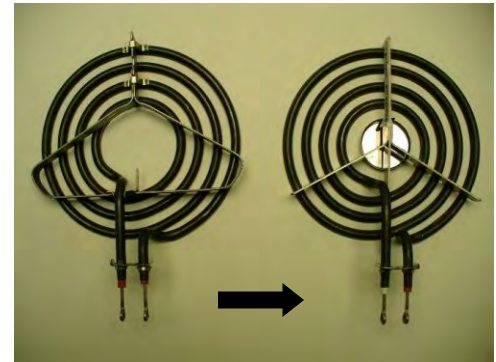
Pack ID No.	Description	Parts Included in Kit
PID-27 	Universal Adapter for shallow rear compartment stoves	<ul style="list-style-type: none"> <li>1 pc. External mounting bracket</li> <li>4pcs. #8 x 1/2" self-tapping screws</li> <li>4pcs. Nylon cable ties</li> </ul>
PID-10 	Adapter for Whirlpool ranges with shallow rear compartment	<ul style="list-style-type: none"> <li>1 pc. External mounting bracket + 1pc. cover plate</li> <li>3pcs. #8 x 1/2" self-tapping screws</li> <li>2pcs. Nylon cable ties</li> <li>1pc. Nylon cable clip</li> </ul>
PID-11 	Adapter for GE ranges with shallow rear compartment	<ul style="list-style-type: none"> <li>1 pc. Mounting bracket</li> <li>1 #10 x 1/2" self-tapping screw</li> </ul>

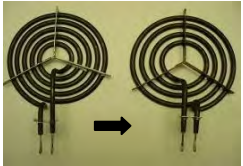
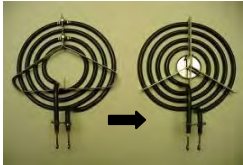
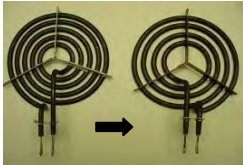
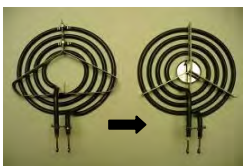
Ensure that the Safe-T-element® is compatible with the stove. Some stove models may require the replacement of the elements or the use of an adapter kit.

### Check the construction of the burners.

The Safe-T-element® plates cannot be mounted to element with a 'delta' or triangular spider. The element will need to be replaced with compatible elements with the 3 legged spider.

The Safe-T-element® small plates are not compatible with some stoves that have **small 6" elements with 5 turns** of the element coil. They must be replaced with compatible 4-turn elements. The new elements must have the same or lower power rating.



Part/Assembly	Adapter Kit Package	Qty	Pack ID #	Package Figure
<b>2x2 Element Configuration:</b>				
5-Turn 6" Element	Replacement 6" 4-Turn 'equivalent' element	2	PID-12	
Delta Spider 6" & 8" Element	Replacement 6" and 8" Y-spider 'equivalent' element 6" element 8" element	4	PID-13	
<b>3x1 Element Configuration:</b>				
5-Turn 6" Element	Replacement 6" 4-Turn 'equivalent' element	3	PID-14	
Delta Spider 6" & 8" Element	Replacement 6" and 8" Y-spider 'equivalent' element 6" element 8" element	4	PID-15	

**IMPORTANT!**

**This document describes a typical installation.  
There are slight variations from stove model to model which must be  
accommodated. Please contact Pioneering Technology for  
assistance.**

## 2. INSTALLATION

### 2.1 Preparing For Installation

1. Before disconnecting anything test the surface elements and oven to ensure they are functional. To prevent injury do not allow elements to get hot. Turn elements off when slightly warm.
2. Disconnect power to stove.



**DANGER:**  
**Failure to disconnect power will result in a  
hazardous situation.**

3. Remove screws securing the rear cover of the stove.  
(Fig. 2-1)

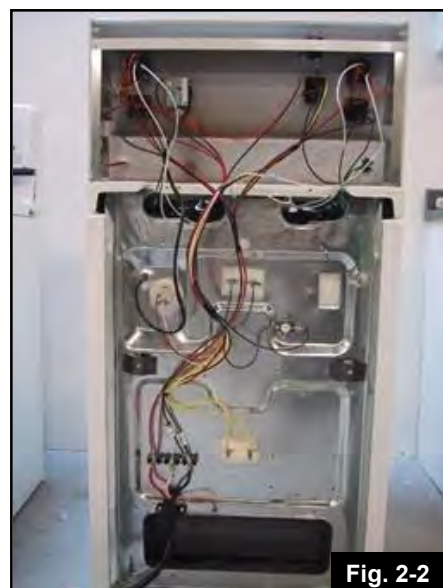
**For Front-mounted Control Switch Stoves, please  
refer to Section: 3 on Page: 17**

4. Inspect all existing wiring for damage or excessive grease  
buildup. (Fig. 2-2)



**DANGER:**  
**Do not proceed with the installation if there is  
any damage to wiring or excessive grease  
buildup.**

To avoid risk of personal injury or property damage,  
have the stove serviced before proceeding with the  
installation if either of these conditions is found.

**Fig. 2-1****Fig. 2-2**

## 2.2 Installing Safe-T-element® Plates

### 1. IMPORTANT!

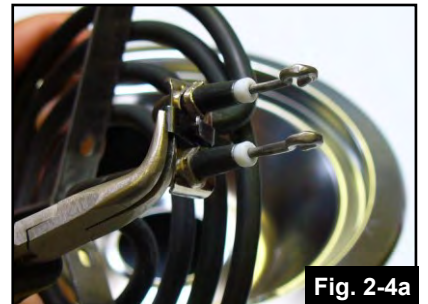
Verify that the power supply to the stove is disconnected and the burner elements are cool.



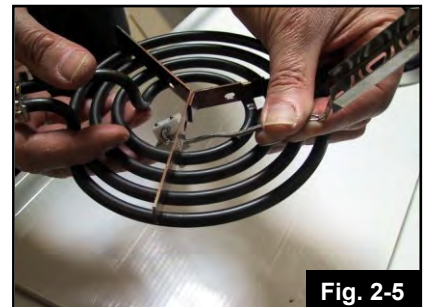
2. Remove burner element from its socket. (Fig.2-3)



3. Remove its center cover piece. If its welded to the spider, snip it with aviation snips. (Fig.2-4)  
If the element has a spring clip near the prongs then remove that clip as well. (Fig.2-4a)



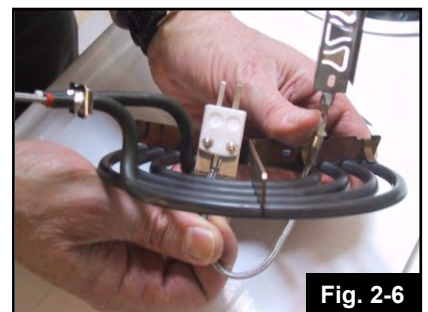
4. Put the thermocouple wire through the gap in the element as shown, carefully, holding it by the wire only. (Fig.2-5)



### CAUTION!

**HOLD & BEND THE THERMOCOUPLE WIRE ONLY. DO NOT HOLD OR BEND THE WIRE WITH THE THERMOCOUPLE BRACKET AS IT MAY BREAK THE THERMOCOUPLE JUNCTION ON THE BRACKET.**  
(Fig.6)

5. Put the other end through the next gap as shown carefully, holding it by the wire only. (Fig.2-6)





6. Hold the thermocouple wire bracket in place.(Fig.2-7) Where possible, the bracket must be mounted behind the existing element grounding bracket. Where this is not possible, the temperature sensor bracket may be mounted in front of the element grounding bracket provided the following requirements are met:

- The thermocouple bracket can be mounted in a position where it can hook onto the element grounding bracket to prevent movement; and,
- A minimum spacing of ½ inch is left between the thermocouple bracket and the exposed terminals of the element.

**NOTE:** The kit includes 2 different sized thermocouple wires. Ensure you mount the correct one for the element.

**If the deck of the stove is shallow, you may not be able to install the thermocouple wire bracket on the element. Please refer to Section 6, for instructions on how to install the thermocouple wire bracket.**

7. Secure the temperature sensor bracket to the element using the M3x12mm screws. (Fig.2-8)

8. Place the Safe-T-element® plate top-side down. Place burner element top-side down on the Safe-T-element® plate. The electrical connections for the element must be placed opposite the notch in the plate. (Fig.2-9)

9. Loosely secure the Safe-T-element® plate to the burner element using thermocouple assembly bracket and 2 M3x5mm screws using the #1 Phillips screw driver. (Fig.2-10)

10. Use 2 additional brackets to secure the plate to the element. Tighten the 6 screws until the bracket is snug against the plate. Be careful not to over tighten the screws. If the M3x5mm screws do not screw into the plate use the longer M3x6mm screws. If using an electric screwdriver ensure that the torque setting is set between 2 & 3.

11. Repeat the above steps for the other 3 burner elements.

12. Use 2 additional brackets to secure the plate to the element. Tighten the 6 screws until the bracket is snug against the plate. Be careful not to over tighten the screws. (Fig.2-11)

13. Repeat the above steps for the other 3 burner elements.

**NOTE:** In some installations, the 4-turn 6" small element is not truly round (oblong shaped) and will not fit on the small Safe-T-element® plate. The Safe-T-element® kit will still work without replacing these elements. Refer to page: 26, Section: 7 on how to install the small plate by modifying the spider arms.

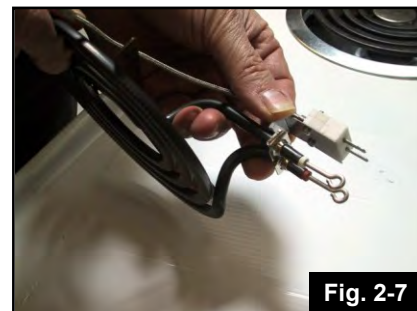


Fig. 2-7

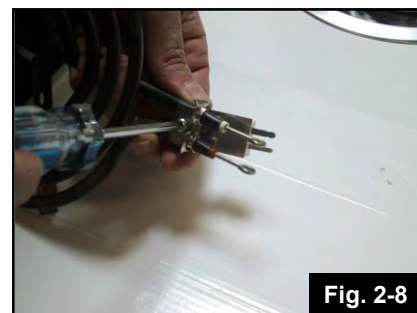


Fig. 2-8

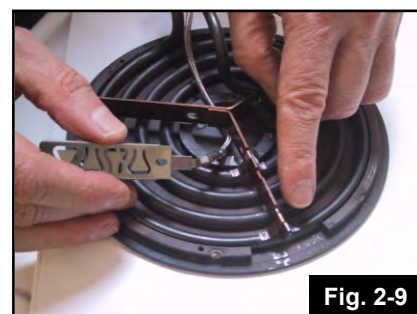


Fig. 2-9

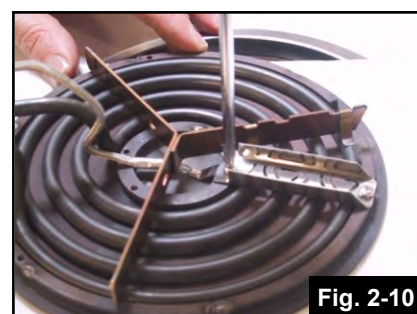


Fig. 2-10



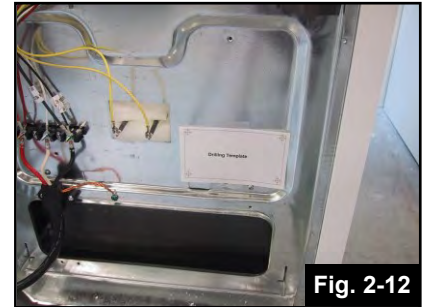
Fig. 2-11



## 2.3 Mounting the Safe-T-element® Controller :

1. Place the adhesive back drill template for the Safe-T-element® Controller in the lowest possible location INSIDE the stove rear compartment. The photo (Fig. 2-12) shows a typical mounting location.

**For Front-mounted Control Switch Stoves, please refer to Section: 3.2 on Page: 18**



**Fig. 2-12**



### **IMPORTANT**

**The Safe-T-element® Controller location must meet the following requirements:**

- It must be placed as low as possible in the rear compartment of the stove in order to minimize exposure to heat.
- In no case should the template be placed directly above the terminals for the oven element as heat escaping from the opening may cause the Safe-T-element® Controller to over-heat.
- A minimum 1 inch gap is maintained between the Safe-T-element® Controller and any other stove component such as terminal blocks, oven components, etc.
- The Safe-T-element® Controller and all wires are completely enclosed in the rear compartment.
- Stoves which have a shallow rear compartment will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove). Please refer to Section: 4 on page:23 for more details on installation of this kit.
- A minimum of ¼ inch is maintained between the tallest component on the Safe-T-element® Controller and the rear cover.
- If the range has a narrow vertical lower rear cover (terminal guard cover), mount the controller behind that cover. Please refer to Section 8.1 on page:28 for more details.
- If the range has 2 piece rear covers, mount the controller behind the upper left portion of the range. Please refer to Section 8.2 on page:28 for more details.

2. Drill 4 holes using a **5/32"** drill bit. (Fig.2-13)



### **WARNING**

**Be careful to drill through the rear panel only. Drilling deeper than ½ inch will cause damage to the oven wall.**

3. Remove the template. Insert the Safe-T-element® Controller mounting supports as shown in Fig.2-14. (Insert wide end of support into hole)



**Fig. 2-13**



**Fig. 2-14**

4. To avoid any static electricity discharge to the Controller which can damage it, start by grounding yourself by touching the range. Then remove the Controller carefully from the anti-static bag. Hold the board by the relays or by its edges (Fig.2-15). Avoid touching other components on the Controller or its back. Secure the Controller to the supports as shown.(Fig.2-15) Ensure each support is fully inserted.

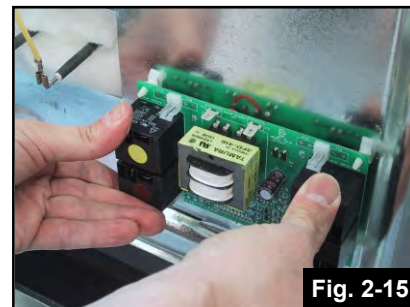


Fig. 2-15



### WARNING

Apply pressure only from the left and right edges. Pressure to the middle of the board will cause it to flex and may damage the circuit.

## 2.4 Connecting Power to the Safe-T-element® Controller (Refer to Wiring Diagram Section: 2.7)



### WARNING

The Safe-T-element® Controller is designed to operate on 120VAC only, DO NOT apply or connect it to 220VAC!

For front-mounted control switch stoves, please refer to Section: 3.3

1. Connect the BLACK wire to terminal P1 on the Safe-T-element® Controller. (Fig.2-16)
2. Locate the fuse for the 120VAC outlet on the stove. Disconnect the wire which goes to the 120VAC outlet. (Fig.2-17)
3. Connect the BLACK wire from the STE Controller to the fuse holder. (Fig.2-19)

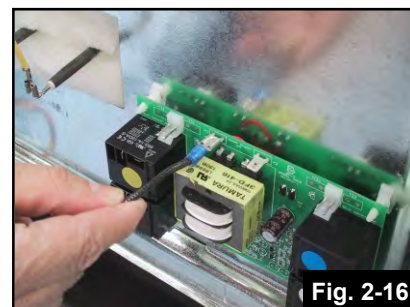


Fig. 2-16

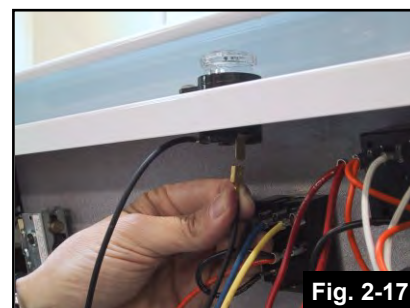


Fig. 2-17

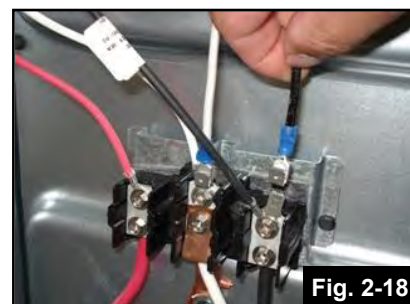


Fig. 2-18

**NOTE:** For stoves without a fuse or where the fuse is not accessible, the BLACK wire from the Safe-T-element® Controller may be connected directly to the BLACK wire from the power cord at the terminal block. If necessary use ring terminal adapter provided. (Fig.2-18). Remove the nut securing the internal black wire using a 3/8" Nut Driver. Place the adapter on the terminal block & replace the nut.



Fig. 19

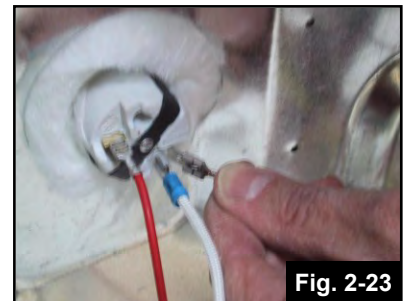
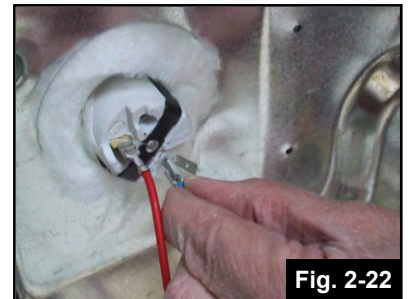
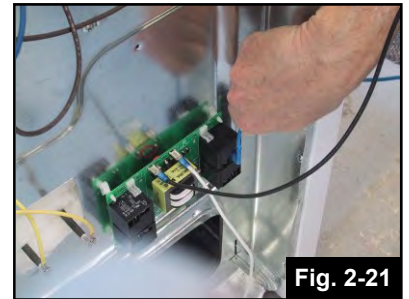
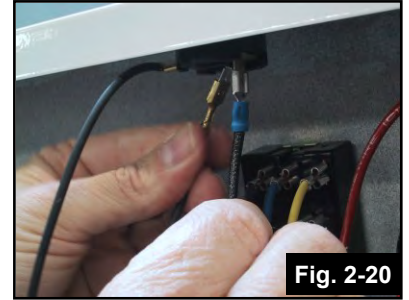
4. Re-connect the wire from the 120V outlet to the piggyback connection on the Safe-T-element® wire. (Fig.2-20)

5. Connect the WHITE wire to the P2 terminal on the Safe-T-element® Controller. (Fig. 2-21)

6. Remove the white wire to the oven light. Connect the Safe-T-element® wire to the oven light. (Fig.2-22)

**NOTE:** For stoves without an oven light or where the oven light is not accessible, the White wire from the Safe-T-element® Controller may be connected directly to the white wire from the power cord. If necessary use ring terminal adapter provided. (Fig.18). Remove the nut securing the internal white wire. Place the adapter on the terminal block & replace the nut.

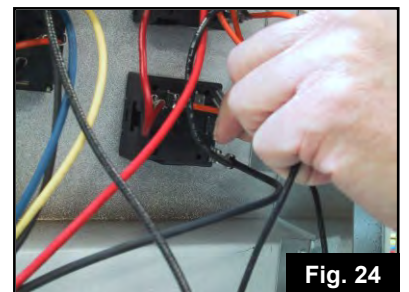
7. Re-connect the wire to the light. (Fig.2-23)



## 2.5 Connecting the Elements to the Safe-T-element® Controller (Refer to Wiring Diagram Section:2.7)

**NOTE:** For Front-mounted Control Switch Stoves, please refer to Section: 3.4

1. Connect the flag-type connector on the BLUE relay wire to the one terminal on the upper-right relay of the Safe-T-element® Controller (when looking at the Safe-T-element® Controller from the back of the stove). (Fig.2-24)
2. Locate the temperature control dial for the **front-left element**. (when looking at the electric stove from the front). Disconnect the wire going from the dial to that burner element.





3. Connect the other end of the BLUE relay wire to the front-left temperature control dial. (Fig.2-25)
4. Apply the provided white insulating sleeve for straight-type female terminal to the female connector on the wire coming from the front-left element. If the female connector on the element wire is a flag-type, use the white insulating sleeve for flag-type female terminals. Connect the insulated male terminal of BLUE relay extension wire provided to this insulated female terminal of the element wire. (Fig.2-26)



**WARNING!**

**To prevent possible fire or electric shock ensure that the blue male connector of the relay extension wire completely covers the connection.**

5. Connect the other end of the BLUE relay extension wire to the other terminal of the **upper-right relay** of the Safe-T-element® Controller. (Fig. 2-27)
6. Using the RED wire repeat steps 1 through 5 to connect the **rear-left element** (looking at the stove from the front) to the **lower-right** relay of the Safe-T-element® Controller.
7. Using the BROWN wire repeat steps 1 through 5 to connect the **rear-right** element (looking at the stove from the front) to the **lower-left** relay of the Safe-T-element® Controller.
8. Using the YELLOW wire repeat steps 1 through 5 to connect the **front-right element** (looking at the stove from the front) to the **upper-left** relay of the Safe-T-element® Controller.



**WARNING!**

**It is essential that each colored relay & relay extension wire is correctly connected to the corresponding colored relay or channel.**

**NOTE:** Some stoves may have the H1 & H2 terminals of the temperature control dial covered by a white insulator. This insulator must be removed completely to connect the relay wire. (Fig.2-28)

- 9 . Secure all the wires using cable ties to keep the installation safe and tidy. (Fig.2-29)

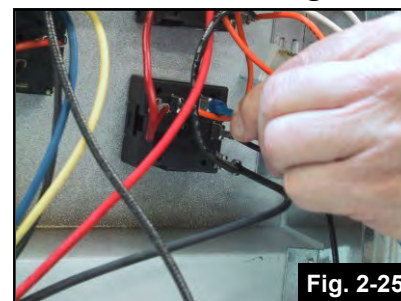


Fig. 2-25

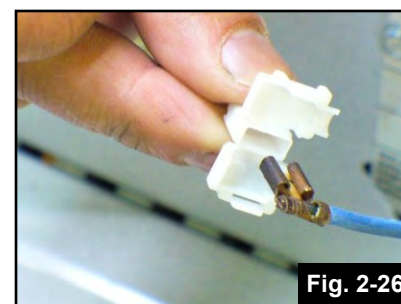


Fig. 2-26

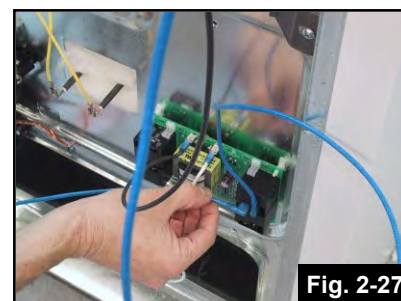


Fig. 2-27

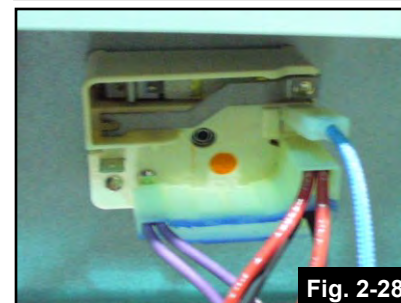


Fig. 2-28

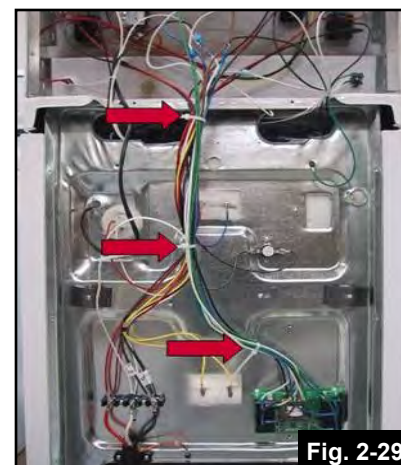
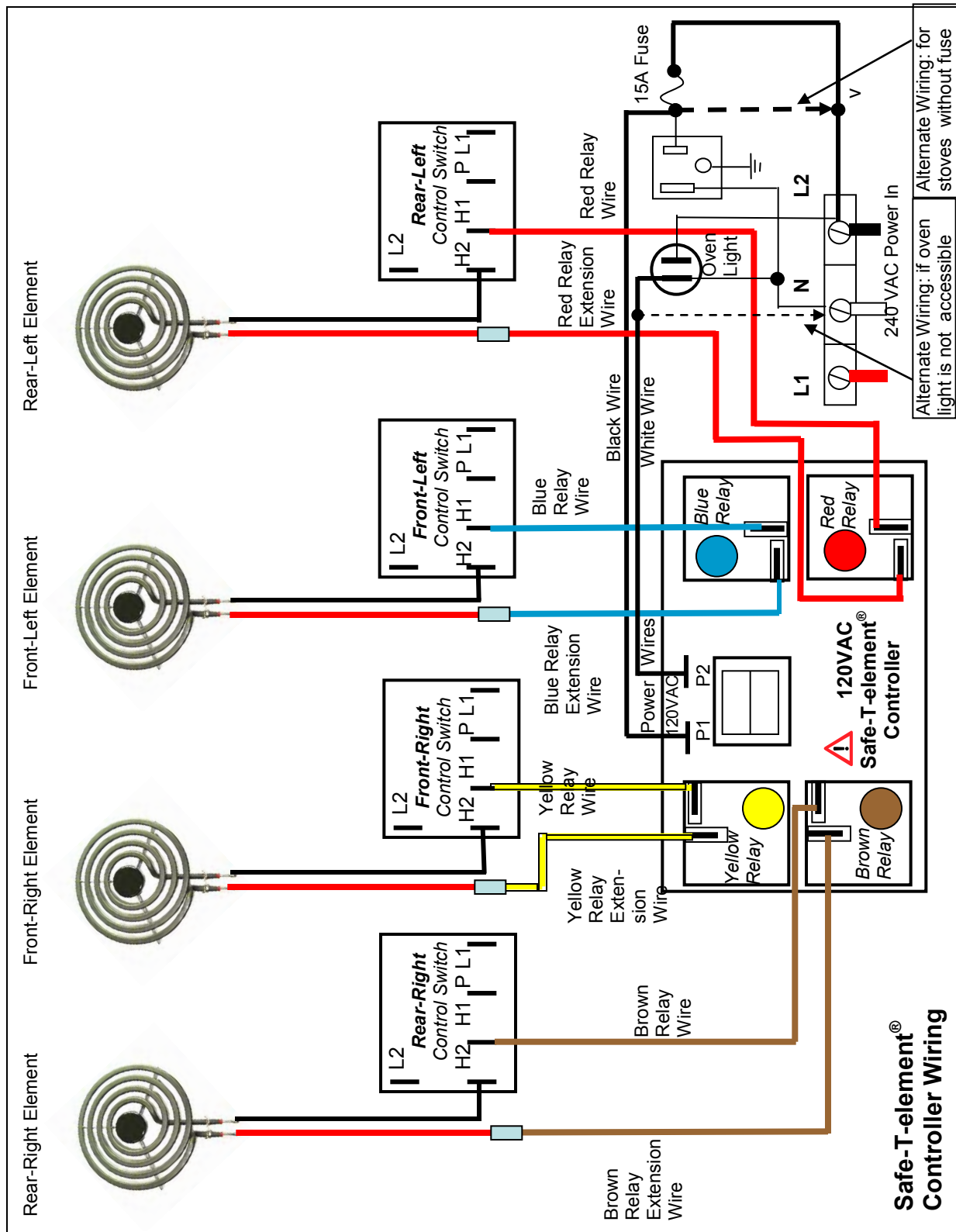


Fig. 2-29

## 2.6 Wiring Diagram



## 2.7 Connecting the Temperature Sensors to the Controller

### A. For Ranges with Lift-up Cook-top

1. New ranges have lift-up cook-top that can be lifted up and supported in the up position by the two side supports when lifted. This can help to connect & route the thermocouple wires underneath easier. When lowering the cook-top, be careful not to pinch your fingers.
2. Securely wrap & twist the thermocouple wires under the cook top around the existing coil element wires at least 2 to 3 times to avoid them contacting the drip pans or the burner box which may cause them to overheat. (Fig 2-30a, Fig 2-30b)

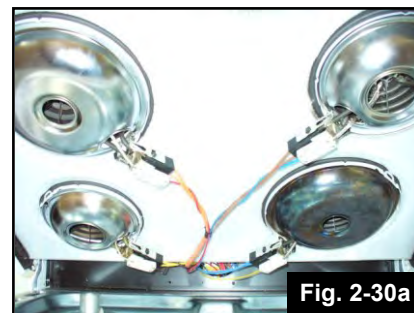


Fig. 2-30a

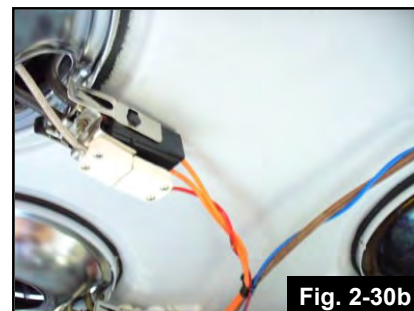


Fig. 2-30b

### B. For Ranges with Fixed Cook-top

1. These stove have channels on the sides which house the existing element wires as shown (Fig. 2-31) run the thermocouple wire inside the channel.
2. If there are no channels, remove the drip-pans completely to access & wrap the wires at least 2 times around the existing element wires to avoid them contacting the drip pans or the burner box which may cause them to overheat. .

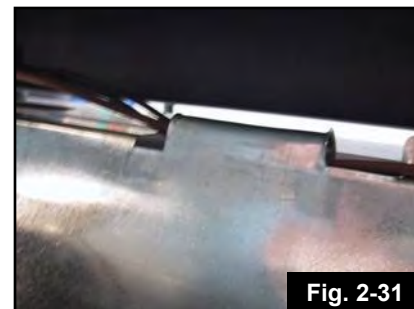


Fig. 2-31

The thermocouple wires should have just enough slack (Fig. 2-32a) or length to allow the user to disconnect the thermocouple wire when cleaning the drip pans.

2. Re-install the drip pan as shown. (Fig.2-32a)

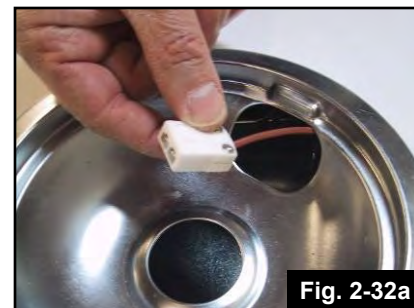


Fig. 2-32a

3. Connect the thermocouple wire to the thermocouple on the plate. (Fig.2-32b)

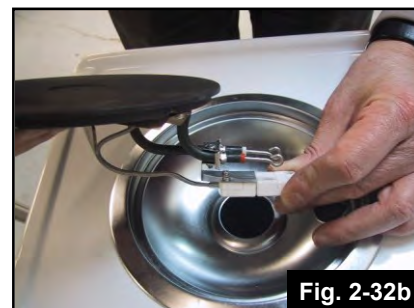


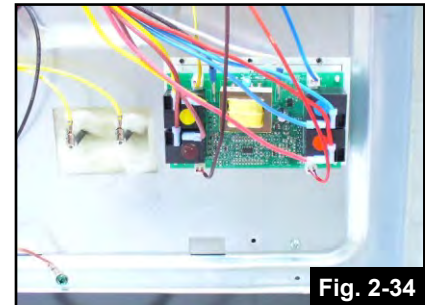
Fig. 2-32b



**WARNING! Ensure that the thermocouple wires do not touch the drip-pan or the burner box.**



4. Re-install the element. (Fig.2-33)
5. Connect the blue thermocouple wire to the upper-right terminal of the Safe-T-element<sup>®</sup> Controller ie. same channel as the blue relay wires for that element). (Fig.2-34)
6. Repeat for the 3 other elements. (**Brown thermocouple wire to the lower-left, Yellow thermocouple wire to the upper-left & Red thermocouple wire to the lower-right terminal of the controller**)
7. Pull all excess thermocouple wire from the back of the stove. Roll them up & tie them together near the Safe-T-element<sup>®</sup> Controller using one of the cable-ties provided.



**WARNING!** It is essential that each colored thermocouple wire is correctly connected to the corresponding colored relay or channel.

## 2.8 Reassembly

1. Remove a screw (if present) on the rear-right side (or left side depending on which side the Safe-T-element<sup>®</sup> controller was mounted) on the stove. (Fig.2-35)
2. Secure the thermocouple wires using a cable clamp and the screw, so that it does not come into contact with any exposed live terminals (Fig.2-36)



**WARNING!** Be careful not to damage any of the wires during reassembly. Any wire damaged during the installation must be replaced prior to applying power to the stove.

3. Replace the rear cover.
6. Re-connect the power cord.



## 2.9 Testing

1. Place your hand on the front-right plate and turn on the element. Ensure that the light for that element lights up.
2. Feel for heat from the plate. **Be extremely careful during this test as the element may heat up very quickly.** Move your hand away at the first sign of heat.
3. Turn off the element. Repeat for other elements. Do not turn on all the elements at the same time to test. By doing so it is not possible to check if the wiring is correct.
4. Installation is complete.

## 2.10 Applying the Installation Label

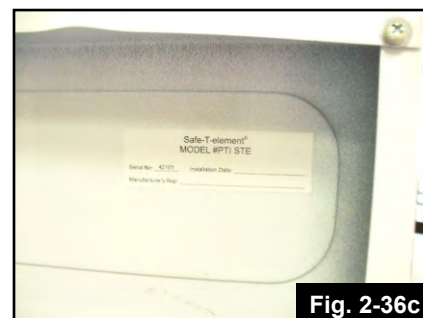
1. Hand write the installation date, the Manufacturer's Rep. & the installer's name on the installation label.
2. Apply the installation label (Fig 2-36a) right next to the nameplate label of the range (Fig 2-36b). This label is usually found on the left or right wall behind the drawer beneath the oven door. If there is no drawer, apply the label behind the porcelain back-guard as shown in Fig. 2-36c. This label must be applied for Pioneering Technology to honor the one-year warranty from the installation date of the product.

Safe-T-element® MODEL # PTI STE	
Serial no: <u>12345</u>	Installation Date: <u>Aug 25, 2010</u>
Manufacturer's Rep: <u>ABC Service Company Inc.</u>	

**Fig. 2-36a**

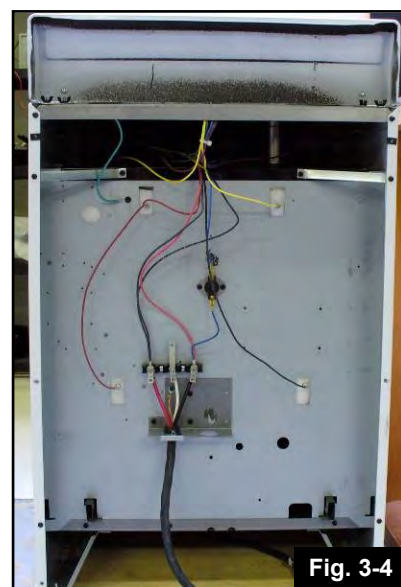
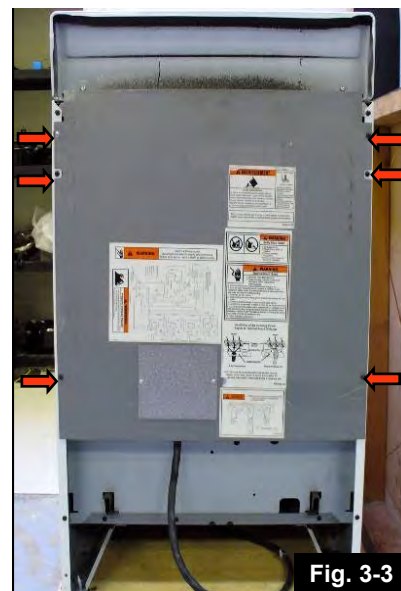


**Fig. 2-36b**



**Fig. 2-36c**

### 3. Front-Mounted Control Switch Stoves (Fig.3-1, 3-2)

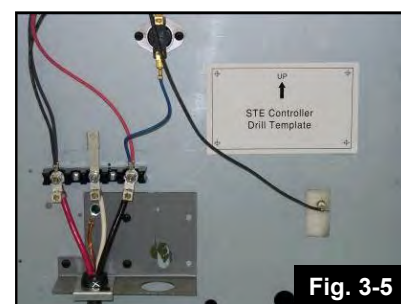


#### 3.1 Preparation for Installation

Remove screws securing the rear cover of the stove.  
(Fig.3-3)

#### 3.2 Mounting the Safe-T-element® Controller. (Fig. 3-4, 3-5, 3-6)

For **Slide-in stoves** the controller will have to be mounted below the top wire opening behind the rear cover.



### 3.3 Connecting Power to the Safe-T-element® Controller (Fig. 3-7, 3-8)

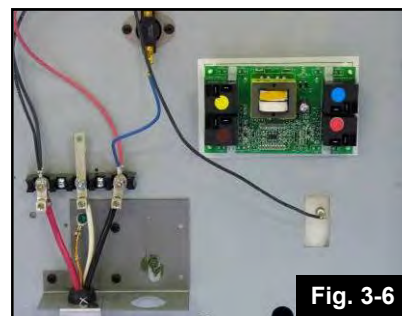


Fig. 3-6

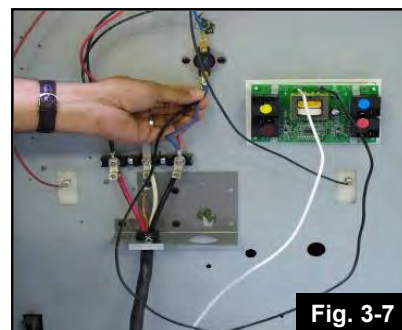


Fig. 3-7

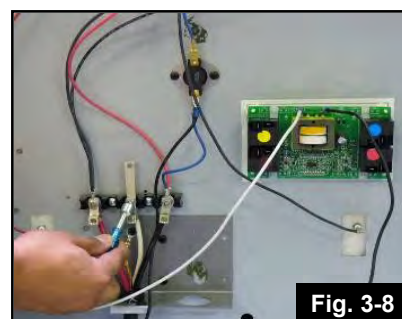


Fig. 3-8

### 3.4 Connecting the elements to the Safe-T-element® Controller

1. Connect the flag connector on the RED relay wire to one terminal on the lower-right relay of the Safe-T-element® Controller (when looking at the STE controller from the back). (Fig.3-9)
2. Route the wire through the space above the oven and over to the front mounted temperature control dials. (Fig.3-10)

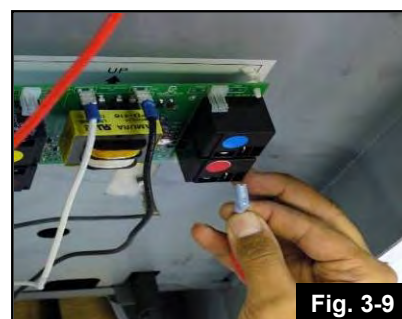


Fig. 3-9

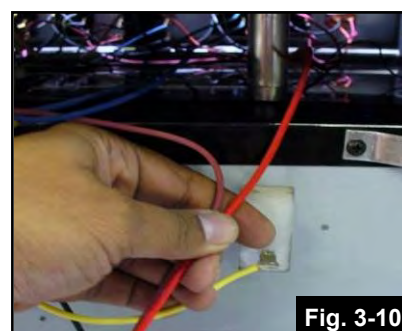
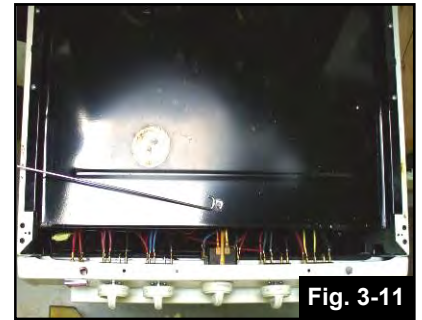


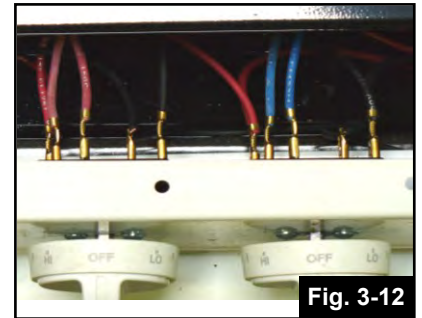
Fig. 3-10



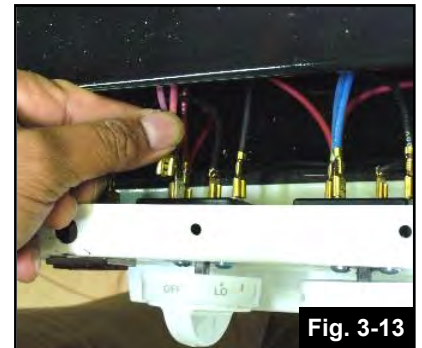
3. Remove the top panel to access the front mounted temperature control dials. (Fig.3-11)



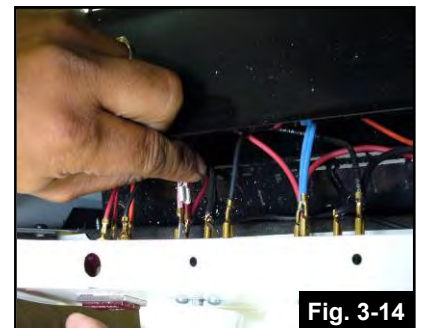
4. Locate the temperature control dial for the **rear-left element** (when looking at the stove from the front) (Fig.3-12)



5. Disconnect the wire going from the dial to the cook element. (Fig.3-13)



6. Connect the other end of the RED relay wire to the temperature control dial. (Fig.3-14)

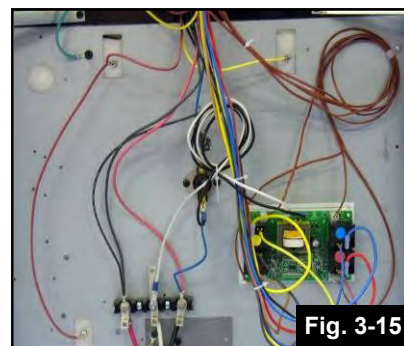


7. Apply the white insulating sleeve for straight-type female terminal to the female connector on the wire coming from the rear-left element. If the female connector on the wire is a flag-type, using the white insulating sleeve for flag-type female terminals. Connect the insulated male terminal of RED relay extension wire provided to this insulated female terminal.

**DANGER**

To prevent possible fire or electric shock ensure that the blue male connector of the relay extension wire completely covers the connection.

8. Connect the other end of the RED relay extension wire to the other terminal of the **lower-right relay** of the Safe-T-element<sup>®</sup> Controller.
9. Using the BLUE wire repeat steps 1 through 5 to connect the **front-left element** (when looking at the stove from the front) to the **upper-right relay** of the Safe-T-element<sup>®</sup> Controller.
10. Using the BROWN wire repeat steps 1 through 5 to connect the **rear-right element** (when looking at the stove from the front) to the **lower-left relay** of the Safe-T-element<sup>®</sup> Controller.
11. Using the YELLOW wire repeat steps 1 through 5 to connect the **front-right element** (when looking at the stove from the front) to the **upper-left relay** of the Safe-T-element<sup>®</sup> Controller.
12. Secure all the wires using cable ties to keep the installation safe and tidy. (Fig.3-15)

**Fig. 3-15**



#### 4. Location of Safe-T-element® Controller in special cases

##### 4.1 Location of Safe-T-element® Controller on ranges with vertical back cover.

Some ranges have a narrow vertical back cover (Fig.4-1)

In some cases the controller can be installed vertically (Fig. 4-2) and avoids the use of an adapter kit. This can be done if the rear cover is at least 2" deep. In these instances do not use the relay extension wires. Instead use one of the element wire to connect directly to the relays on the controller. If the rear cover is less than 2" deep please refer to the instructions for using an adapter kit.



Fig. 4-1

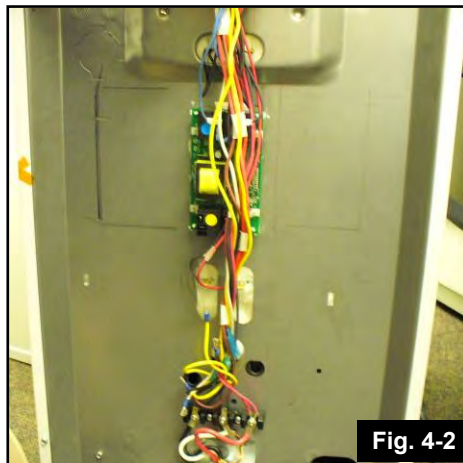


Fig. 4-2

##### 4.2 Location of the Safe-T-element® Controller board on some Ranges that have 2 piece back covers.

Some ranges have 2 piece back covers (Fig. 4-3) If the lower back cover is not deep enough to accommodate the controller it needs to be mounted in the upper left portion of the range back as shown in Fig. 4-4 & Fig. 4-5 on these ranges. If the rear cover is less than 2" deep please refer to the instructions for using an adapter kit.



Fig. 4-3

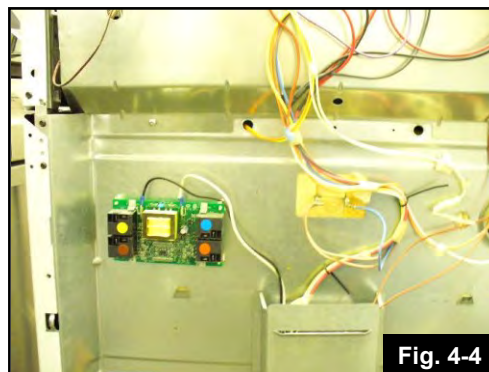


Fig. 4-4



Fig. 4-5

## 5. Installation Instructions for Safe-T-element® Universal Controller Adapter – Pack ID # 27 For Ranges with Shallow Rear Compartments

Some stoves have a shallow rear compartment (less than 2" deep) and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove.

### 5.1 Tools and Equipment Needed

Aviation snips  
Pliers  
Power drill

### 5.2 Pack ID # 27 Components

Your Pack ID # 27 Safe-T-element® Controller Adapter kit includes the following:

Quantity	Description
1	Safe-T-element® Controller universal mounting bracket
3	#8 x 1/2" metal self-tapping screw
4	Nylon cable tie

NOTE: The images shown are representative of a typical installation. Some applications may differ slightly in appearance and location of the adapter bracket.

### 5.3 Installation



1. Disconnect power to stove.

**DANGER:**  
Failure to disconnect power will result in a hazardous situation.

2. After removing rear lower cover place it on a flat surface and place the adapter against the edge at the desired location. (Fig.5-1)

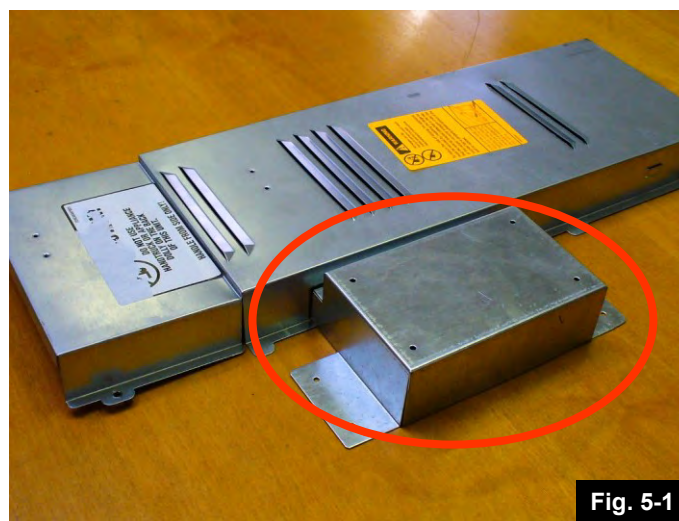


Fig. 5-1

3. Mark edges of bracket opening with a solid line on sides and a dotted line on the top.

#### 4.3b Installing the Adapter

1. Cut along solid lines.

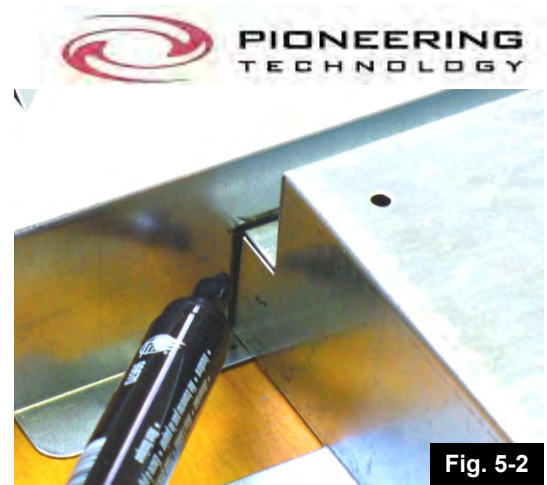


Fig. 5-2

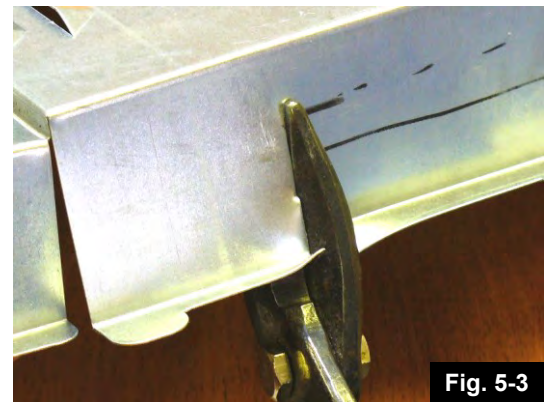


Fig. 5-3

2. Bend the cover outward along the dotted line.

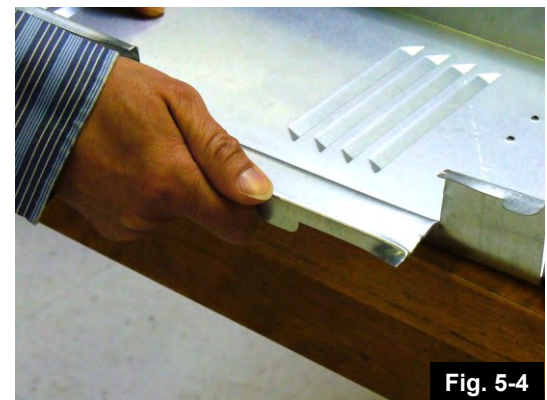


Fig. 5-4

3. Cut off the extra material about 3/8" from the bend.

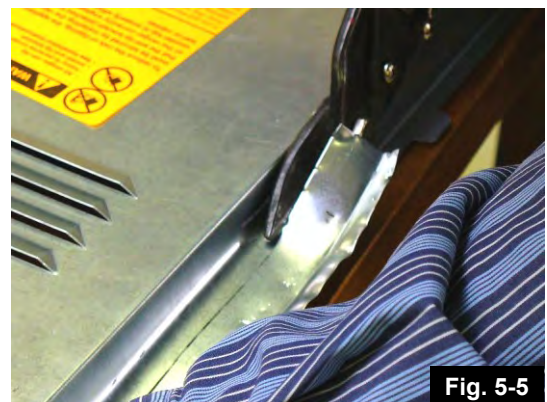


Fig. 5-5



4. Using pliers bend the cut edge upward and flat against the side of the cover.



Fig. 5-6

5. Install the Control Board in the Adapter and connect wires as previously described in these instructions.

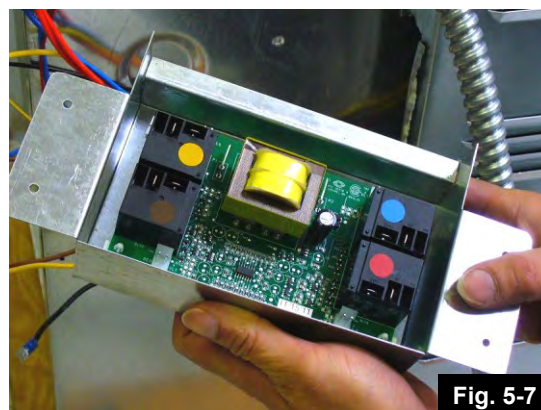


Fig. 5-7

6. Re-install rear cover being careful not to pinch any wires. Use the supplied cable ties to hold the wires in a neat bundle. Place the adapter against the rear of the stove and the rear cover such that the opening slides into the hole cut into the rear cover. Use the self-tapping screws to secure the adapter in place.



Fig. 5-8

7. Completed installation.



Fig. 5-9

## 6. Installation Instructions for Safe-T-element® Controller Adapter – Pack ID # 10 For Some Whirlpool Ranges

Some Whirlpool stoves such as model WERE3000 or similar have a shallow rear compartment and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Controller outside the rear panel. Please contact Pioneering Technology if one is required for your stove.

### 6.1 Tools and Equipment Needed

Aviation snips  
Needle nose pliers  
Power drill  
1/8" drill bit  
Metal punch

### 6.2 Pack ID # 10 Components

Quantity	Description
1	Safe-T-element® Controller mounting bracket + Cover
3	# 8 x 1/2" metal self-tapping screw
1	Nylon cable clip
2	Nylon cable tie

### 6.3 Installation

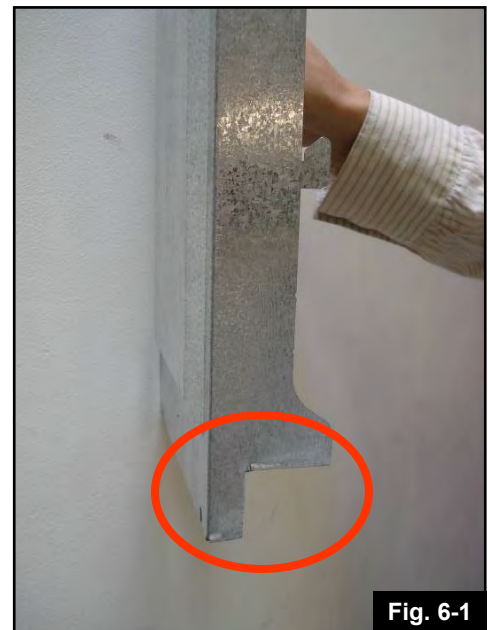
#### 6.3a Preparing for Installation

1. Disconnect power to stove.



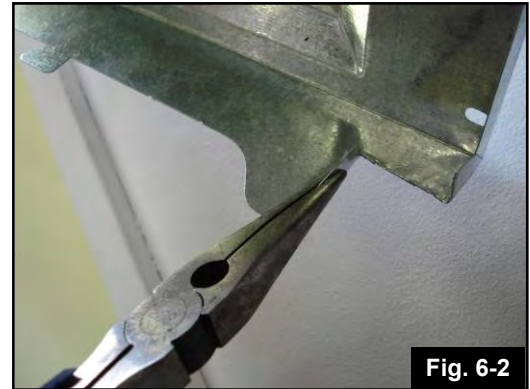
**DANGER:**  
Failure to disconnect power will result in a hazardous situation.

2. After removing lower cover cut a notch out of the lower-right corner of the cover approximately 1¼" wide by 1¼" high. (Fig.6-1)



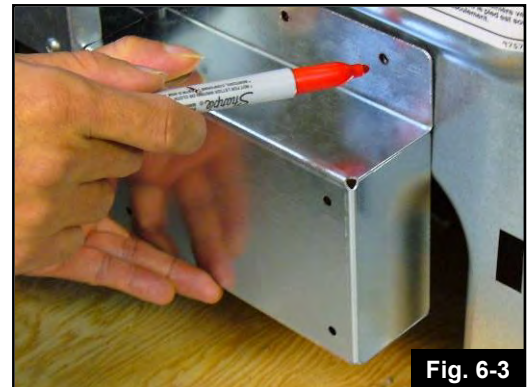
**Fig. 6-1**

3. Bend approximately 1/4" of the cover inward at the top of the cut to prevent the sharp edge of the cover from coming in contact with the wires.



### 6.3b Installing the Adapter

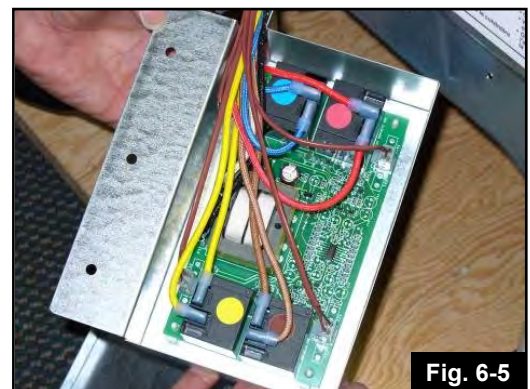
1. Hold the bracket in place as shown in the picture and mark the three holes using a pencil or marker.



2. Use a metal punch to mark the center of the holes and drill three 1/8" holes.



3. Mount the Safe-T-element® Controller on the bracket bringing all the wires out the opening. Use a cable tie to secure the wires.





4. Place cover on the back of the bracket.

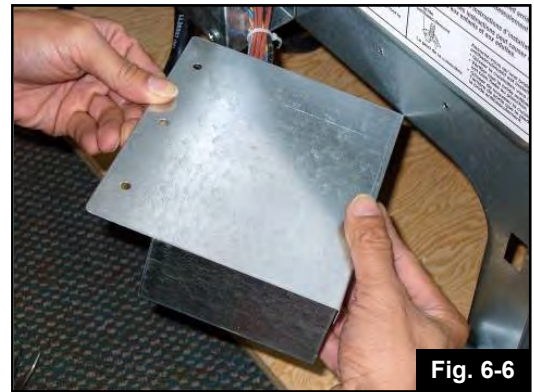


Fig. 6-6

5. Mount the Adapter using 3 screws provided.

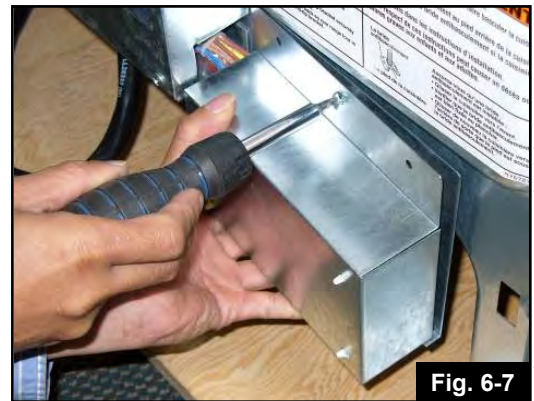


Fig. 6-7

6. Use the cable clamp and screw provided to secure the thermocouple wires away from the power terminals. Use an existing hole in the stove if possible.

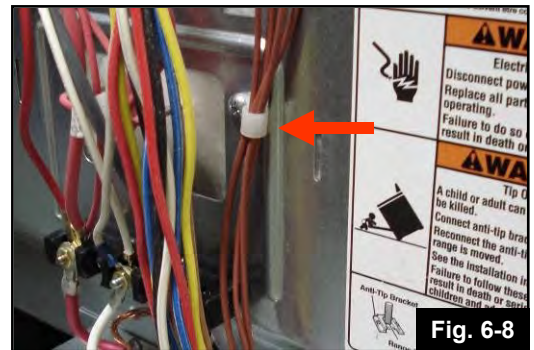


Fig. 6-8

7. After completing the rest of the Safe-T-element® installation reinstall the lower rear cover. Ensure that there are no exposed electrical wires.

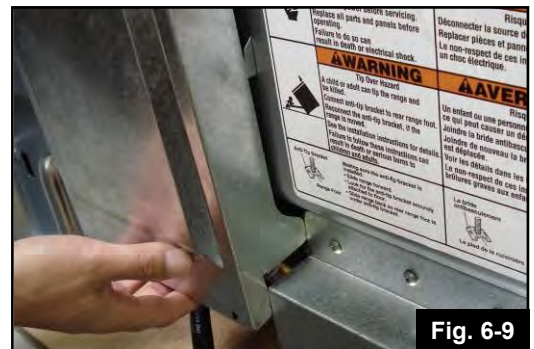


Fig. 6-9

## 7. Installation Instructions for Safe-T-element® Controller Adapter– Pack ID # 11 For Some GE Ranges

Some GE stoves have a very shallow rear compartment and will require an adapter kit to accommodate the Safe-T-element® Controller . This adapter kit will allow the mounting of the Safe-T-element® Controller behind the rear panel. Please contact Pioneering Technology if one is required for your stove.

### Installation

1. Disconnect power to stove.



**WARNING:** Failure to disconnect power will result in a hazardous situation.

2. Remove stove rear panel. (Fig.7-1, 7-2)



Fig. 7-1



Fig. 7-2

3. Mount the Safe-T-element® Controller on the adapter plate, using the PCB supports. (Fig.7-3)

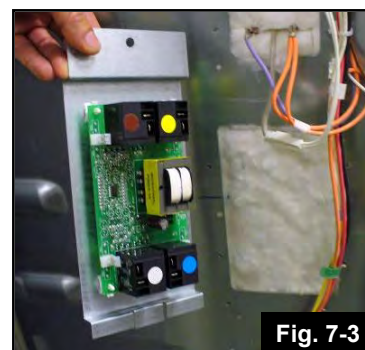


Fig. 7-3

4. Secure the bottom edge of the adapter plate and use the screw provided to hold the top. (Fig.7-4)

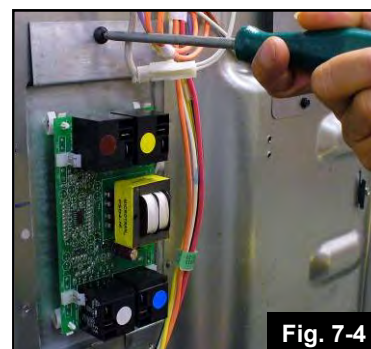


Fig. 7-4

5. Connect the power wires, relay wires and the thermocouple wires to the Safe-T-element® Controller as previously described in these instructions. Re-install rear cover.

## 8. Instructions for Installing Thermocouple Bracket on the Elements of Shallow Deck Stove.

**The thermocouple bracket cannot be attached to the burner element if the deck of the stove is shallow.**

The thermocouple bracket needs to be attached to the long prong of the element to prevent the Safe-T-element® plate from rocking on the stove top.

Components supplied for this fix:

Stainless steel straps- 4 pcs.

First install the Safe-T-element® plate on the element. (Fig.8-1)

The burner element has 2 prongs- a long and short prong. Attach the strap as shown midway on the element's long prong. Insert the thermocouple wire as shown. (Fig.8-2)

Wrap the strap around the prong as shown. (Fig.8-3, 8-4)

Repeat the above steps for the rest of the burner elements.

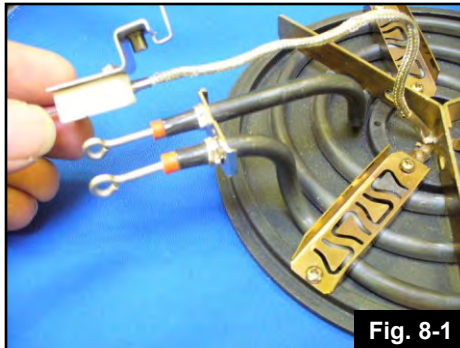


Fig. 8-1

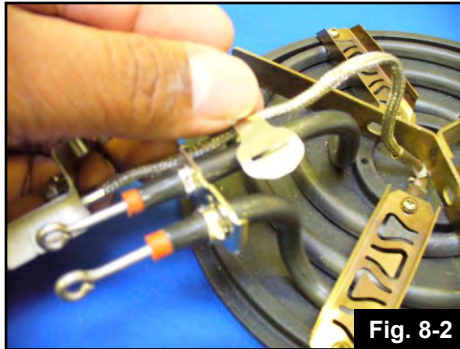


Fig. 8-2

Straighten the 'C' portion of the thermocouple bracket as shown. This is done in order to prevent it from catching on the drip pan when the Safe-T-element® plate is removed from the stove for cleaning

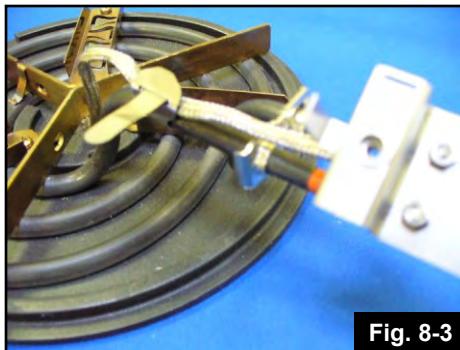


Fig. 8-3

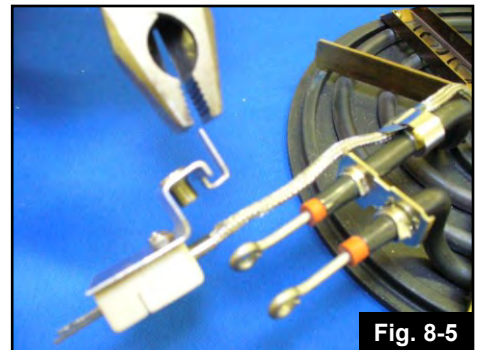


Fig. 8-5

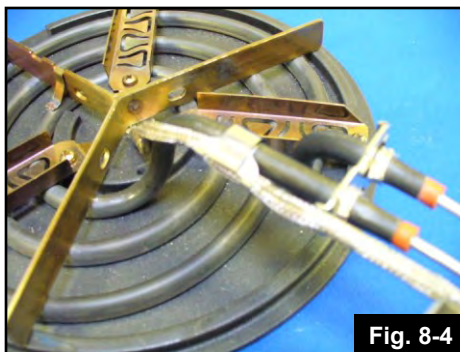


Fig. 8-4

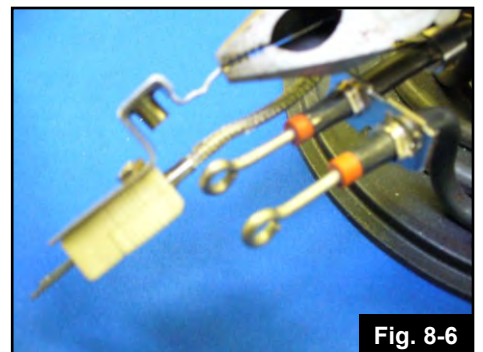


Fig. 8-6



## 9. Non-Round (Oblong) Shaped 4-turn 6" (Small) Element-Spider Modification

In some installations, the 4-turn 6" small element is not truly round & will not fit on the small Safe-T-element<sup>®</sup> plate. The Safe-T-element<sup>®</sup> will still work without replacing these coils using the following steps.

Tools required: Pliers and flat head screw driver.

### Installation Procedure:

1. The small element has 3 spider arms - 1, 2 & 3. Spider arms 2 and 3 have notched endings while spider arm 1 does not have a notched ending (Fig. 9-1).

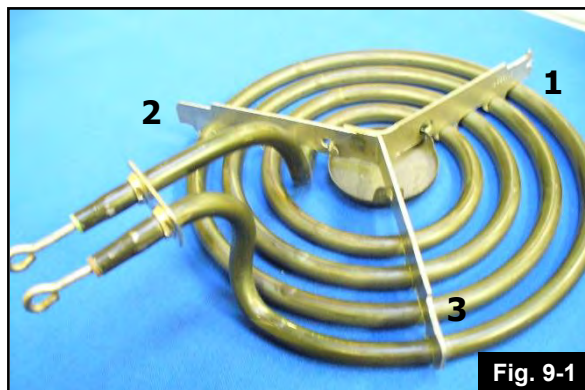


Fig. 9-1

2. Mark notches A, B on spider arms 2 & 3 and notch C on inner spider arm 3 (Fig. 9-2, 9-3 & 9-4).

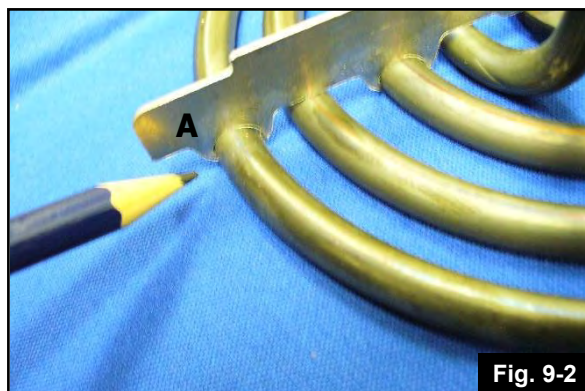


Fig. 9-2

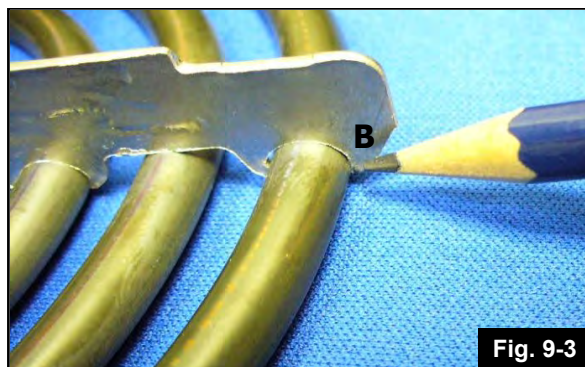


Fig. 9-3

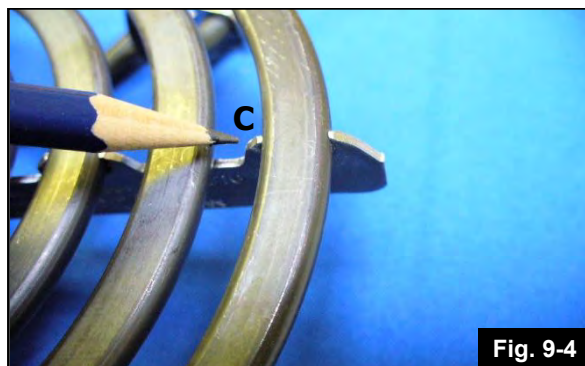
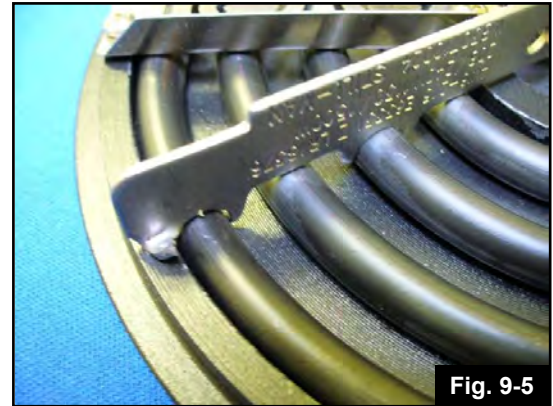
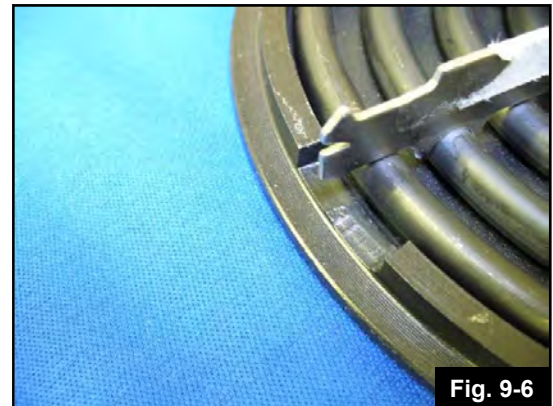


Fig. 9-4

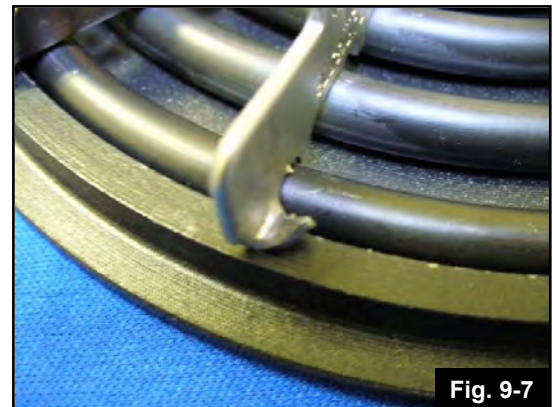
3. Start by bending notches A, B and C with pliers (Fig 9-5, 9-6).



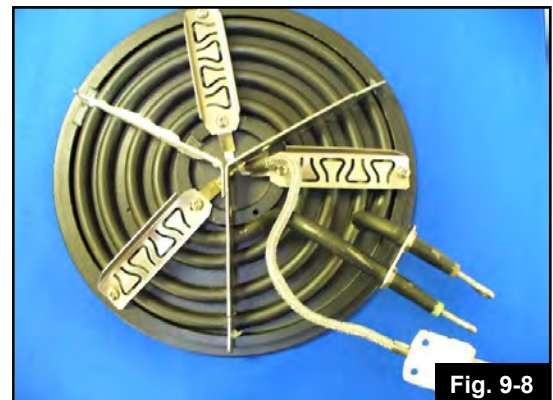
4. Align the coil element such that spider arm 1 is in line with the opening in the plate's inner ring as shown (Fig. 9-7). Install the first 2 retaining brackets to hold the coil to the plate making sure that they are only "hand tightened". Ensure that one of these is the thermocouple wire bracket.









5. Fit the coil into the small plate using a screw driver to push/pry the portion of the coil that overhangs the cast-iron plate until it snaps into the inner ring of the plate (Fig. 9-8).






6. Install the 3rd retaining bracket tightening it AND the first two that were previously hand tightened.



## 10.0 Safe-T-element® Replacement Parts (order by Pack ID #'s)

Part/Assembly	Replacement Parts)	Qty	Pack ID #	Package Figure
Controller Board and PCB supports	Control Board	1	PID-1	
	PCB supports	4		
Small Plate, Mounting and Thermocouple wires	Small plate	1	PID-2	
	Small mounting bracket	2		
	Small mounting bracket with short-end of thermocouple wire	1		
	Mounting bracket screws (M3x5mm)	6		
Large Plate, Mounting Brackets and Thermocouple wires	Large Plate	1	PID-3	
	Large mounting bracket	2		
	Large mounting bracket with short-end of thermocouple wire	1		
	Mounting bracket screws (M3x5mm)	6		
Large Plate Thermocouple wire with Mounting Bracket	Large mounting bracket with short-end of thermocouple wire	1	PID-4	
	Thermocouple wire connector bracket	1		
	Mounting bracket screws	2		
Small Plate Thermocouple wire with Mounting Bracket	Small mounting bracket with short-end of thermocouple wire	1	PID-5	
	Thermocouple wire connector bracket	1		
	Mounting bracket screws (M3x5mm)	2		
Relay wires	Relay wire set	4	PID-6	



Part/Assembly	Replacement Parts)/ Adapter Kit Package	Qty	Pack ID #	Package Figure
<b>Power Wires</b>	Power wire set	<b>2</b>	PID-7	
<b>Extended Relay Wires</b>	Extended relay wire set	<b>4</b>	PID-8	
<b>Thermocouple Wires</b>	Type E thermocouple wire set (Red, Blue, Yellow, Brown)	<b>4</b>	PID-9	

## 11. TROUBLESHOOTING

### 11.1 Common Questions

PROBLEM	POSSIBLE CAUSE/SOLUTION
Stove does not operate	Cord not plugged into wall. Ensure power cord is plugged into outlet.
	Fuse has blown or circuit breaker has tripped. Check stove fuses and breaker at panel.  <b>WARNING:</b> Do not reset breaker/replace fuse until cause is identified and corrected. Failure to do so may result in injury or damage.
One element does not operate	Thermocouple wire connection broken. Ensure thermocouple wire connected. Check thermocouple wire for damage.
One or more of the elements get too hot (up to 450°C/ 842°F)	It is normal to have hot spots on the plate if the Safe-T-element® is operated without a pot or pan. The Safe-T-element® is designed to keep the <i>average</i> temperature of the plate at approximately 350°C (662°F). If the element is operated without a pot or pan then there may be some hot spots due to irregular heating by the element below. This is normal provided that the highest temperature does not exceed 450°C (842°F).
One or more of the elements get too hot (greater than 450°C / 842°F)	Thermocouple wire has a short circuit. Check wire for damage. Replace if necessary.
	Safe-T-element® is not connected properly. Check wiring and ensure thermocouple and relay wires are connected correctly.
	Controller defective. Replace controller and test again.

### 11.2 Getting Help

If you require assistance with the installation of **Safe-T-element®** please call **Pioneering Technology Corp.** at toll free: **1-800-433-6026** or **905-712-2061 x 228** between the hours of 9:00am and 5:00pm EST or email: **service@pioneeringtech.com**.



Technical Overview of  
Pioneering Technology Corp.'s  
Safe-T-element® Cooking System

**safe T element®**  
*helps prevent cooking fires before they start*



Now available pre-installed on new stoves or as a  
retrofit on existing stoves

*Pioneering's award winning Safe-T-element® cooking system  
is engineered to help cooking fires before they start and  
reduce the amount of electricity required to cook.*

**Pioneering Technology Corp.**

220 Britannia Road East  
Mississauga, Ontario  
Canada, L4Z 1S6

[www.safetelement.com](http://www.safetelement.com)  
[www.pioneeringtech.com](http://www.pioneeringtech.com)

Call us toll free at 1-800-433-6026



## Safe-T-element® Technical Overview

### 1. CSA Certificate of compliance for Safe-T-element® as component electronic temperature control device

Issued: 18 January 2008

Applicable Standards

Certification Number (Listing number)

Product evaluated to the applicable CSA & ANSI/UL standards for use in Canada and the United States.  
401,501 rated 240VAC & Model PTI STExxx rated 120VAC.

1. CSA Standard C22.2 No 24-93-Temperature-indicating and-regulating equipment
  2. UL Standard No. 873-Electrical Temperature Indicating and regulating Equipment
- 1258071 (LR 115437-1)

### 2. CSA Certificate of compliance for Safe-T-element® installed in certified/approved cooking ranges & cook-top ranges

Issued: July 5, 2011

Applicable Standards

Certification Number

Product evaluated to the applicable CSA & ANSI/UL standards for use in Canada and the United States.

PTI STExxx installed in certified/approved cooking ranges & cooktops rated 120/240V, 60Hz.

1. CAN/CSA-C22.2 No.61-08- Household Cooking Ranges.
2. UL Std. No. 858 15th Edition-Household Electric Ranges

1769971

### 3. Australia/ New Zealand Standard

Issued: 03 October 2007

Applicable Standard

Test Report Number

Safety of household and similar electrical appliances  
Part 2.6: Particular requirements for stationary cooking ranges, hobs, ovens & similar appliances.  
AS/NZS 60335.2.6: 2002 +A1-A4  
AS/NZS 60335.1: 2002 + A1

32840

## Control Board

Relay-Rated Switching & Voltage

Input Voltage

Maximum set temperature

10-30Amps, 120/240VAC, Electrical Life: 100,000 cycles

120/240VAC, 50/60Hz

350° C +/- 15° C (662°F +/-59°F)

## Thermocouple Wire

Type

Material

Connector

E

Chromium-Constantan

High temperature ceramic male-female thermocouple wire connector

## Relay, Relay Extension & Power Wires

Type

Size

Rated Voltage

Terminals

CSA SEW-2, 200° C (392° F)

16AWG (7 Strands)

600V

16-14AWG, 600V, 105° C (221° F)

## Plates

Material

Finish

Cast-Iron ASTM-30

High temperature black coating