

# UNIVERSAL SEAT HEATER INSTALLATION INSTRUCTIONS



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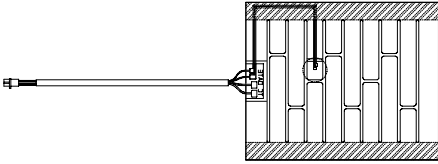


# PARTS LIST

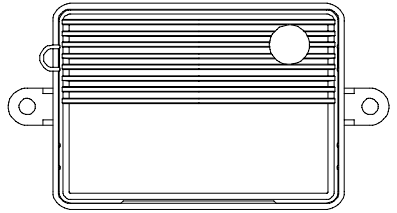
<u>KIT#</u>	<u>CONTROLLER</u>	<u>ELEMENT</u>	<u>SWITCH</u>	<u>HARNESS</u>	<u>SACK PTS</u>
250-1550	250-2225	250-2226	250-2227	250-2228	250-2229
Item	F	A	E	B,C,D	G

# PARTS DIAGRAM

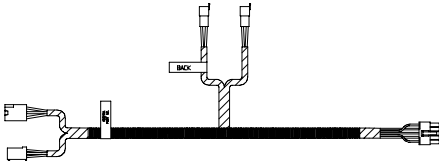
Heater Element 'A'



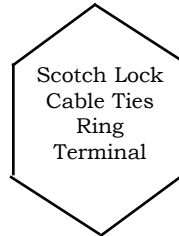
Control Module 'F'



Controller Harness 'B'



Sack Parts 'G'



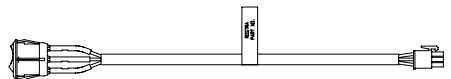
Extension Harness 'C'



Fused Harness 'D'



Switch Assy 'E'



# HELPFUL HINTS

1. **BEFORE STARTING INSTALLATION:**
  - a. Automotive electrical experience is beneficial for this installation
  - b. Familiarize yourself with the installation instructions and seat heater system components, prior to installing the system.
2. **AIR BAG AND ANTI-THEFT RADIO:**
  - a. If vehicle is equipped with an ANTI-THEFT RADIO, the radio code must be written down prior to disconnecting battery cable. The code must be re-entered when the negative battery cable is re-installed.
  - b. If vehicle is equipped with an AIR BAG, it is advisable to disconnect negative battery cable for 3 minutes before beginning installation.

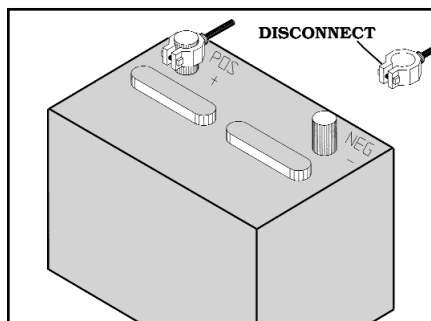


FIGURE 1

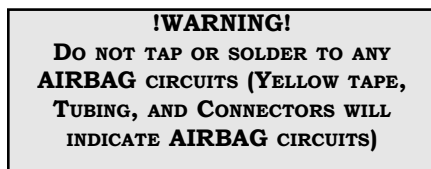
3. **REMOVAL OF NEGATIVE BATTERY CABLE:**

Disconnect the negative battery cable before installing seat heater system components as a safety precaution.

FIGURE 1

4. **ACCESSORY POWER:**

When installing the special terminal into fuse panel of vehicle, use as shown in FIGURE 2.



5. **NOTES:**

- a. Refer to vehicle owner's manual for any wiring identification.
- b. Seats manufactured using the "foam in place" method of trim cover attachment will not be applicable at this time.
- c. Verify that all seat motions are still possible without any interference from harnesses or switch installation.
- d. Remove the seat from the vehicle and place on a clean work bench.

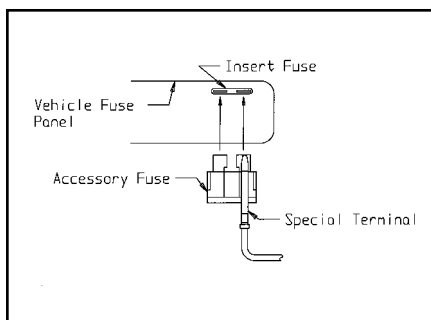


FIGURE 2

# INSTALLATION

## SEAT HEATER ELEMENT

### STEP 1:

Remove seat back cover and cushion cover to expose seat foam.

#### A. Seat cover attachment types:

- \* **J-Clips:** Insert panel puller into channel (in the seam on bottom edge of seat back) and pull the other side of the seam over the channel to release.
- \* **Zipper:** Unzip as necessary.
- \* **Hog-Ring:** Requires Hog-ring pliers and replacement rings. (Cable ties can be substituted) Cut existing rings to remove.
- \* **Removable Pocket:** Held in with push-pins or screws. Usually removed from bottom edge of seat back.
- \* **Rigid back:** Remove screws from bottom edge of seat back.

#### B. Seat back cover:

- a. Turn the cover inside-out as you roll it up.
- b. Working from the rear, remove the front of the seat cover from the frame. It will be held in place by Velcro, Springs, Hog-rings or Tie-bar (visible from bottom edge).

#### C. Seat cushion cover:

Working from the bottom of the seat, unsnap the J-clips and/or the Hog-rings to expose the bottom seat cushion.

### **!WARNING!**

It is important for the proper function of this system and to insure a malfunction does not occur that special attention is given to the installation of the seat heater element relative to the seat foam. **If the element is folded, or creased over onto itself it may cause a premature failure of the system.** In addition, it is important that the installer **does not pierce or short** the element with metal devices such as Hog-rings, or etc.

### **!WARNING!**

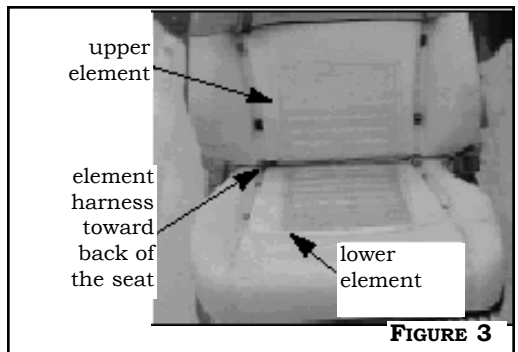
**Do NOT Cut or Trim the element.**

### STEP 2:

Mount Element 'A' On Seat Cushion:

#### FIGURE 3

- A. Both elements provided in kit are identical.
- B. Ensure element width will fit in the desired location.
- C. Remove the protective layer from the double sided tape on the heater element and center side to side on the seat cushion keeping the heater element away from any plastic or metal objects. The harness from the element should be routed toward the back of the seat and secured with



**FIGURE 3**

# INSTALLATION

## STEP 3:

Mount Element 'A' On Back Rest Cushion: **FIGURE 3 ON PAGE 4**

- A. Repeat Steps 2B and 2C.
- B. Remove the protective layer from the double sided tape on the heater element and center side to side on the seat cushion keeping the heater element away from any plastic or metal objects. The harness from the element should be routed toward the bottom of the seat and secured with cable ties.

## CONTROLLER MODULE

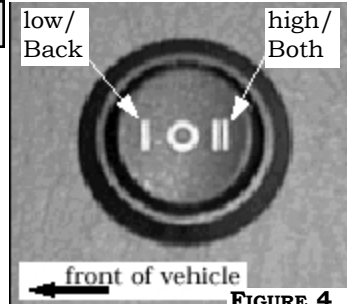
1. Connect the 10 pin connector on the controller harness 'B' to the controller module 'F' connector.
2. The default setting for the system is **Back and Both Mode**. Cut away the external wire loop to get **High and Low Mode** operation.
3. Secure the controller module 'F' and harness 'B' to the underside of the seat cushion frame using cable ties.

## SWITCH INSTALLATION

**NOTE:** Seat plastic cuts best at room temperature.

1. Choose a switch location on a flat surface where switch wires won't interfere with seat movement.
2. Mark the switch location, cut an opening using a punch tool or drill bit (13/16 in. or 21mm).
3. Insert switch Assy 'E' through opening with the mark 'I' toward the front of car and snap in place.

**FIGURE 4**



**FIGURE 4**

## WIRING HARNESS INSTALLATION

1. Remove side scuff plate and kick panel of the vehicle.
2. Starting under the seat, route three wire extension harness 'C' through carpet opening under the seat toward scuff plate, run the harness along the scuff plate toward the fuse panel. (If no carpet opening, create as required)
3. **FOR POWER**, cut the red wire on the extension harness 'C' to desired length and solder **OR** use attached butt splice to fused harness 'D', also solder the other end of fused harness 'D' to a positive Accessory fuse (fused 10Amp or greater) **OR** Insert the red wire with special terminal from fused harness 'D' assembly to a positive Accessory fuse (fused 10 Amp or greater)  
**FOR GROUND**, cut the black wire on the extension harness 'C' to desired length, install ring terminal supplied and attach to a suitable ground source.  
**FOR IGNITION**, cut the green wire of the extension harness 'C' to desired length and solder to ignition power. (**Improper installation could drain your battery if you solder to a constant battery source.**)
4. Verify that all wires and connectors are secured to seat frame with cable ties.

# INSTALLATION

## FINAL ASSEMBLY

1. Connect the wires from the seat heating element (lower & back rest) to the controller harness '**B**' under the seat. Check that the element in the seat back is connected to the harness '**B**' lead that is labeled **BACK**.
2. Re-install seat back cover and cushion cover. Relocate seat into vehicle. (Do NOT install mounting bolts)
3. Connect the switch Assy '**E**' to the controller harness '**B**' under the seat.
4. Connect the extension harness '**C**' to the controller harness '**B**' under the seat.

**NOTE:** Verify that all connections are secured and the seat movement will not interfere with harness.

5. Install seat mounting bolts making certain to torque mounting bolts to manufacturers recommended specifications.
6. Re-connect the negative battery cable per owner's manual, and test the function of the seat heater.
7. Re-check all systems and Accessories where components were removed or relocated during the installation process.
8. Re-install scuff plate and kick panel.

# OPERATION AND TROUBLESHOOTING

## OPERATION PROCEDURES

The seat heater system provides lumbar heat alone or both lumbar and cushion heat in **Back and Both Mode**. It provides heat on both surfaces at two temperatures for the **High/Low** setting.

**OPERATION:** The switch is used to operate the system. It has a **BOTH/HI** setting identified by '**II**' and a **BACK/LOW** setting identified by '**I**'. If your seat heater system was installed correctly, it should perform as indicated below. To turn the heater system on, turn the vehicle ignition to 'on' position.

**BACK/BOTH ACTIVATION:** The external wire loop must be intact for this mode. Placing the switch in the '**I**' position, warms the backrest alone to approximately 149°F on the element surface. Placing the switch in the '**II**' position warms the backrest and seat cushion to approximately 140°F. The controller module will regulate the above temperatures until the switch setting is changed or until the vehicle ignition is turned off. Placing the switch in the '**O**' position turns the system off.

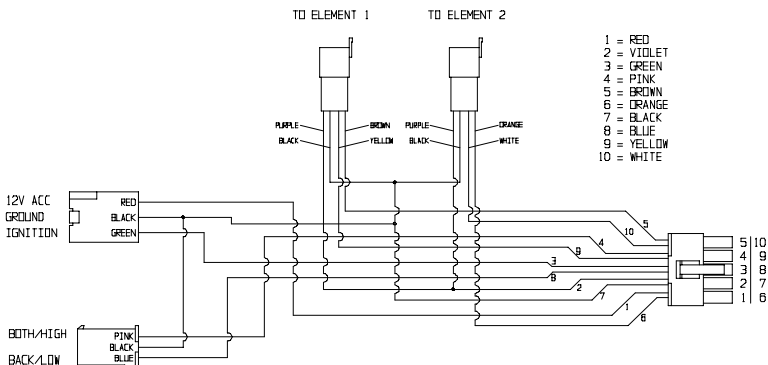
**HI/LOW ACTIVATION:** The external wire loop must be cut away for this mode. Place the switch in the '**I**' position. The system will warm up until the element surfaces are approximately 135°F. The controller module will regulate the temperature until the switch setting is changed or the vehicle ignition is turned off. Place the switch in the '**II**' position. The system will warm up until the element surfaces are approximately 145°F. the controller module will regulate the temperature until the switch setting is changed or the vehicle ignition is turned off. Placing the switch in the '**O**' or mid-position turns the system off.

# OPERATION AND TROUBLESHOOTING

## TROUBLESHOOTING

### ! WARNING !

Using a Test Light may cause damage to the vehicle. It is recommended to use a Volt/Ohm meter for all electrical testing.



### A: NO HEAT

#### POSSIBLE CAUSES

**STEP 1** No ACC.

**STEP 2** No IGN. power

**STEP 3** No Ground

**STEP 4** Switch

#### SOLUTION

\***Check** all connections, vehicle ACC fuse, in line 10 amp fuse, fix or replace if needed.

\***Check** all connections, vehicle ignition fuse, fix or replace as needed.

\***Check** ground connections for continuity.

\***Check** connection, if okay disconnect switch from harness. Using an Ohm meter, measure the following functions for continuity:

#### SWITCH OFF

(position O)

open circuit

open circuit

#### SWITCH BACK/LO

(position I)

closed circuit

open circuit

#### SWITCH BOTH/HI

(position II)

open circuit

closed circuit

(If not okay, replace switch, if okay go to Step 5)

**STEP 5** Element

\***Check** all connections, if okay disconnect element from harness, using an ohm meter, measure the resistance across sensor, yellow wires (at Room Temp.) = 19 to 21k ohms, if not replace element, if okay check continuity across element, white wires = 5 ohms or less, if not okay, replace element, if okay go to Step 6.

**STEP 6** Harness

\***Disconnect** controller Harness 'B' and check continuity per wiring diagram on top of this page. If not okay, replace Harness 'B'. If okay, disconnect the extension harness 'C' from main harness and check for continuity: **Ground** black wire, **Ignition** green wire, and **Accessory** red wire. If not okay, replace Harness 'C', if okay, replace controller module 'F'.

### B: LOW HEAT

The system is operational, the amount of heat felt by the occupant could vary if the plus pad on the seat cover is 1/4 in. or more in thickness.