Check corporation™

The Mark of Quality

2 Series

COPPER Wire

Wire Seat Heater Installation Instructions

1-Seat Coverage

2-Temperature Settings

Part# HILO-M1xx
HILO-M0xx

Document: LIT-MAN-HILO-2 Rev G 2/11/15

Check Corporation

1800 Stephenson Highway
Troy, Michigan 48083
USA

Limited Warranty

This Product is warranted to be free from defects in manufacturing and workmanship and is guaranteed to work for three years or 36,000 miles, or whichever occurs first. This Limited Warranty covers the repair or replacement of the seat heater components only and does not cover any costs related to or damage resulting from the installation of the seat heater. Seat heaters must only be used in the seat applications for which they were designed, tested and approved by Check Corporation, and failure to properly install the designated seat heated product, or improper installation or misuse of any component, will void this Limited Warranty. Installer shall indemnify and hold Check Corporation harmless from any and all installations contrary to automobile OEM, automobile dealership, and Check Corporation issued instructions.

MANUFACTURER'S LIMITED REPAIR/REPLACEMENT WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR DUTIES OR WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE OF TRADE OR COMMON LAW. IN NO EVENT SHALL MANUFACTURER BE LIABLE FOR PROXIMITE, INCIDENTAL, CONSEQUENTIAL OR OTHER DAMAGES, INCLUDING BUT NOT LIMITED TO DAMAGES FOR LOSS OF PROFITS OR PRODUCTION OR INJURY TO PERSON OR PROPERTY. THE CONSUMER OF THIS PRODUCT SHOULD CONTACT ITS INSTALLATION DEALER FOR ANY WARRANTY CLAIM AND RETURN WARRANTY CARD TO VALIDATE WARRANTY.

Safety:

PLEASE READ BEFORE INSTALLING HEATING ELEMENT ASSEMBLIES!

[wear gloves]

[wear safety glasses]

⚠ DANGER

- IF ANY OF THE FOLLOWING SAFETY CONDITIONS CANNOT BE MET, DO NOT ATTEMPT PRODUCT INSTALLATION
- Circulation and or sensory compromised persons **SHALL NOT** use this system/product at any time. There is a High Risk of Thermal Burns.
- Never reinstall a heating element . Once the element has been removed it cannot be reapplied to the foam bun. There is a risk of a thermal event
- Check Corporation wire heating element assemblies are specific to each seat and are not to be cut. They are designed to fit specific vehicle seats according to the model and production year of the vehicle. For a full list of vehicles that your kit is compatible with, please call customer service at 877-607-8941.
- Some front passenger seats are outfitted with occupant detection sensors which are not compatible with any after-market seat heater. Consult with Check Corporation to determine the appropriate heating element assembly for each specific vehicle.
- Heating elements should NEVER be installed onto foam where an occupant detection sensor is visible on the Top surface of the foam, even if the heating element would not touch the sensor. Heating elements are to be placed onto foam bun only. The heating elements may adversely affect or cause the sensors or airbag system to not function correctly, thereby causing severe injury or death.
- To prevent OVERHEATING AND/OR FIRE follow these instructions carefully: Cushion and back heating elements are wired to operate in series only. Do not change the wiring to power the heating elements in parallel.
- If the kit has a cushion and back heating element, then both must be used. Never operate cushion or back element separately. Single element heaters are available if needed.
- Release paper must be completely removed. Failing to completely remove paper is a fire hazard and nullifies and voids warranty.

Installation Instructions

⚠ WARNING

- **Do not modify this product**
- **Do not connect this product to factory seat heater parts**
- Remove paper adhesive liner from the cushion and back heating elements before installing them onto the foam bun. This is mandatory as the heating pattern is maintained by the adhesion of the heating elements to the foam bun of the seat. If the heating elements are not secured they could develop hot spots.
- The Heating elements must NOT be folded into seat listing channels except where cutouts were designed into the element. Do not fold the heating elements against themselves.

⚠ CAUTION

- CLOTH UPHOLSTERY

  If your upholstery is thin, and does not have at least 1/4” of foam sewn onto the backside of the upholstery, it is recommended that you apply a 1/4” to 1/2” thick layer of foam or headliner fabric to the entire insert area between the heating element and the upholstery. This will eliminate read-through and make sure the temperature is at an appropriate level.

NOTICE

- The heating elements must be connected to switched or keyed ignition power only, to prevent battery drain when vehicle is off.
- Check and determine that the heating elements will fit under the seat trim covers in the desired areas. The listing channels or the Velcro hold-downs should line up with the cutouts in the heating elements. This is not important if the heating elements do not cross over a listing channel or Velcro hold-down. See figure 1
- BONDED SEATS (UPHOLSTERY GLUED TO FOAM BUN)

  Never remove the cover of a bonded seat. The cover of a bonded seat cannot be installed again once it has been removed. If installation of a heating element assembly is to be attempted in this kind of seat, cut an opening in the foam bun large enough for the element to fit ½″ underneath the cover. A professional should only attempt this, as mistakes often result in the replacement of the seat foam and cover.

1-SEAT

HILO SEAT HEATER KIT

INSTALLATION MANUAL

for Leather and Cloth Seating

Product Specifications

- 12v automotive system (11 – 15 volts)
- Maximum power requirements vary by kit and range between
  51W (3.7A @ 13.8V) and 84W (6.1A @ 13.8V)
- Temperature range measured at seat surface during normal operation **
  High 110°F (+/- 3 °F) or 43.3°C
  Low 101°F (+/- 3 °F) or 38.3°C
- Heating elements meet FMVSS 302 flammability requirements
- Connectors are indexed to prevent improper mating, including a quick disconnect for the switch
- New thin element design to reduce read through on thin upholstery on cloth and leather

** Performance varies with seat materials used and the density and amount of sew foam between the heating elements and the surface of the seat.

Installation Instructions

The skills you need:

You need to be confident in your ability to:

- remove an automotive seat and reinstall to specification
- remove the upholstery and reinstall the upholstery
- remove and reinstall other trim such as the center console or parts of the instrument panel
- creating a hole in the trim for placement of the switch
- work with advanced airbag and occupant detection systems if equipped

Automotive electrical experience or a basic understanding of electrical systems and the ability to disassemble and reassemble automotive seating is recommended.

Recommended tools:

- **multi-meter (ohm's, volts, continuity)**
- Terminal crimpers
- Wire strippers
- Screw driver
- Wrenches
- Electrical tape
- Marker or pencil
- Drill
- Wire cutters
- Torque, socket and Allen wrenches
- Hog ring pliers
- Utility knife
- Needle nose pliers
- Ratchet
- Deep socket
- **1" Uni-bit (step bit) or 13/16" Drill bit**

This product features:

Temperatures	Seats	Heating Technology
☐ 1 temp	☒ 1 seat	☒ Copper Wire
☒ 2 temp	☐ 2 seats	
☐ 3 temp		

Available Switch Style Options for this product:

Round Rocker

2 Series Wire Seat Heater Kit

Checklists:

2 Series Wire Product Contents Part Number	Heating Element(s)	Hardware
HILO-M101	NTCPACK-M101	HPACK-EC-M9A
HILO-M110	NTCPACK-M110	HPACK-EC-M9A
HILO-M113	NTCPACK-M113	HPACK-EC-M9A
HILO-M120	NTCPACK-M120	HPACK-EC-M9A
HILO-M1XP	NTCPACK-M1XP	HPACK-EC-M9A
HILO-M121	E27004M, E07195	HPACK-EC-M9A
HILO-M128	E27195M, E07004	HPACK-EC-M9A
HILO-M129	E27361M, E07004	HPACK-EC-M9A
HILO-M020	E28195	HPACK-EC-M9A
HILO-M0XP	E28004M	HPACK-EC-M9A

HPACK-EC-M9A Component Hardware Contents	Part Number	Quantity
Installation Extras (see contents below)	HPACK-EC9-PRO	1
Power Harness (12')	PH-EC12-12FT	1
Switch Harness (with switch)	SWH-EC-M9-1	1
Hi / Off / Low Round Latching Switch	SW-SPDT-06-24V	1

HPACK-EC9-PRO Installation Extras Sub-component Package Contents	Quantity
4" TY-RAP	4
7.5" TY-RAP	2
Inline Fuse Holder	1
7.5 Amp Fuse	1
Fast-On Terminal	1
Ring Terminal	1
Self-tapping Ground Screw	1

Installation Instructions

Installation

1. **Pre-wire all components** on your workbench and test with a multi-meter for continuity. Do NOT use a battery charger as a power source. Use a 12V D.C. power source. If there are any problems, see the troubleshooting page.

2. **Locate vehicle fuse panel** and determine routing of power harness. **Each seat heater needs a separate 7.5A inline fuse** (included) with a switched ignition 12V power source.

NOTICE

3. **Install the ground** wire ring terminal, from the power harness, to the fuse box ground screw. Clean terminals and grounding point of paint, grease, and dirt to ensure a good electrical connection. **Never drill through the floor.**

⚠ DANGER

4. **Disconnect and isolate** the negative (ground) battery cable

5. **Discharge latent electricity** - pump the brakes a few times, and wait five minutes for the system to discharge. It is important to do this before disconnecting any airbag connectors.

⚠ CAUTION

6. **Remove Seat(s) from vehicle.** Care should be taken, as the sharp edges of the seat frame will scratch the interior trim. Use duct tape or padding to cover sharp areas before removing seat.

7. **Remove the seat covers** and verify that the heating elements fit.

8. **Determine a location for mounting the switch.** Cut a hole according to the dimensions shown in the wiring diagram. Connect switch harness to the back of the switch as shown in the wiring diagram (by wire color).

9. **Locate area for heating elements** by tracing element outline onto foam bun. Be sure that the cushion element is placed on the cushion bun, and that the back element is placed on the back bun.

⚠ DANGER

10. **Remove the adhesive release paper.** This paper must be completely removed, as IT WILL BURN.

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Installation Instructions

Heating Element Information

Here is a list of the element part numbers in each 2 Series kit:

Regular Stock Kits

Kits with 2 Heating Elements (both must be used)

Kit P/N:	Element Pack P/N:	Cushion	Back Rest
HILO-M101	NTCPACK-M101	E27092M	E07092
HILO-M110	NTCPACK-M110	E27105M	E07094
HILO-M113	NTCPACK-M113	E27106M	E07107
HILO-M120	NTCPACK-M120	E27195M	E07195
HILO-M1XP	NTCPACK-M1XP	E27004M	E07004

Kits with 1 Heating Element (for the back rest or the cushion)

HILO-M020	E28195M
HILO-M0XP	E28004M

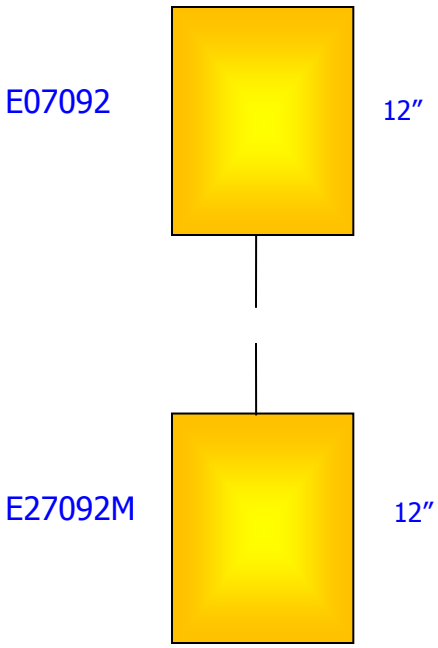
If you ever think about mixing and matching element, here's a guide on what is allowed:

Acceptable Mix & Match Alternate Patterns (not regular stock part numbers)

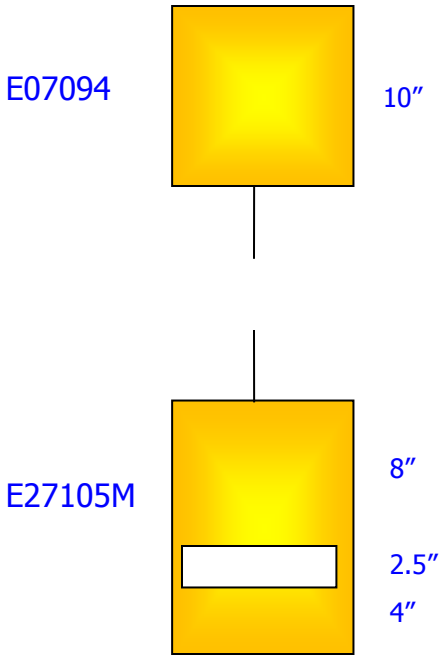
HILO-M121	E27004M	E07195
HILO-M128	E27195M	E07004
HILO-M122	E27092M	E07094
HILO-M123	E27092M	E07107
HILO-M124	E27105M	E07092
HILO-M125	E27105M	E07107
HILO-M126	E27106M	E07092
HILO-M127	E27106M	E07094
HILO-M129	E27361M	E07004

Heating Element Information

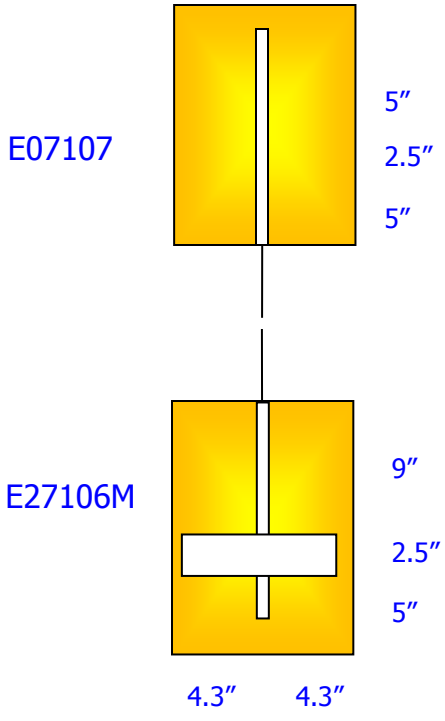
HILO-M101



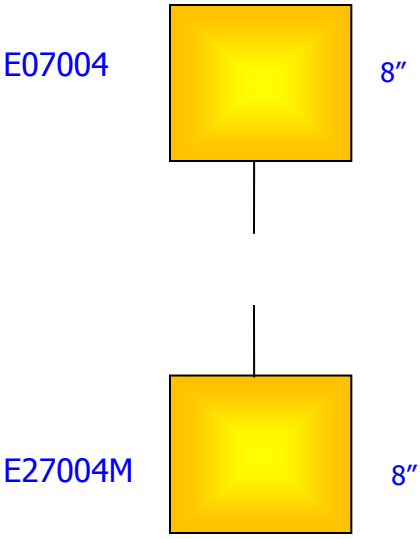
HILO-M110



HILO-M113



HILO-M1XP



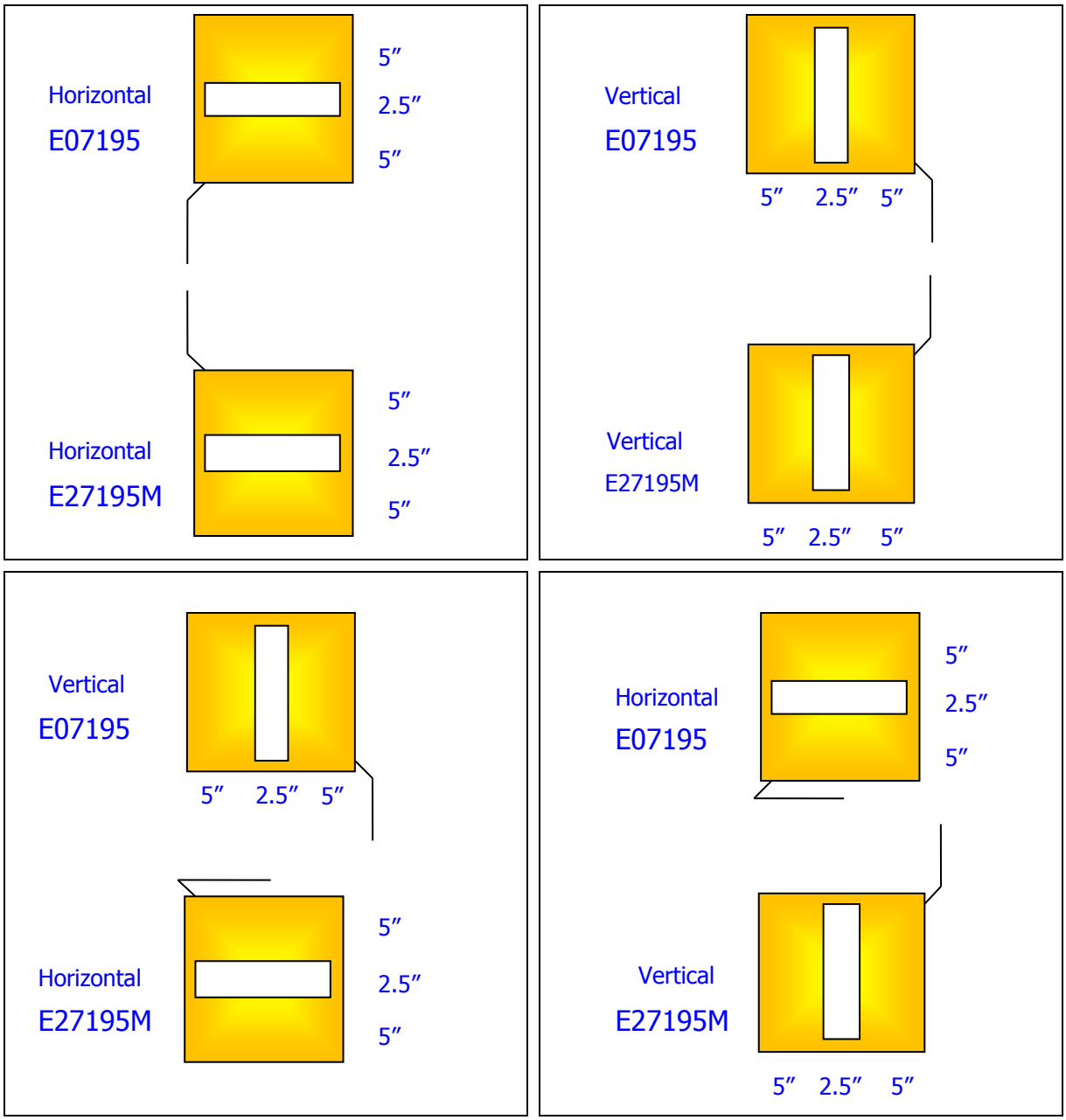
Installation Instructions

Heating Element Information

HILO-M120 Installation Features

- The heating elements in the HILO-M120 (E27195M & E07195) are made to accommodate several different seat styling layouts.
- The elements can be installed so that the cut-out is aligned horizontally or vertically.
- When installing the element vertically, run the wiring harness along the bolster tie-down area or, if the wire lays atop the foam bun and you are concerned about the user feeling the harness, use a razor knife to create a slit in the foam bun and lay the harness into the foam bun.

HILO-M120



Heating Element Information

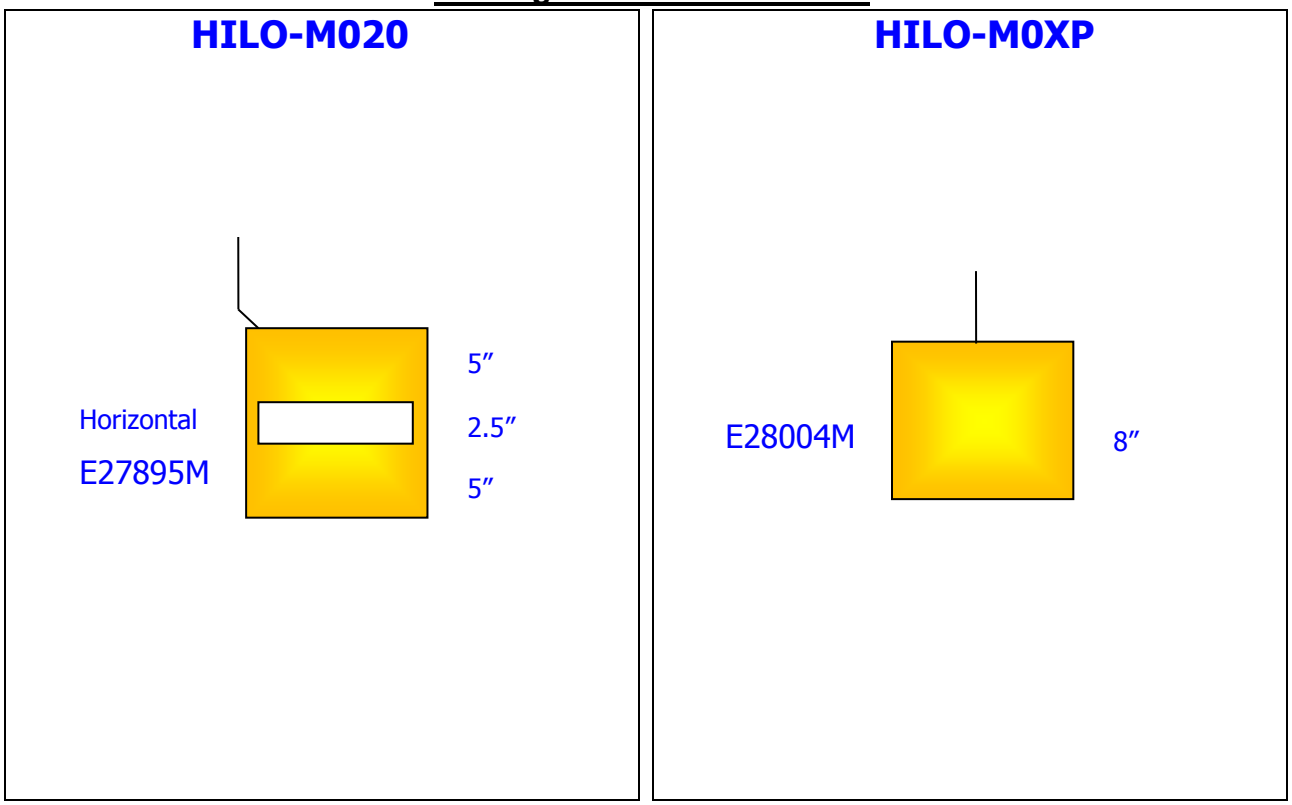
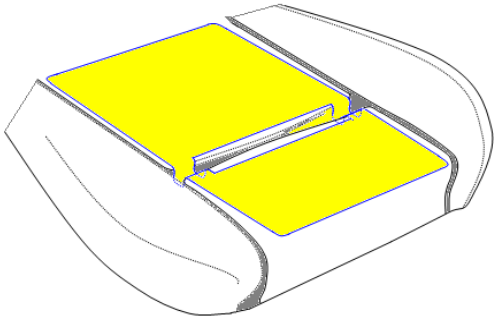


Figure 1: Installing the heating elements

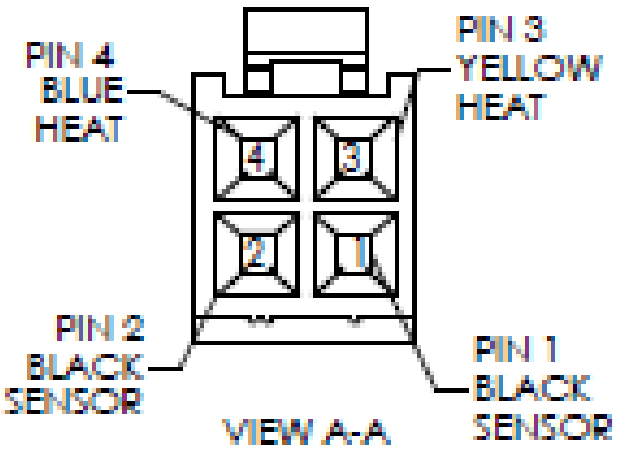


- The seat heater element adheres 100% to the foam bun following the surface into the listing gaps.
- If your heating elements have a pre-made hole, align the hole with the tie-down.
  - The listing channels or the Velcro hold-downs should line up with the cutouts in the heating elements.
  - Fold the narrow bridges of the element down into the trench as shown in these illustrations.

Figure 2: Troubleshooting the heating elements

This is the 4 Pin connector at the end of the element harness. Disconnect the wire harness and use a multi-meter to check for continuity.

- Probe Pin 1 and Pin 2 at 20K Ohms. Normal reading should be 6,500 to 15,000 Ohms.
- Probe Pin 3 and Pin 4 at 20 Ohms. Normal reading is between 1.5 and 22 Ohms.
- If Pin 4 is a blue wire, this system is equipped with a mandatory backrest heating element. The two elements are wired in series. Trace on the blue wire harness to find the backrest element connector.
- The backrest element can be tested for Ohms on its own.
- The cushion element must have the backrest element connected during the Ohm reading test.



Troubleshooting of the electrical system

If the system does not heat up, check the following:

To test the unit you must sit in it for at least a 5-minute period in which the heat has time to reach the seat surface.

- Check the fuse utilized during the installation.
- Ensure that all connections are properly mated and that the 12V DC and ground wires are properly installed. (See seat heater wiring diagram)
- A break in the heating element circuit. To check for this, pull on the wires at all connectors to verify they are properly seated in the connector. Don't forget the connector on the back element. Also check for continuity at the 4 pin connector. The cushion and back elements must be connected and use a multi-meter set to ohms. See Figure 1
- A low voltage condition on the controller input from the fuse box. To verify the voltage input, use a multi-meter set to volts, across red AND black wires at controller module (it should read 11-15V).

If the heating elements, switch, and seat harness test OK, then a power problem exists, check the following:

- Using a multi-meter or a test light, start at the power connection and trace back through all of the connectors and the switch to determine where the power loss is occurring. Repair as necessary.

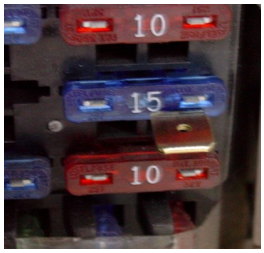
If the fuse continues to fail, check the following:

- Each pair of heating elements that are installed in the vehicle must have their own fuse.
- A poor ground connection. Check connections or try another grounding point. Another possible cause is the fuse used for power is computer controlled (try another fuse location).

IF YOU HAVE ANY QUESTIONS REGARDING THE INSTALLATION OF CHECK CORPORATION SEAT HEATERS, PLEASE CALL OUR HOTLINE AT 1-800-927-6787, 8AM TO 5PM EASTERN STANDARD TIME.

Figure 3: Connecting Power

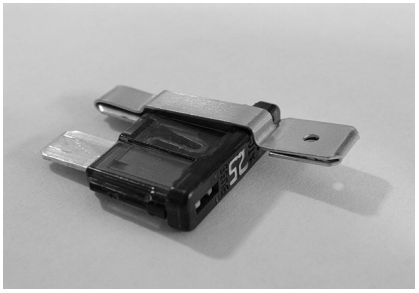
Using fuse-taps



If you are using fuse taps, it is important to draw from the correct side of the fuse

When connecting the red wire on the power harness

connect it to the cold side of the fuse.



Red = Cold Side

[warning] do not fuse this seat heater system with a fuse greater than a 7.5 amp value

Using Optional Add-A-Fuse Accessory (Purchased Separately)

This adaptor is rated to handle up to 10 amps on the accessory fuse.

Prong indicated in photo below must go to the DC +12V hot side of the fuse receptacle. In the example photo, the 7.5 amp fuse runs the seat heater accessory; the 10 amp fuse is the original amperage fuse from the fuse box. The 7.5 amp fuse is in line with the red wire for connection to the DC +12V seat heater wire.

Photo: Add-A-Fuse with fuses

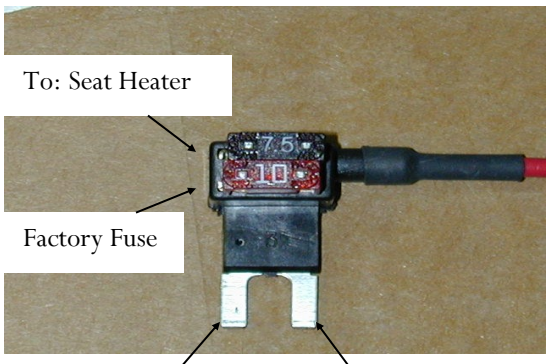
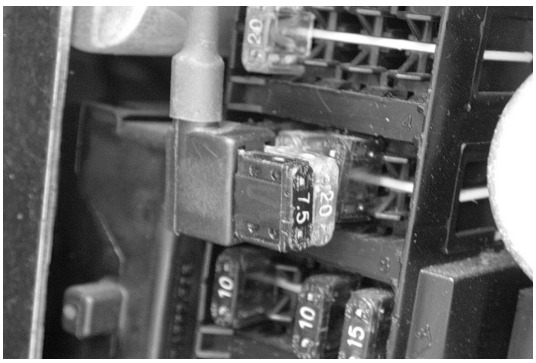


Photo: Add-A-Fuse installed in fuse box



Thrown for a loop?

Have a great idea?

Questions?

We're listening and we're here to help.

Call us @ (877) 607-8941

Or 248-680-2323

Office Hours

8:30 AM to 5:00 PM Eastern

5:30 AM to 2:00 PM Pacific

Email Support

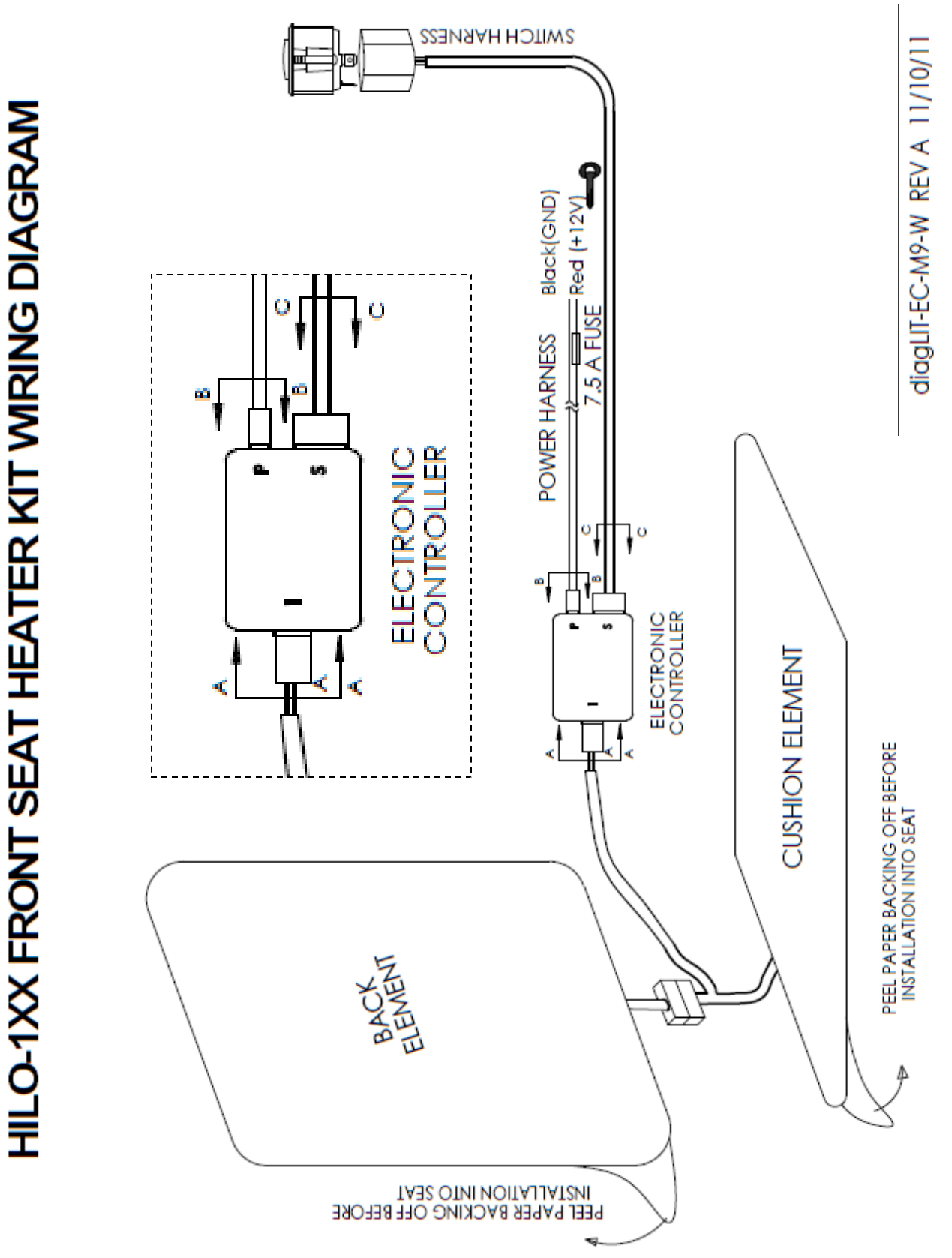
sales@checkcorp.com

SeatHeater.com HeatYourSeat.com

Check Corporation

1800 Stephenson Highway, Troy, Michigan, USA

Installation Instructions

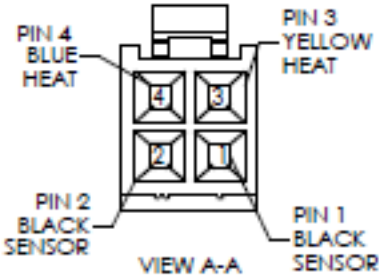


Cushion Heating Element

(3 versions) A-A

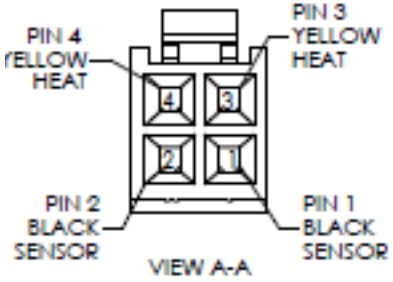
HILO-M101, HILO-M110

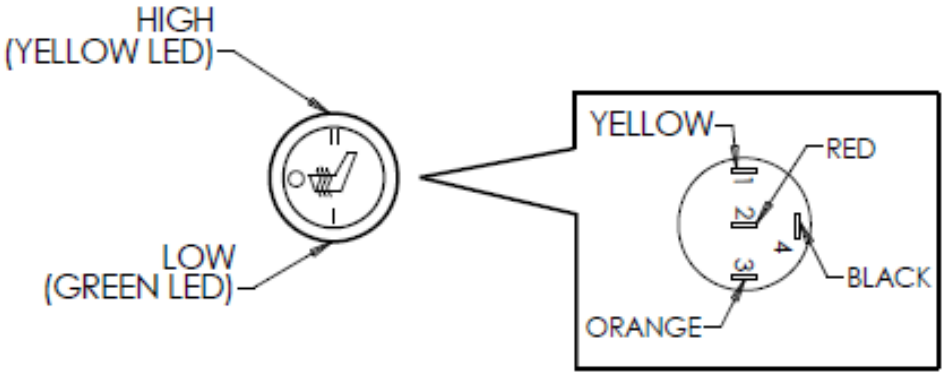
HILO-M113, HILO-M1XP

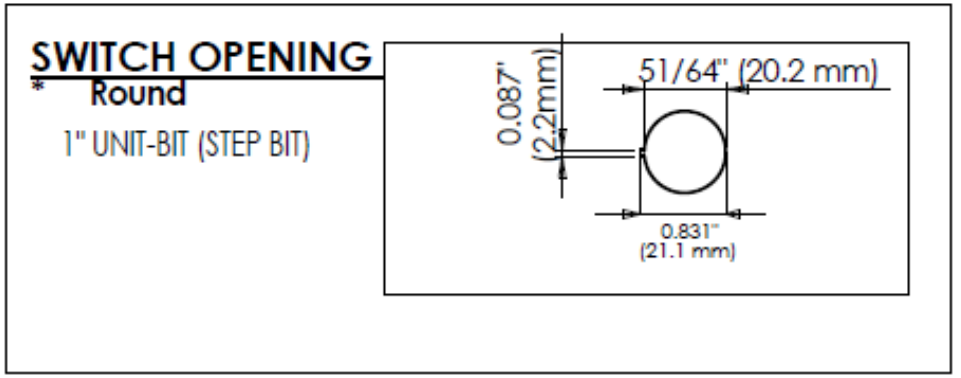


HILO-M020

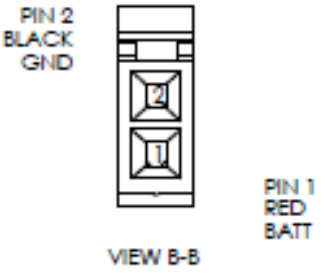
HILO-M0XP



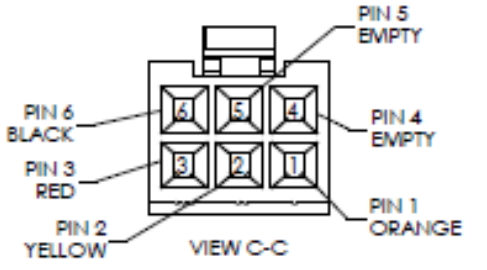




Power Harness B-B



Switch Harness C-C



Installation Instructions

More Products From Check Corporation:

1 SERIES

2 SERIES

COPPER Wire

3 SERIES

1ROUND

1FLAT

3 SERIES MASSAGE

2 SERIES DUAL

3 SERIES DUAL

2ROUND

JOINED

2FLAT