**Disclaimer:** Read and follow all instructions. Installation of this product is restricted to certified automotive service technicians. Improper installation may void the warranty. We are not responsible for any loss or damages as a result of improper installations.
Carbon Fiber Seat Heating System CSH-18R

Content of Package

1. Two seat heater pads
   - Large pad 280x550mm (11 x 21.5 inch)
   - Small pad 280x450mm (11 x 17.5 inch)

2. Wire harness with Hi-Lo switch (the side with one heater wire icon is the Lo position, the side with two heater wire icon is the High position)

3. Electrical insulation tape
Carbon Fiber Seat Heating System

Installation steps

1. Seat Disassembly
   a) Ensure that the all power to the car interior are disconnected.
   b) Remove the seat hold-down screws/bolts and move seat to outside of the vehicle.
      ** take care NOT to damage the seat and the parts attached.
   c) Carefully take the cover off the seat cushion and lean back. Keep detail record of the order of dismantling and save the components.

2. Overview of Carbon Fiber Heaters
   The carbon fiber heater consists of the wire harness which connects to the sensor and the two electrode bands on both ends of the carbon fiber mesh. When current is passed from the electrode band through the mesh, the mesh area heats up.
Carbon Fiber Seat Heating System
Installation steps

3. Confirm Heater Position

a) Unwrap the heater pad and decide on the best position to put on the cushion.
b) Take note the position of the metal rods and the recessed area on the foam.
c) The seat heater sensor shall not be located in any recessed area of the foam.
d) The cut holes for metal rods shall be at least 1.5 inch away from the sensor.
e) Edge of the cut holes shall be at least 0.7 in away from the electrode band.
f) The suitable size of a cut hole shall be about 7 in x 0.8 in.

** take care NOT to cut and damage the electrode bands
3. Confirm Heater Position – cont’d

a) If seat heater pad is too long, you can use scissors to cut short the pad from the side without wiring harness. Do NOT cut on the side with the wire harness.

b) The cut off length shall not exceed 1/3 of the original length of the pad.

c) Carefully Insulate the edges around cut openings with black electrical insulation tape in order to prevent potential arcing and fire hazard.
4. Special Handling of Seat Heater Pad

a) Carefully put electrical insulation tape along the cut edges of cut holes in order to prevent potential arcing and fire hazard.

b) It is optional to put insulation tape along the pad edges.

c) Stuff the cut opening of heater pad down the depression of the foam body as shown.
5. Special Handling of the Metal Rod

a) Carefully insulate the metal rod by wrapping with electrical insulation tape in order to prevent potential arcing and fire hazard.

b) Cut out an opening on the heater pad, to the same size of the rod sack

c) Insert the insulated metal rod into the center of the rod sack
6. Laying Out the Seat Heater

a) Along the edge of the heater pad are self-adhesive tapes to help fix the heater pad onto the foam. Peel off a few inches of protective cover to expose the sticky tape and stick the pad to the correct position on the foam. Then gradually peel off more cover tape and stick the pad to the foam until done. From time to time, tuck the pad gently to prevent wrinkles on the pad.

b) Route the harness at end of the pad to the opening to connect with the wiring under the seat.
7. *Complete the Seat Cover Installation*

a) Fix the seat cover to the seat using hog-rings and other tools as needed.

b) Tidy up the seat cover, reverse the disassembly steps to put the seat back into the car.
Carbon Fiber Seat Heating System
Installation steps

8. Installing the Heater Switch
a) Choose a suitable position to install the switch - on the dash, or the plastic trim on the side of the seat
b) Drill through the dash/trim material to make a round opening. Trim the opening until the switch has a good fit and fix the switch in the opening.

9. Connecting to Power Source
a) The heater may be connected to a switched or unswitched power source. When connected to an unswitched power source, the heater may be operated without using the ignition key but at the risk of draining the car battery.
b) The red wire in the wire harness is for connecting to the power source. Before making any connections, make sure the heater switch is at the off position:
1. Locate the fuse panel under the dash. Tee off a wire from a high current (eg 20A) contact. Use multi-meter to confirm if the wire is switched or unswitched.
2. Strip off 1 inch of insulation cover of the red wire in wire harness, and same of the tee-off wire. Twist and secure the two wires together.
3. Insulate the connection with black electrical tape.
** do NOT snip off the fuse or bypass the fuse by any means.
Carbon Fiber Seat Heating System
Installation steps

10. Connecting to the Ground Wire
a) The brown wire in the wire harness is for connecting to the ground /chassis.
b) A screw that is securely fastened to the chassis is suitable for use as a grounding screw.
c) A grounding screw shall not pass through any plastic material. It shall have direct contact with the metal of the chassis, and shall be free from oil or rust. If there is any oil or rust on the screw, they must be cleaned thoroughly.
d) The copper washer of the brown color wire of wire harness must be attached to the ground screw by using a nut.

11. Connecting to the two Heater Pads
a) The two wires in the wire harness with white terminal clip are for connecting to the heater pads. On the wire of the heater pad is a white male clip. Connect the two white terminal clips with the two male clips from the heater pads.

12. Testing the Seat Heater
a) Start the car engine, flip the heater switch to LO for one minute and then to HIGH for one minute to test the operation and performance of the seat heater.
Carbon Fiber Seat Heating System

Safety Precautions

1. Installation Guide Lines and Best Practice

a) Never cut out the wire mesh under the sensor and the thermostat.
b) Never cut holes along the length of the electrode band.
c) Never allow hog rings to be in direct contact with the heater pad.
d) Never damage the two electrode bands.
e) Never fold the pad to create overlapping.
f) Never remove the manufacturer label on the seat heater pad.
g) Never connect other electrical devices to the seat heating system.
h) Never pour electrically conductive liquid on the seat.
i) Never put hot or sharp objects on the seat while seat heater is in use.
j) Never turn on the seat heater while engine is not running - may drain the battery.
k) For cars fitted with airbags, extra care must be taken during installation. Our company shall not be responsible for any malfunctioning of the airbag as a result of problematic installation.
l) The company shall not be responsible for seat heaters installed by unauthorized and untrained personnel.
Carbon Fiber Seat Heating System
Safety Precautions

2. Example of incorrect installation

a) The cut edges of pad were not insulated using electrical insulation tape.

b) Cut hole was not made at the foam depression – looping the heater pad into the foam depression will cause overheating of the area.
Carbon Fiber Seat Heating System Safety Precautions

3. Example of incorrect cutting of the heater pad
   a) Cut hole is made too close to the electrode band.
   b) Cut hole is too wide.
   c) Cut hole is made too close to the Sensor
Carbon Fiber Seat Heating System
Safety Precautions

3. Example of incorrect cutting of the heater pad (cont’d)

d) The electrode band was cut while making the cut hole.
e) Cut holes are made parallel to the electrode band.