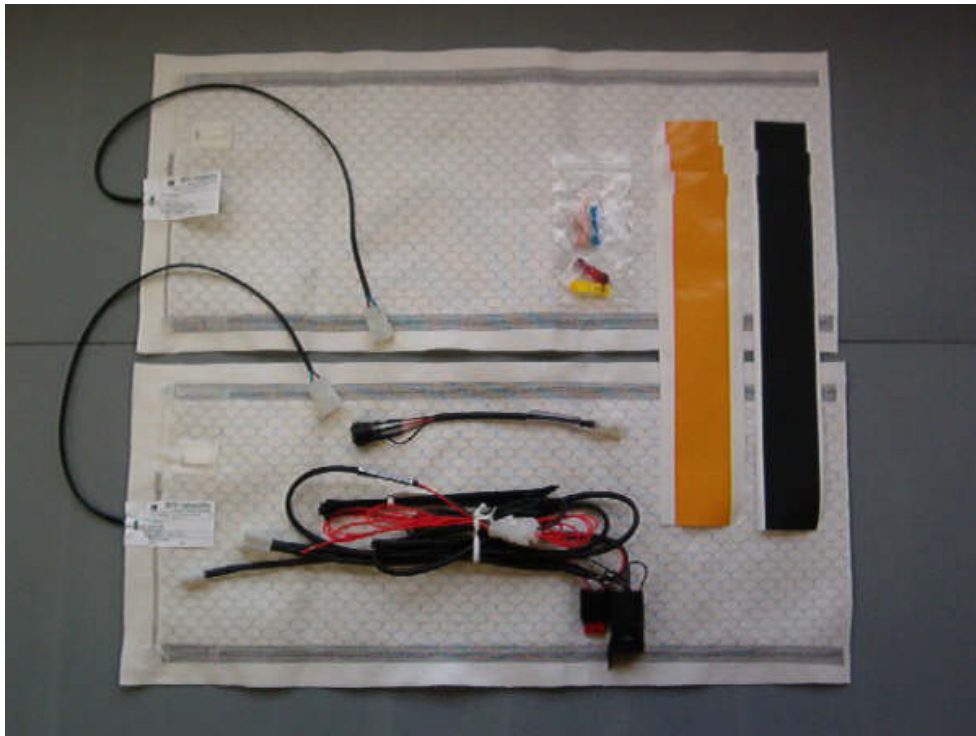




Presents

CARBONTECH™ Seat Heater
INSTALLATION INSTRUCTIONS
AND
OWNER'S MANUAL



SINGLE SEAT APPLICATION
With two 12" x 26" Heating Pads
(HI/LO/OFF Round illuminated Switch)

P/N 300202-MWA

Installation Preparation & General Notes:

1. Seat heater system will **NOT** work on seats manufactured using the “foam in place” (trim cover glued to foam pad) method of trim cover attachment.
2. If the 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.
3. If vehicle is equipped with an air bag, it is advisable to disconnect negative battery cable for 3 minutes prior to beginning installation.
4. Only use parts and components supplied in kit for the seat heater installation. The supplied components are carefully selected for optimal performance. Foreign parts may lead to problems which could result in potential damage to the seat heater components or vehicle.
5. **The installation of the heating pads must be free of creases and wrinkles.**
6. Seats in vehicles with pre-loaded (power charge equipped) safety belts must be removed and re-installed under strict adherence to the vehicle manufacturers instructions.
7. In cases where a seat is equipped with an occupant pressure sensor for air bag deployment; please refer to the manufacturer’s manual for any specific instruction with regard to installing seat heater kits.
8. After installing seat heater wire harness, care must be taken to ensure all seat motions are still possible without obstruction and the moving of the seat does not cause any interference that could damage the seat heater wire harness.
9. Installation of a CARBONTECH™ seat heater system with seats containing seam lines running front to rear (length wise) is not permitted. Only exception is if the heating pads are not directly located over the groove/s.
10. The overall side to side (width) of the heating pads must not be altered (**cutting not permitted**).
11. Both heating pads must be connected to ensure system functions properly.

Warning: Metal, electrical conductors or hog rings are not to be placed on, through or across the heating element.

Warning: Do not tap or solder seat heater harness to any airbag circuits. Yellow tape, tubing and connectors will indicate airbag circuits.

Warning: Do not tap or solder seat heater harness to any pre-loaded safety belt circuits.

Installation:

Open box and remove contents. Check to make sure that the following parts are included within kit:

Qty	Description	Part Number
2	12"x 26" Seat Heater Pad	30-0108-MW
1	Wire Harness Assembly	30-4200004
1	Switch Assembly	30-0213-MW
4	Black Tape Strips	30-0110-MW
4	Gold Tape Strips	30-0109-MW
1	Red T-Tap Connector	88-2300003
1	Blue T-Tap Connector	88-167000-TT
1	Yellow T-Tap Connector	88-2300002
2	Male Spade Connector	88-167000-MS
10	Wire Ties	88-8880001

Seat Cushion:

1. Prior to removing seat from vehicle, lay heating pads on seat to verify size & fit.
2. Secure car on a level surface.
3. Disconnect the negative battery cable or make sure that the area to be worked within is grounded. If you have any doubt concerning the layout of the vehicle wire harness, consult the wiring diagram provided by the manufacturer.
4. Remove seat from vehicle and place on a suitable work table/area.

Note: Make certain to disconnect all wire connectors prior to removing seat from vehicle.

5. Disassemble seat as needed to gain access to seat cushion cover attachment clips.
6. Unsnap j-clips and or remove "hog ring" clips and peel back cover. See Fig 1 & 2

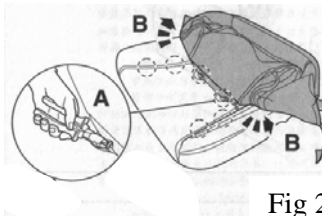


Fig 2

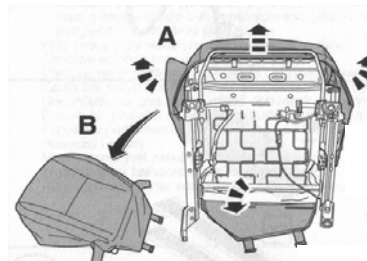


Fig 1

Note: If trim cover has hook and loop style tie down, care must be taken when removing cover.

7. Measure the width of the center seat area between the longitudinal seams.

Note: The width must be at least 250 mm (10 in).

The heating pad CANNOT contact the side seams of the seat. If it does make contact, the seat heater cannot be installed. See Fig 3

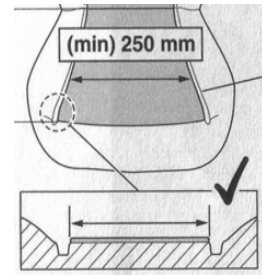


Fig 3

8. Position the heating pad with the label facing down and the wire harness routed towards the back of the seat area. Adjust the pad so the thermostat is located approx. 25-50 mm (1-2 in) forward of the back rest. In cases where the seat cushion contains lateral grooves (side to side) to allow for trim cover attachment, a section of the heating pad will need to be cut out. See Fig 4

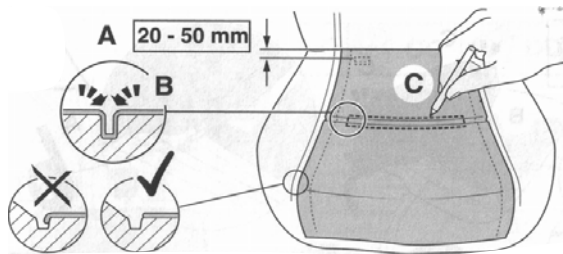


Fig 4

9. Once the area that needs to be cut out is marked, remove the heating pad from the cushion. Measure in board (towards Center of pad) on each side 40mm (9/16 in) and mark. This is necessary to ensure that the main power supply for the heating pad does not get damaged or cut. See Fig 5

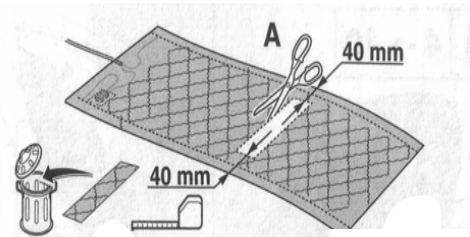


Fig 5

10. Cut out the marked area. With the section removed, wrap lateral "bridges" with the supplied black insulation tape. Repeat procedure on remaining sides of cut out. See Fig 6

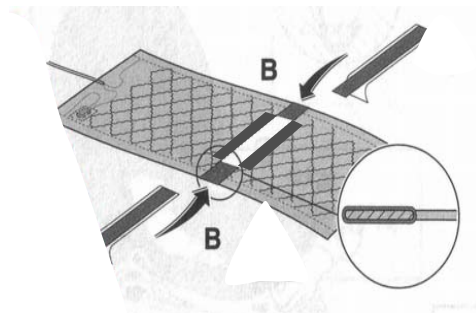


Fig 6

11. Reposition heating pad onto cushion foam. Make sure thermostat is in the correct location.
(see step 9) Using the supplied gold double sided tape, attach the back edge of the heating pad to the cushion foam. With the pad attached at the rear, determine the final length.

Note: Make sure that the length difference between the cushion pad and back rest pad is not more than 275 mm (10-3/4 in). See Fig 7

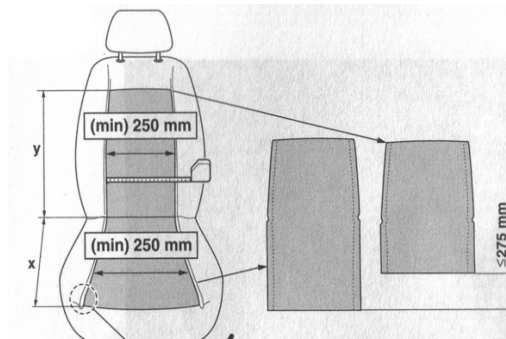


Fig 7

12. Trim if needed and attach using the supplied gold double sided tape.

Note: Seat heater pad should reach the forward edge of the seat cushion. See Fig 8

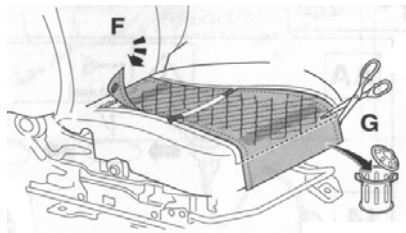


Fig 8

13. Route the heating pad wire harness so that it exits the trim cover in an inconspicuous area.
14. Installation is now complete. Double check to make sure the pad does not have any wrinkles or is folded over onto itself. Once checked, carefully re-attach trim cover.

Back Rest:

1. Follow the same order and procedures for steps 5-13 for installing the heating pad to the back rest.

Note: For step 11, use 2 pieces of gold double sided tape. One at the top and the other approximately half way down to ensure the pad will not loosen and wrinkle over time due to effects of gravity.

Seat Heater Pad Wire Harness Routing/Attachment:

1. Route wires from cushion & back to underside of seat. Use supplied wire ties to fasten harness to seat.

Warning: Make sure attachment locations will NOT interfere with any seat movement.

Seat Heater Switch:

1. With the seat still removed from vehicle, choose a switch location on a flat surface where the wires won't interfere with any seat movement.
2. Mark the location and drill a 19.5 mm (3/4 in) hole using a stepped drill bit.

Note: hand filing may be required for final fitment.

3. Insert switch through opening and snap into place.

Seat Heater Wire Harness:

1. Remove vehicle scuff plate & kick panel.
2. Start under seat, route main harness through carpet opening toward scuff plate. Route harness along scuff plate towards the underside of dash.

Note: If opening in carpet does not exist, create as required.

3. Using a digital volt/ohm meter, locate a switched ignition circuit that is capable of handling a 10A continuous current and attach using one of the supplied T-tap connectors. Use Red T-tap for 18-22 gauge wire, blue T-tap for 16-14 gauge wire or yellow T-tap for 12-10 gauge wire. Attach spade connector to seat heater harness red wire and connect to t-tap. **Note: Improper installation could drain your battery if you attach seat heater harness to a constant battery source.**

Warning: Never use engine control/ECM, safety device, ABS/ARS or engine cooling fan, etc. to power the seat heater circuit.

4. Attach ring connector on the black harness wire to a suitable ground source at vehicle.

Note: A T-tap and spade connector can also be used if needed.

Note: Tap/splice into only one vehicle circuit per seat heater harness.

Final Seat Assembly:

1. Re-assemble remaining components of seat.
2. Load seat into vehicle. Do not install mounting fasteners.
3. Re-connect vehicle harness connectors. Connect seat heater switch, main power and heating elements to seat heater harness.

Note: Heating elements can be plugged into either connector.

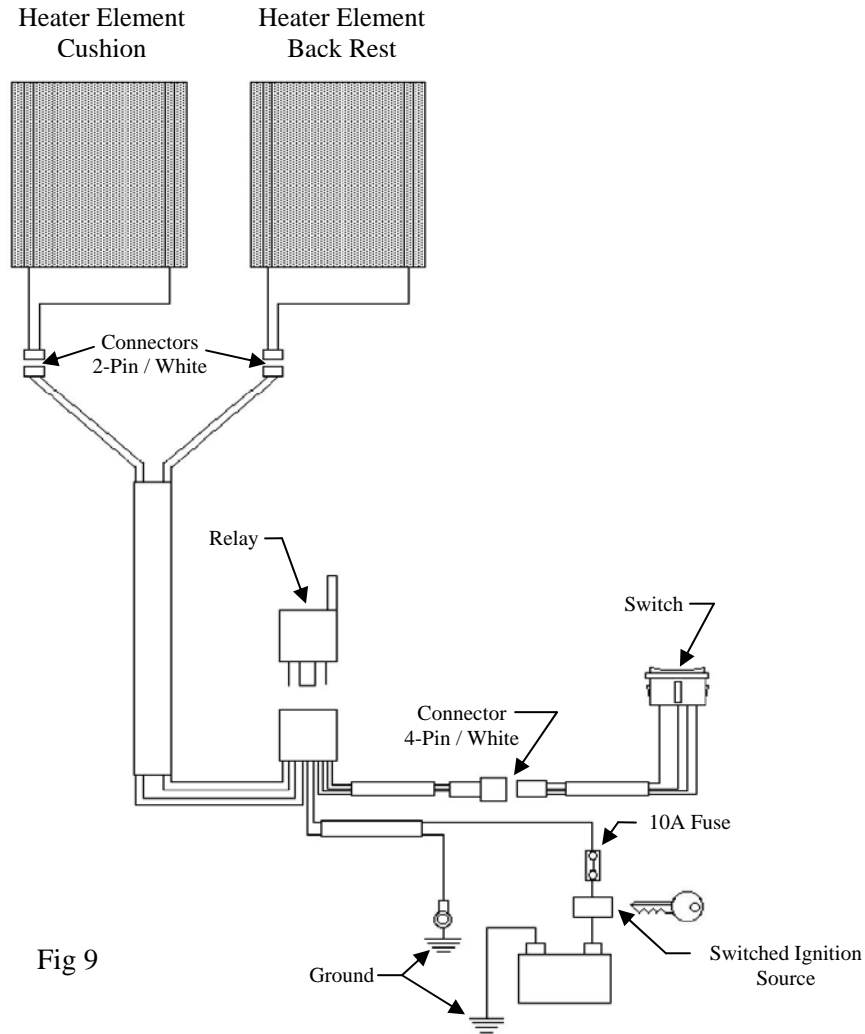
4. Install seat mounting fasteners and torque to manufacturers recommended specifications.
5. Re-connect the negative battery cable and test function the seat heater system.
6. Re-check all systems and accessories where components were removed or relocated during the installation process.
7. Re-install vehicle scuff plate and kick panel.

Troubleshooting:

If system does not heat up or no indication of power.

- Check fuse in seat heater harness and vehicle.
- Temperature of seat may be above the preset thermostat temperature and will not allow it to come on. (i.e.: sun shining on seat)
- If the light on the heated seat switch does not come on, it could be that the switch bulb is burnt out (replace switch) or that there is no power to the switch.
- Ensure that all connectors are properly connected and that the ground wire is properly grounded. (see Fig 9 for wiring diagram)
- Using a digital ohm meter, test only the heating elements (switch not included) from the under seat wire connector. If no resistance is found, then an open condition exists.
- Check internal wire connectors for an open circuit. If a heating element has an open, install a new heating element.
- If the heating elements and seat harness tests OK, then a power supply problem exists.
- Using a digital volt meter, start at the source and trace back through all the connectors and switch to determine where the power loss is occurring. Repair as necessary.
- If the seat heater fuse continues to blow, then a short or bad ground condition exists in the power circuit.
- If the vehicle fuse which has the heated seat T-tap connected to it continues to blow, then the tap will need to be moved to another vehicle circuit.

Seat Heater System Wiring Schematic:



CARBONTECH™ Seat Heater Specification (290mm)

Heater Pads:

Size	645 x 290mm
Thickness	1.3mm
Heating Power	0.050 Watt/sq. cm @ 13.8 Volts
Total Heating Power	71 Watts @ 13.8 Volts
Electrical Resistance	2.67 Ohm +/- 10%
Electrical Current	5.17 Amps @ 13.8 Volts
Thermostat	Bi-Metal switch: on at 40°C, cuts off at 70°C
Wire Length	520mm +/- 10mm
Connector	Tyco/AMP
Burn Rate	<80mm/min. to FMVSS 302
Specification	2000/53/EG
Weight	0.094 kg
Content per Kit	2

Note: All data are valid for the non-trimmed heater pad.

Wiring:

Material	PVC/Cu
Specification	2000/53/EG ISO 6722 DIN EN 60684-2 (VDE 0341-2) DIN EN 60352-2 DIN VDE 0298
Weight	0.033 kg
Content per Kit	1

Relay:

Type	Change over relay
Continuous Rating	20 Amps @ 12 Volts
Short Time Rating	40 Amps @ 12 Volts
Voltage Drop (20 Amp)	< 100 mV
Pressure on Contact	> 100 grams
Tension of excitation	< 10 Volts
Tension of misexcitation	> 2.5 Volts
Current absorption	< 170 mA
Mass Isolation	200 Volts eff.
Lifetime	100,000 times (2 sec. ON, 2 sec. OFF)

CARBONTECH™ Seat Heater Specification continued

Operating Temperature	-40°C to +80°C
Homologation	E3-7025 with Standard ECE 10R 02
Weight	0.030 kg
Content per Kit	1

Note: All data are valid for the non-trimmed heater pad.

Switch:

Type	Rocker Switch
Circuit	ON-OFF-ON
Operation Temperature	-20°C to +85°C
Rating	20 Amps @ 12 Volts
Contact R	Max. 50 mOhm
Insulation R	Min. DC 500V 100 mOhm
Illumination	Status: 2 Color LED, Green for Low Red for High
Content per Kit	1

Approvals for CARBONTECH™ Whole System:

TÜV approved for European ECM Standard 72/245/EWG Version 95/54/Eg and for use in cars with side airbags in seats.

Functional Principle of CARBONTECH™ System:

Each heater pad is an electrical resistor. A seat heater kit contains two (2) heater pads: one (1) for the cushion and one (1) for the bag.

To realize two (2) heating levels, the two (2) pads are connected serial for the “LOW” position and parallel for the “HIGH” position. This gives a 25% rate for the “LOW” position and 100% for the “HIGH” position.

To avoid overheating, each pad has its own thermostat, which interrupts the electrical circuit at a temperature of 70°C.

The CARBONTECH™ product was designed by MWW Automotive; patented and manufactured by ACTIVline, a recognized German seat heater supplier to the global OEM market, exclusively for MWW Automotive.

The MWW Automotive CARBONTECH™ system is a derivative of the certified and proven OEM system designed for the North American OEM/aftermarket applications. The system can be installed in almost all type cars, trucks, SUV's and commercial vehicles.

Warranty Instructions and Procedures

CARBONTECH™ carries a one year limited warranty beginning from the date of installation. The warranty covers proven fabrication and materials deficiencies. Not covered in the warranty are damages resulting from:

- Improper handling of components and seat heater systems.
- Failure to follow installation instructions.
- Unauthorized installation.
- Installations by staff not qualified or certified to do the installation.
- Transportation and freight.

The warranty covers only material. Subsequent damage of any kind, even as result of damage or flawed components (supplied by vendor) is not covered. The vendor's warranty procedures must be followed to become eligible for a claim. The vendor reserves the discretionary right to determine whether the defective unit will be repaired, replaced entirely or whether only components will be sent to correct the defects. All freight, packaging and other associated cost must be covered by the buyer. Vendor reserves the right to conduct repairs of defective units either at the location of the buyer or any other location specified, agreed and communicated between the vendor's place of business and the buyer. Potential transport and freight cost must be covered by buyer unless otherwise specified by vendor. Only such warranty claims can be processed and honored, where buyer provides the vendor at the time of the claim with the following documents:

- Proof of purchase (invoice)
- Proof of payment
- Proof of installation by authorized and qualified installer (following published installation guide lines and directions) incl. mileage reading at the moment of installation.
- Both labels on the seat heater system's heater pads must contain comprehensive vehicle data like year, make and model of the car as well as the date of seat heater system installation.

Notice to Users

The seat heater is designed to control the temperature of the lower and upper seat segment of the front seats. Proper temperature control of the vehicle seat increase the driver's comfort and enhances basic health. The seat heater operates in two power levels and can only be engaged with the ignition turned on. The switch label "**HI**" denotes the function best used to power up the seat heater in cold ambient temperatures.

After the system is running for a while the seat heater should be switched to the "**LO**" position for maximum comfort. This keeps the system from generating too much heat when running continuously. The low position will provide the best comfort for normal operations.

The seat heater may be turned "**OFF**" by placing the rocker switch in the center position.

The seat heater is equipped with safety device which senses and prohibits overheat conditions. If the seat heater is operated for extended times in the "**HI**" position, it may be possible for the thermo probe to shut the heater down. In such event it may take a few minutes until the system will re-engage again without action needed from the drivers (provided the switch is still in the on position). A 10 Amp fuse protects against electrical shorts and other malfunctions.

Features – Functions – Benefits

- The CARBONTECH™ Seat Heater system is made from the highest quality carbon fiber material.
- Higher density of carbon fiber mesh produces approx. 7% higher heating capacity and ramp-up times over other competitive products.
- Patented solution of a Teflon™ encapsulated side channel for added protection and durability.
- Large dual heating elements with the latest carbon fiber technology.
- Automatic thermo-controller for consistent temperature regulation.
- Encapsulated water-proof relay.
- Universal harness with in-line fuse.
- Round lighted High / Low switch.
- Rapid heat-up time with the best and most even heat distribution.
- Carbon fiber mesh: not prone to local overheating or power disruption.
- **OEM-approved** product: Currently being installed in a large variety of domestic and foreign vehicles.
- CARBONTECH™ Seat Heaters meet or exceed QS9000, ISO9001/2 quality standards and comply with FMVSS 302 standards.

Warranty Instructions and Procedures

Webasto Product Inc. carries a one year limited warranty beginning from the date of installation. The warranty covers proven fabrication and materials deficiencies. Not covered in the warranty are damages resulting from:

- Improper handling of components and seat heater systems.
- Failure to follow installation instructions.
- Unauthorized installation.
- Installations by staff not qualified or certified to do the installation.
- Transportation and freight.

The warranty covers only material. Subsequent damage of any kind, even as result of damage or flawed components (supplied by vendor) is not covered. The vendor's warranty procedures must be followed to become eligible for a claim. The vendor reserves the discretionary right to determine whether the defective unit will be repaired, replaced entirely or whether only components will be sent to correct the defects. All freight, packaging and other associated cost must be covered by the buyer. Vendor reserves the right to conduct repairs of defective units either at the location of the buyer or any other location specified, agreed and communicated between the vendor's place of business and the buyer. Potential transport and freight cost must be covered by buyer unless otherwise specified by vendor. Only such warranty claims can be processed and honored, where buyer provides the vendor at the time of the claim with the following documents:

- Proof of purchase (invoice)
- Proof of payment
- Proof of installation by authorized and qualified installer (following published installation guide lines and directions) incl. mileage reading at the moment of installation.
- Both labels on the seat heater system's heater pads must contain comprehensive vehicle data like year, make and
- Model of the car as well as the date of seat heater system installation.

Safety Advice

- **Do not place any heavy, sharp or pointed objects on the seats.**
- **Any fluid spilled on the seats may destroy the seat heater and may cause damage to the vehicle. Never operate the seat heater while the seats are wet or soaked with fluid.**
- **Do not keep insulating material (sheets, covers, coats) on the seats while the seat heater is running. Do not place heat sensitive objects on the seats while the seat heater is running.**
- **To protect damage and discharge of the battery, avoid seat heater operation for extensive time periods without a running engine.**
- **Individuals, extra sensitive to heat, should only operate the seat heater in the “LO” position.**

NOTES:

NOTES:



Feel the drive

15083 North Road
Fenton, MI 48430

Technical Assistance Hotline
USA: (800) 860-7866
Canada (800) 667-8900

www.webasto.us
www.techwebasto.com