



IMPORTANT: Read These Operating and Safety Instructions Before Using the Inductor Energy®.

OPERATING AND SAFETY INSTRUCTIONS

Specializing in High Performance Induction Heating Systems for the Automotive Aftermarket



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I. Safety Rules for Using the Inductor Energy®

A. General Work Area Safety Rules



Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious personal injury.



Keep your work area clean and well illuminated. Cluttered and dark areas invite accidents.



Keep bystanders, children, visitors and animals away while operating the Inductor Energy®. These beings may create distractions that cause you to lose control of the Inductor Energy®.



Work outdoors, if there is no danger of rain, water or moisture. If this is not possible, keep the inside work area well ventilated and dry. Be sure that ventilation fans are moving air from the inside to the outside.



Keep a fully charged fire extinguisher at hand at all times when using the Inductor Energy®.

B. Personal Safety Rules



Do not operate the Inductor Energy®, and stay at least twenty feet away from an operating Inductor Energy®, if you have a cardiac pacemaker or any other kind of electronic or surgical implant. The Inductor Energy® will interfere with the operation of cardiac pacemakers and other implanted electronic medical devices, and can cause dangerous heating of any metal items in your body, for example, artificial joints and bone screws and braces.



Do not operate the Inductor Energy® while wearing any metallic items such as jewelry, rings, watches, chains, identification tags, religious medals, belt buckles, body piercing hardware, etc. The Inductor Energy® can heat these metallic objects very quickly and cause serious burns or even ignite clothing.



Do not operate the Inductor Energy® while under the influence of drugs, alcohol or any medication.



Do not overreach, keep proper footing and balance at all times. Proper footing and balance enables better control of the Inductor Energy® in unexpected situations.



Do not use the Inductor Energy® within 4 inches of any airbag component. The heat created from the Inductor Energy® can ignite the air bag, causing it to explode without warning. Refer to the vehicles service manual for precise airbag location before operating.

Personal Safety Rules Continued



Remove all loose coins, metallic tokens, keys, chains, pocket knives, miniature tools, or any other metallic object in or on your clothing before operating the Inductor Energy®. Do not replace these items until you are finished using the Inductor Energy®. The Inductor Energy® can heat these metallic objects very quickly and cause serious burns or even ignite clothing.



Do not wear clothing that is made with metallic pocket rivets, waist band buttons, pocket buttons, and zippers when operating the Inductor Energy®. The Inductor Energy® can heat such metallic items very quickly and cause serious burns or even ignite clothing.



Do not operate the Inductor Energy® while under the influence of drugs, alcohol or any medication.



Always wear safety goggles when using the Inductor Energy®.



Fumes and smoke from hot/burning adhesives are toxic. Wear a dual filter (dust and fume) respirator mask. These masks and replaceable filters are readily available at major hardware stores. Be sure the mask fits. Beards and facial hair may keep masks from sealing properly. Change filters often. DISPOSABLE PAPER MASKS ARE NOT ADEQUATE.



Wear heat-resistant gloves when using the Inductor Energy®. The Inductor Energy® heats metal very quickly. You can burn your hands and fingers when trying to remove parts from hot metal surfaces.

C. Electrical Safety Rules



Do not use the Inductor Energy® in the rain, moisture or immerse in water. Exposing the Inductor Energy® to water or other liquids may cause an electrical shock hazard.

Electrical Safety Rules Continued



Disconnect the Inductor Energy® from the power supply cord before changing any of the applicators.



Fire Hazard Safety Rules Continued

⚠ WARNING



Interior trim pieces and headliners may be damaged or ignited by the heat created by the Inductor Energy® when removing glass. The ignition of these materials may not be readily apparent and could result in property damage and injury to persons. When removing windshields and other glass, keep the Inductor Energy® applicator tool moving in a back-and-forth motion along with outward pressure. Lingering or pausing in one spot could ignite interior trim and/or headliners.

D. Tool Use Safety Rules

⚠ WARNING



Make sure that the Power Unit has a sufficient supply of air for cooling. Do not operate the Inductor Energy® with the top of the storage case closed or partially open. Make sure that the vents of the Inductor Energy® Power Unit are clean and free of dust and debris so that the Power Unit has an unimpeded flow of cooling air.

⚠ CAUTION

Do not attempt to repair or service the Inductor Energy®. There are no user-serviceable parts except for renewing the heat barriers on the Heat Concentrator™ and Heatblock™.

⚠ CAUTION

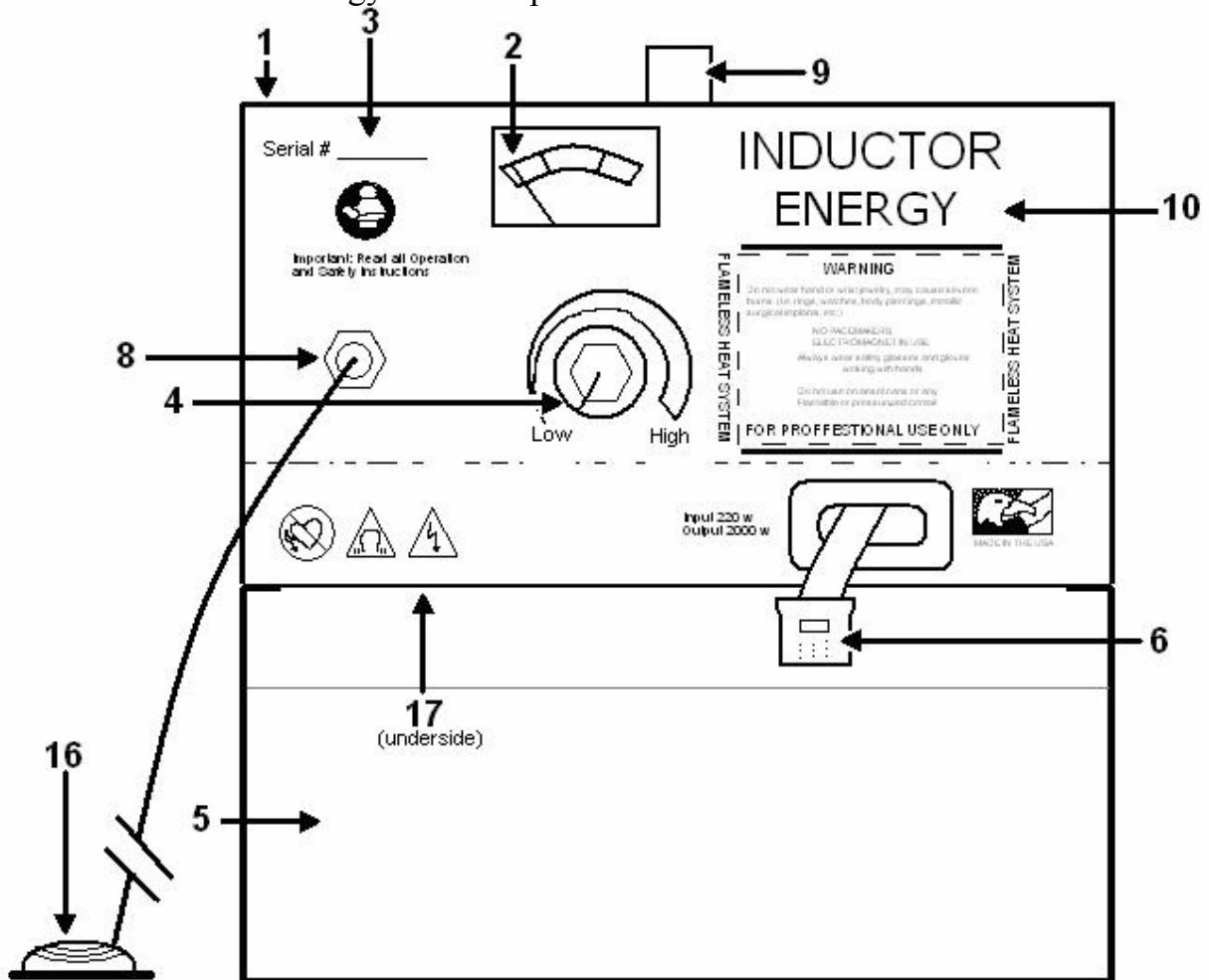
Before plugging in the Inductor Energy®, make sure that the outlet voltage supplied is compatible with the voltage marked on the nameplate within 10%. An outlet voltage incompatible with that specified on the nameplate can result in serious hazards and damage to the Inductor Energy®.

⚠ CAUTION

Do not separate the attachment cord connectors from the Inductor Energy® cord connector by yanking or pulling on the cords to disengage the connectors. If the Inductor Energy® is operating when the connectors are separated, NON-WARRANTABLE damage to the internal electronics of the Inductor Energy® may occur.

II. Components

A. Inductor Energy®™ Components

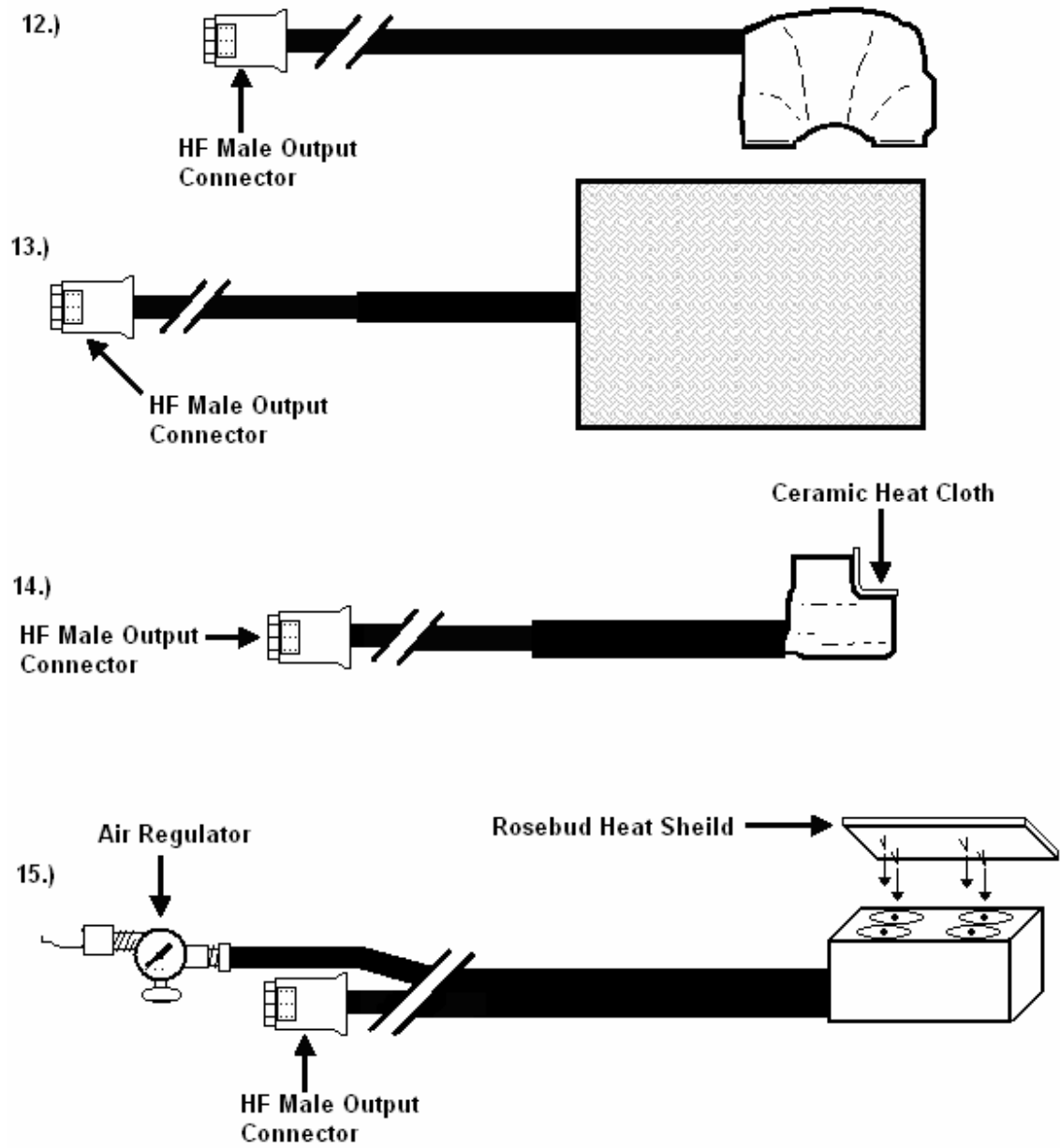


1. Inverter
2. Power Level Meter
3. Serial Plate
4. Power Control Knob
5. Storage case
6. HF Female Output Connector

7. GFI (Ground Fault Interrupter)
8. Barb Hose Fitting
9. Handle
10. Model
11. Plug 110/240 AC
12. Glass Releaser® Attachment

- 13. Heat Pad Attachment
 - 14. Heat Concentrator Attachment
 - 15. Heatblock Attachment
- Inductor Energy® Attachments

- 16. Pneumatic Foot Switch with air hose
- 17. Vent
- 18. I-wedge (Not Shown)



(Refer to the illustrations on this and preceding pages, as necessary. Numbers in parentheses in the text following refer to callouts on the illustrations.)

III. PRINCIPLES OF OPERATION

The **GFI** (7) and **power cord** (11) insures a properly grounded 240 VAC power input connection. The **inverter** (1) steps up ordinary 240 volt, 50 Hz alternating line current to a high Frequency, which the tool – **Glass Releaser**® (12), **Heat Pad**® (13), **Heat Concentrator**® (14), or **Heatblock**™ (15) – converts to a high frequency alternating magnetic field. This magnetic field crosses the metallic, conductive work surface (e. g., the sheet metal of an automobile body panel) and vibrates the electrons in the metal through the principle of electromagnetic induction. The kinetic energy of the moving electrons is dissipated as heat, which warms whatever metal is within the tool's working range (about 1-1/2 inches). The more easily magnetized a substance is, the greater the heat developed in it. That is why the Inductor Energy® heats ferrous metals and their alloys readily, but has no effect on glass, plastics, wood, cloth and other non-conductive materials. The inverter is equipped with a **meter** (2), which indicates the relative amount of power that is being delivered to the attachment and, indirectly, the amount of heat created. The meter is color coded with green, yellow and red ranges, indicating, respectively, low, medium and high power generation. The meter may also be used to locate hidden metal such as a pinch weld when removing a window. The inverter may also have a **power control knob** (4) to adjust the level of power being delivered to the attachment. Turning the power control knob clockwise increases the power, turning it counterclockwise decreases the power. The **pneumatic foot switch** (16) is used to turn the inverter on and off. Step or squeeze it to turn on power to the unit. The unit will remain ON as long as pressure is applied to the switch. Remove pressure from the switch to turn the power OFF. Refer to the **serial number plate** (3) on the inverter and record the serial number on the enclosed Warranty Card for use when making a warranty claim.

IV. PREPARATION FOR USE

⚠ WARNING



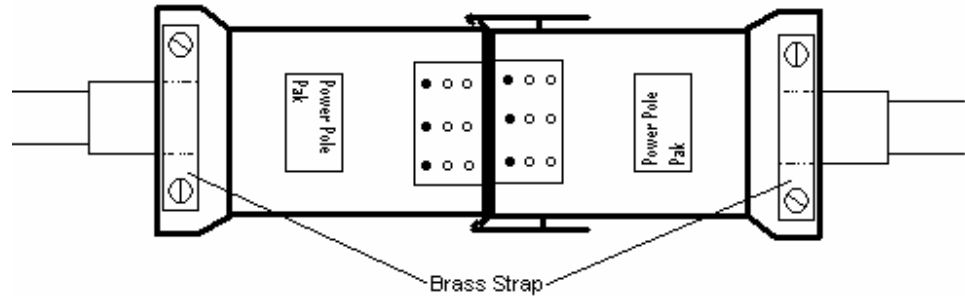
Read and understand all safety warnings and cautions in this manual before operating the Inductor Energy®.

A. Generator & Inverter Use

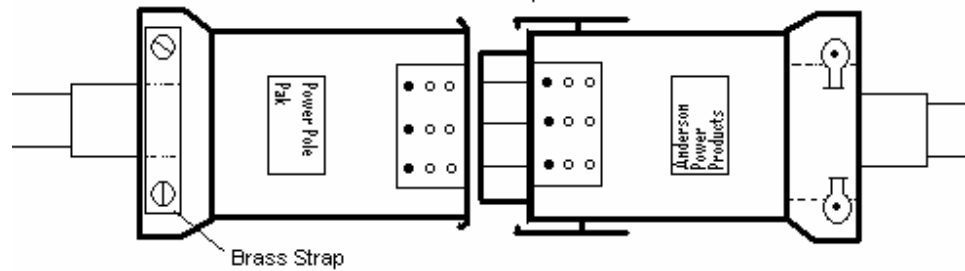
⚠ CAUTION

The Inductor Energy® is designed to operate from a normal 240 volt alternating current (VAC), 50 Hz (cycles per second) power line or service outlet.

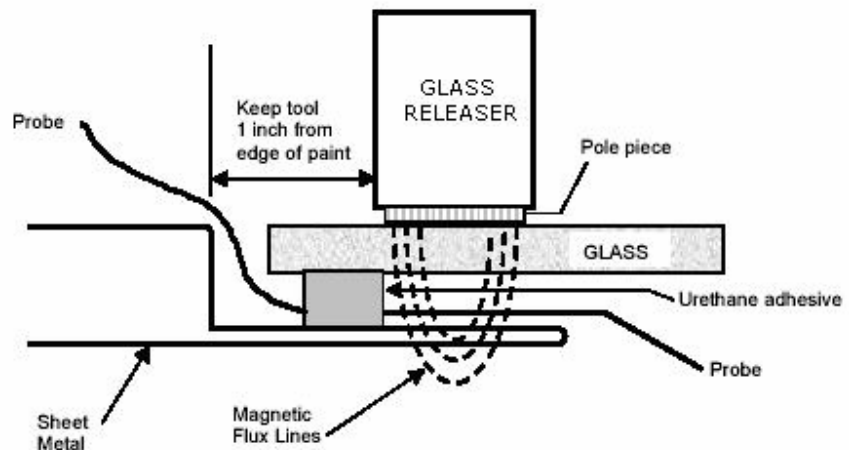
Right Way



Wrong Way



V. USING THE GLASS RELEASER®



Functions: The *Glass Releaser*® (12) tool (shown above) is formed in the shape of a shallow upside down U, and the magnetic lines of flux pass back and forth in an arc between the pole pieces (the two flat square surfaces at the open end points of the U). The Glass Releaser® tool heats metal at high intensity in the shape of an oval or ellipse centered on the long axis of the tool, which makes it ideal for the quick, easy and clean removal of automotive glass, bonded SMC Panels, Bed liner, metal bond adhesives, etc.

Tip: Practice on a junk car or clip in order to master the techniques of using the Glass Releaser® before attempting to work on a customer's car. Windshields are laminated glass and very fragile. Practice first on the less fragile tempered glass from rear hatches and rear windows. The most important thing to remember when using any of the Inductor Energy® tools is that it's far better to use too little heat at first, and take a few more minutes on the job to gain the experience necessary to use the tool well, than to use too much heat and burn the paint, ignite the headliner, or damage any trim.

A. Removing a Complete Window When the Position of the Urethane Seal is known

Step 1 Remove any metallic trim or reveal molding, if applicable.

Step 2 Pull back any non-metallic trim or reveal moldings, if present.

Step 3 If you are unfamiliar with the particular model vehicle and where the urethane adhesive seal is relative to the edge of the window glass, use your I-wedge, to probe for the location of the urethane adhesive. Mark the location of the urethane adhesive (refer to illustration above) on the glass to assist in placing the Glass Releaser® for best performance. The ideal placement of the Glass Releaser® tool is just inside the edge of the urethane adhesive, but never closer than at least one inch from the edge of the glass, to avoid burning the good paint.

Step 4 Turn the power control knob on the inverter all the way clockwise to Full (max.) power (also labeled as the "Glass Releaser®" setting) but do **NOT** turn ON the Inductor Energy® yet.

Tip: The best place to start on most glass is at a corner. Pick a corner that is accessible from the inside and the outside of the vehicle, so that you can apply outward pressure on the glass to break the urethane bond after heat has been applied to the pinch weld by the *Glass Releaser*® tool.

Step 5 Position the Glass Releaser® tool on the glass near a corner, with the two flat pole piece surfaces on the glass, and with its long axis aligned with the inside edge of the urethane adhesive that you have measured already. Use a marking tool to make some guide lines if they will help you keep the Glass Releaser® tool at the inside edge of the urethane adhesive.

Step 6 Step on the foot switch to turn the power ON. Immediately begin to move the Glass Releaser® tool parallel to the horizontal or vertical side of the corner, at a rate of 1/2-inch per

second, for a distance of 9 inches from the corner outward, and then back into the corner, as shown in the illustration to the right. When you reach the corner, turn the Glass Releaser® tool and move it at the same rate of 1/2-inch per second 9 inches down the other side of the corner, and back to the corner. Release the foot switch to turn the power OFF.

Step 7 Using the provided I-wedge; gently pry up on the corner of the glass while simultaneously pushing outward on the glass. If the adhesive is reluctant to come free of the pinch weld, turn the Inductor Energy® ON and place one pole piece of the Glass Releaser® tool over the area where you are prying, to get a little extra heat. When the adhesive bond yields, you will hear a “popping” or “ripping” sound and see the glass lift a fraction of an inch. Release pressure from the pneumatic foot switch to turn the power OFF, remove the Glass Releaser® tool from the glass, and gently insert an I-wedge into the gap between the glass and the pinch weld.

Step 8 Place the Glass Releaser® tool back on the glass, parallel to an edge, at the distance determined by probing for the adhesive. Apply pressure to the pneumatic foot switch to turn the power ON again and work back and forth one time over 9 inches at 1/2-inch per second. Release the foot switch to turn the power OFF, set the Glass Releaser® tool aside, and gently insert another I-wedge to release the urethane adhesive bond.

Tip: Try stacking the I-wedges two high, if necessary, to maintain sufficient outward pressure on the glass.

Step 9 Continue to work around the remainder of the window in this manner until the entire glass is free. After previously released areas have cooled the I-wedges are not needed in these locations any longer and they can be removed and reused to the areas where heat is being actively applied to release the urethane adhesive.

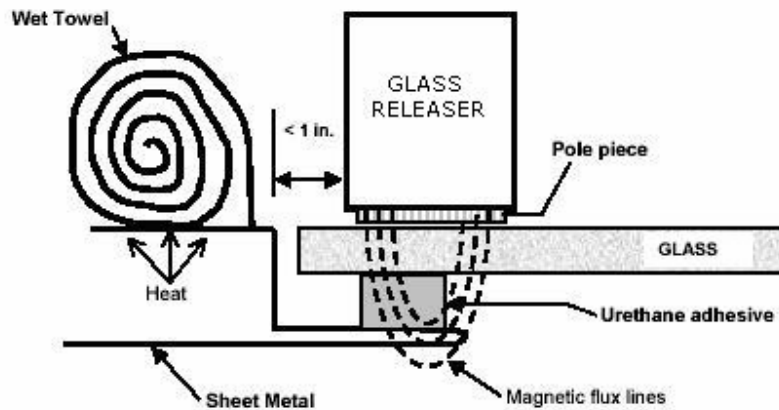
A. “Stubborn” Glass That Won’t Release from the Pinch weld

Step 1 If you have been following carefully the techniques described in Section A above, but a particular piece of glass just won’t de-adhere from the pinch weld, even though you went too close to the edge of the glass and caused a lot of smoke and perhaps came very close to burning the paint, this may be due to a narrow pinch weld that is not heating up well, or a previous window replacement where the application of adhesive was too heavy.

Step 2 If the unit is not OFF; release the foot switch to turn the power OFF.

Step 3 Disconnect the plug from the service outlet or extension cord.

Step 4 (Refer to the illustration below) Soak a bath towel or similar piece of fabric, in water and wring it out so that it is damp, but not dripping. Roll or fold the towel up the long way and place it on the sheet metal along the length where the glass won’t release from the pinch weld. Shape the towel to cover the paint next to the length of glass on which you are working. The damp towel will act as a heat sink to keep the adjacent painted metal cool. A welding paste or thermal gel may be used in place of a damp towel.



Step 5 With a dry towel, wipe up any water that has trickled down the glass. Be sure that water is not dripping from the wet towel.

Step 6 Connect the plug to the service outlet or extension cord. Test the GFI by pushing the test button on the plug: the reset button on the GFI should pop out and you should hear a click. If the GFI fails this test, do NOT use the unit.

Step 7 Make sure that the power control knob, if applicable, is turned clockwise to the Max. position.

Step 8 Position the Glass Releaser® tool on the glass at the problem area.

Step 9 Step on the foot switch to turn the power ON and continue moving the Glass Releaser® tool back and forth at 1/2-inch per second to loosen the glass from the pinch weld. With the wet towel in place, you can move the Glass Releaser® tool closer to the edge of the glass without risking damage to the visible paint.

Step 10 After the glass has been removed, release the foot switch to turn the power OFF and set the Glass Releaser® tool down in a secure place.

Step 11 Turn the power control knob fully counterclockwise to Low, if applicable.

Step 12 Disconnect the plug from the service outlet or extension cord.

Step 13 Remove the wet towel, welding paste or thermal gel and dry any moist areas if further work is to be performed on the vehicle.

B. Removing SMC-bonded Roofs and Other Appliqué's

Step 1 Cover the poles of the Glass Releaser® tool with a light cloth to avoid scratching the plastic panels.

Step 2 Follow the steps in "Preparation for Use," and set the power control knob to the "/Glass Releaser" setting.

Step 3 Apply outward pressure on panel to be removed while placing the glass Releaser® over the adhered area. If adhered area is not known, apply pressure and look for slight shallow dimples on panel, this is where adhesive remains adhered.

Step 4 Step on the foot switch to turn the power ON and move the Glass Releaser® tool in a back-and-forth or circular motion over a 4-5 inch radius over the lowest dimple on one side of the panel; the glue spots are often several inches in diameter.

Step 5 Pry gently outward with an I-wedge until the adhesive releases the panel.

Step 6 Be sure to check frequently that the plastic surface does not become too hot.

Step 7 Use the I-wedge to apply constant outward pressure to the panel in the same way that used in glass removal.

VI. USING THE HEAT PAD®

Function: The *Heat Pad*® (13) is arranged so that the flux lines are spread out evenly over the entire surface of the pad, in order to achieve a less intense, more evenly distributed heat in the metal to which it is applied. While not as strong a heat producer as the *Glass Releaser*® or *Heat Concentrator*®, or *Heatblock*™, the *Heat Pad*® will still burn paint in a very short time if used carelessly. The *Heat Pad*® is designed for the removal of body side moldings, stripes, vinyl graphics, emblems, and other self-adhesive trim pieces without damage. It can also be flexed to wrap around circular objects (i.e. bearing housing)

A. Removing Decals, Vinyl Graphics, and Striping

Step 1 Perform the “Preparation for Use” instructions.

Step 2 Begin with a power setting midway between the “Low” and “” settings. Make adjustments to the power setting after you see how much power the work actually requires.

Step 3 Step on the pneumatic foot switch to turn the power ON.

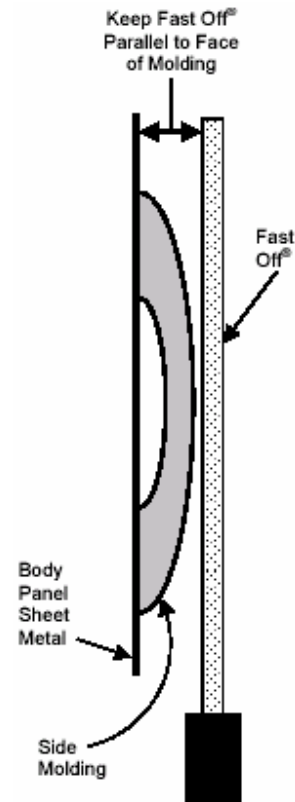
Step 4 Move the *Heat Pad*® in a slow circular or back-and forth motion over one end of a stripe or linear molding, or over a portion of the edge of a decal or graphic. Be sure to keep the *Heat Pad*® pad parallel to the surface on which the trim item is applied.

Step 5 After a few seconds, using an I-wedge, try to lift an edge or portion of the item to be removed. If it lifts easily, keep upward tension on the item and move the *Heat Pad*® a bit further on, maintaining the circular or reciprocating motion. If the item does not lift easily, apply heat for another a few seconds longer, carefully observing any signs of distress in the paint, then try lifting the item again.

Step 6 Repeat these actions until the item is entirely removed.

Step 7 Release the pneumatic foot switch to turn the power OFF.

NOTE: Be careful not to overheat vinyl graphics, as they will become too soft to handle and lift up without compromising their integrity and making a mess. If they seem to be in this state when you try to lift them, release the foot switch to turn the power OFF, and let the graphics cool for a minute before trying again to remove them.



B. Removing Body Side Moldings

Step 1 Perform the “Preparation for Use” instructions on pp 12-15.

Step 2 Set the power control knob to medium power, halfway between the “Low” and “” settings — this is the best setting at which to begin. For thicker moldings, you can start at a higher power level, but until you are experienced, start at the halfway level until you determine precisely what power level is best for which type of molding.

Step 3 Using you I-wedge, begin to lift molding applying outward pressure on molding.

Step 4 Step on the pneumatic foot switch to turn the power ON.

Step 5 Move the Heat Pad® in a slow back-and-forth motion over one end of a molding. Be sure to keep the Heat Pad® pad parallel to the surface on which the trim item is applied. If the molding lifts easily, keep outward tension on the item and move the Heat Pad® a bit further on, maintaining the reciprocating motion. If the item does not lift easily, apply heat for another few seconds, carefully observing any signs of stress in the paint, then try lifting the item again.

Step 6 Repeat these actions until the item is entirely removed.

Step 7 Release the foot switch to turn the power OFF.

C. Warming Cold Body Panels

1. During cold weather, the Heat Pad® pad can be used to warm cold body panels to room temperature so that trim adhesives will stick to them.

VII. USING THE HEAT CONCENTRATOR®

Function: The **Heat Concentrator®** (13) is used to heat nuts, fasteners, hail dent heat shrinking, caulking removal, frozen door hinges, etc.

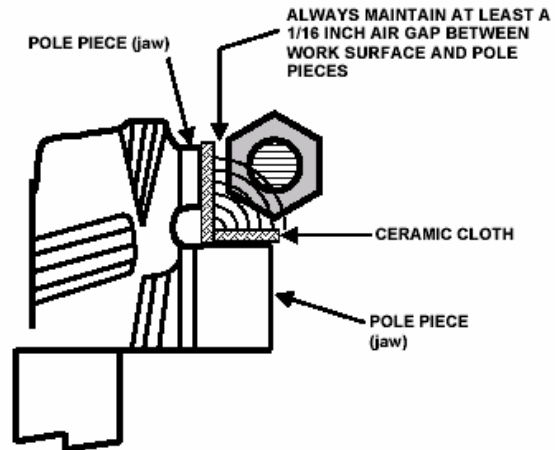
A. Loosening Corroded, Rusted and “Frozen” Nuts and Bolts

Step 1 Perform the “Preparation for Use” instructions.

Step 2 Set the power control knob fully clockwise to the setting.

Step 3 Step on the pneumatic foot switch to turn the power ON.

Step 4 Bring the Heat Concentrator® towards the frozen nut, keeping a minimum distance of 1/16 inch between the ceramic cloth of the Heat Concentrator® and the nut at all times. Initially, bring the Heat Concentrator® close to the nut for only two seconds, back it away, and try to remove the nut with a wrench or socket. If it is still frozen, apply the Heat Concentrator® for another two seconds, and then try the wrench again. There is usually no reason to heat a nut to a red-hot condition in order to free it from the corrosion holding it to the bolt.



B. Removing Caulking Strips

1. Steps 1 through

Step 1 Perform the “Preparation for Use” instructions.

Step 2 Set the power control knob to halfway between the “Low” and “” settings.

Step 3 Step on the foot switch to turn the power ON.

Step 4 Start by heating one end of the caulking strip for 2-3 seconds, and then dig out the caulking with a putty knife or similar tool. Slowly work the Heat Concentrator® down the length of the strip, digging out the hot, soft caulking in back of it.

C. Heat Shrinking Hail / Soft Dents in Sheet Metal

1. Steps 1 through 4

Step 1 Perform the “Preparation for Use” instructions.

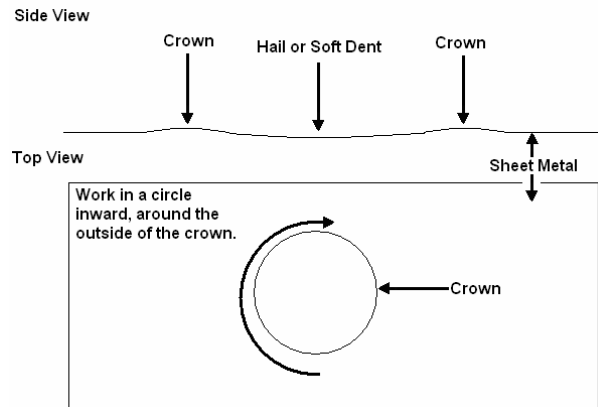
Step 2 Set the power control knob to midway between the “Low” and “” settings.

Step 3 Step on the foot switch to turn the power ON.

Step 4 Holding the Heat Concentrator® ½ to 1 inch above a dent, move it in a small circular motion and gradually bring it closer to the dent, but keeping it around the outside of the crown of the dent. As soon as the dent shrinks, back the Heat Concentrator® away quickly and cool the treated dent with a damp rag. If the dent sucks in you are heating the crown or not far enough around the outside of the crown. Repeat the procedure until removed completely.

Tip: Once a puff of smoke releases from the dent immediately remove the Heat Concentrator from the area. This is the point at which the paint will start to bubble. Also be careful on white and light colored finishes, these lighter paints tend to yellow sooner than darker colors.

Trouble Shooting: If the dent doesn't seem to want to shrink, this may be because there is a crease in the metal or the metal has been stretched to far.



VIII. Using the Heatblock®

Function: The Heatblock (15) is used for frame rail straightening, aluminum annealing, de-bonding heavy gauged steal, etc.

A. Frame Rail Straightening

Step 1 Perform the “Preparation for Use” instructions.

Step 2 Set the control knob to /Glass Releaser® setting.

Step 3 Be sure that the Heatblock Heat shield is sitting in place.

Step 4 Connect the air regulator gauge to a clean dry compressed air source. Adjust the air regulator to 15-20 psi. Keep the air flow through the entire use of the Heatblock and for two minutes after use. Failure to keep proper air flow may result in unwarrantable damage.

Step 5 Apply the Heatblock to structural metal component. Be sure to follow car manufacture recommended imum temperature limits using a temperature indicator. Failure to do so may result in altering metal properties and reducing or eliminating function of the part.

B. Aluminum Annealing

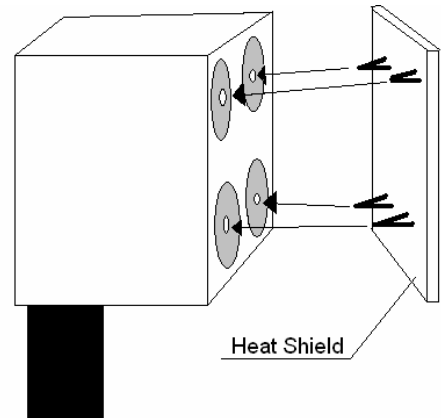
Step 1 Perform the “Preparation for Use” instructions.

Step 2 Set the control knob to /Glass Releaser® setting.

Step 3 Be sure that the Heatblock Heat shield is sitting in place. If heat shield is damaged badly and unable to perform its function call Induction Innovations, Inc. at 877-688-9633 for a replacement shield.

Step 4 Connect the air regulator gauge to a clean and dry compressed air source. Adjust the air regulator to 15-20 psi. Keep the air source running through the entire use of the Heatblock and for two minutes after use. Failure to keep proper air flow may result in unwarrantable damage.

Step 5 Apply the Heatblock to Aluminum panel for stress relieving. When working with painted surfaces, applying a cloth over the heat shield will help prevent from scratching the surface.



IX. Trouble Shooting

1. The Inductor Energy® inverter is designed to stop running if overheated. If the unit stops suddenly: check for proper GFI operation and insure unit is still plugged into a functioning AC power outlet. Also be sure if using an extension cord that there are no cuts in the cord. Allow the unit to cool off for at least 30 minutes and then restart.

X. Cleaning Instructions

A. Proper Cleaning Care

Step 1 Use a dry, clean, non-abrasive cloth or paper towels to remove grease, oil, and other dirt from the tools, electrical cords, connectors and foot switch before returning them to the storage case.

Step 2 For grease, oil and dirt that is more difficult to remove use generally available nonvolatile automotive interior cleaning products.

Allow all components to dry completely before using the Inductor Energy®.

XI. Definitions

- **Anneal:** [uh-neeel] ¹to heat metals to remove or prevent internal stress.
- **Ampere:** [am-peer, am-peer] ¹the base SI unit of electrical current, equivalent to one coulomb per second. *Abbreviation:* A, amp.
- **AWG:** ¹abbreviation for American Wire Gauge.
- **Capacitance:** [kuh-pas-i-tuh ns] ¹the property of being able to collect a charge of electricity. *Symbol:* C
- **Celsius:** [selsiəs] or centigrade, ¹ Of or relating to a temperature scale that registers the freezing point of water as 0° and the boiling point as 100° under normal atmospheric pressure.
- **Circuit:** [sur-kit] ¹ Also called electric circuit. the complete path of an electric current, including the generating apparatus, intervening resistors, or capacitors.
- **Heat Concentrator®:** [kon-suh n-treyt] ¹a registered product name Inductor Energy used for removal of hail dents, frozen nuts, and other frozen or rusted hardware from cars.
- **Conductivity:** [kon-duhk-tiv-i-tee] ¹ Also called specific conductance. *Electricity.* a measure of the ability of a given substance to conduct electric current, equal to the reciprocal of the resistance of the substance. *Symbol:* σ
- **Current:** [kur-uh nt,] ¹the time rate of flow of electric charge, in the direction that a positive moving charge would take and having magnitude equal to the quantity of charge per unit time: measured in amperes.
- **Degree:** [di-gree] ¹a unit of measure, as of temperature or pressure.
- **Eddy Current:** [ed-ee kur-uh nt] ¹an electric current in a conducting material that results from induction by a moving or varying magnetic field.
- **Electromagnetic Interference:** [i-lek-troh-mag-net-ik in-ter-feer-uh ns] ¹Any electromagnetic disturbance that interrupts, obstructs, or otherwise degrades or limits the effective performance of electronics/electrical equipment. *abbreviation E.M.I.*
- **Fahrenheit:** [far-uh n-hahyt] ¹Of or relating to a temperature scale that registers the freezing point of water as 32° and the boiling point as 212° at one atmosphere of pressure
- **Farad:** [far-uh d] ¹the SI unit of capacitance, formally defined to be the capacitance of a capacitor between the plates of which there appears a potential difference of one volt when it is charged by a quantity of electricity equal to one coulomb. *Symbol:* F
- **Heat Pad®:** ¹a registered product name Inductor Energy used for removal of body side moldings, vinyl graphics, and other adhesive bonded parts to automobiles.
- **Ferrite:** [fer-ahyt] ¹ *chemistry* a compound, as NaFeO₂, formed when ferric oxide is combined with a more basic metallic oxide. ² *Metallurgy* the pure iron constituent of ferrous metals, as distinguished from the iron carbides

- **Ferrous:** [fer-uhs] ¹of or containing iron.
- **Flux:** [fluhks] ¹The lines of force of an electric or magnetic field.
- **Frequency:** [free-kwuh n-see] ¹the number of cycles or completed alternations per unit time of a wave or oscillation. *Symbol:* F; *Abbreviation:* freq.
- **G.F.I.:** *see Ground Fault Interrupter.*
- **Glass Releaser®:** ¹a registered product name Inductor Energy used for removal of automotive glass and body panels. Can be an attachment or a single attachment hardwired unit.
- **Ground Fault Interrupter:** [ground fawlt in-tuh-ruhp-ter] ¹a circuit breaker that senses currents caused by ground faults and rapidly shuts off power before damage can happen to generating equipment.
- **Henry:** [hen-ree] ¹ the SI unit of inductance, formally defined to be the inductance of a closed circuit in which an electromotive force of one volt is produced when the electric current in the circuit varies uniformly at a rate of one ampere per second. *Abbreviation:* H
- **Hertz:** [hurts] ¹ the SI unit of frequency, equal to one cycle per second. *Abbreviation:* Hz
- **Hysteresis:** [his-tuh-ree-sis] ¹the delay in response exhibited by a body in reacting to changes in the forces, esp. magnetic forces, affecting it.
- **HF:** (High Frequency [hī free-kwuh n-see]) ¹the range of frequencies in the radio spectrum between 3 and 30 megahertz.\
- **Inductance:** [in-duhk-tuh ns] ¹ that property of a circuit by which a change in current induces, by electromagnetic induction, an electromotive force. *Symbol:* L
- **Induction:** [in-duhk-shuh n] ¹the process by which a body having electric or magnetic properties produces magnetism, an electric charge, or an electromotive force in a neighboring body without contact.
- **Inductor Energy:** [in-duhk-tor] ¹a coil used to introduce inductance into a ferrous work piece. ²(Inductor Energy®) A registered brand name of the only patented induction heating system for the automotive aftermarket.
- **Inverter:** [in-vur-ter] ¹a device that converts direct current into alternating current.
- **Kilowatt:**[kil-uh-wot] ¹unit of power, equal to 1000 watts. *Abbreviation:* kW kw
- **Ohm:** [ohm] ¹ the SI unit of electrical resistance, defined to be the electrical resistance between two points of a conductor when a constant potential difference applied between these points produces in this conductor a current of one ampere. The resistance in ohms is numerically equal to the magnitude of the potential difference. *Symbol:* Ω
- **Resistance:**[ri-zis-tuh ns] ¹a property of a conductor by virtue of which the passage of current is opposed, causing electric energy to be transformed into heat.
- **Heatblock™:** ¹a registered product name Inductor Energy used for annealing, warming of frame rail for straightening, etc.
- **Temper:**[tem-per] ¹ the degree of hardness and strength imparted to a metal, as by quenching, heat treatment, or cold working. ² the operation of tempering.
- **Volt:** [vohlt] ¹the SI unit of potential difference and electromotive force, formally defined to be the difference of electric potential between two points of a conductor carrying a constant current of one ampere, when the power dissipated between these points is equal to one watt. *Abbreviation:* V
- **Voltage:** [vohl-tij] ¹electromotive force or potential difference expressed in volts.
- **Watt:** [wot] ¹the SI unit of power, equivalent to one joule per second and equal to the power in a circuit in which a current of one ampere flows across a potential difference of one volt. *Abbreviation:* W, w.

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