



Signal Glass Installation Instructions



Read all instructions before proceeding with signal glass installation.

GENERAL INSTALLATION

The current flat mirror glass will be replaced with a flat mirror glass including a signal light. This process is easier if the mirror head is removed from the mirror/arm/base assembly. Instructions herein are provided for the 8" x 8" flat glass, 8" x 13" V Max and 9" x 8.5" V Max III flat glass.

If there is a light in the arm being used as a signal light- then wire the signal glass either in series or parallel into the circuit.

If there is a light in the arm being used as a marker light (OR if there is NO light in the arm) - two wires will need to be run through the mirror head, arm and base to connect to the turn signal light. NOTE: The coach manufacturer may have to be contacted to identify where to splice into the turn signal circuit.

NOTE: It is recommended to use protection on your hands (gloves) when working with glass.

Tools Needed:

3/16" Hex Wrench

Wire Cutters

Crimping Tool

Voltage Meter or Test Lamp

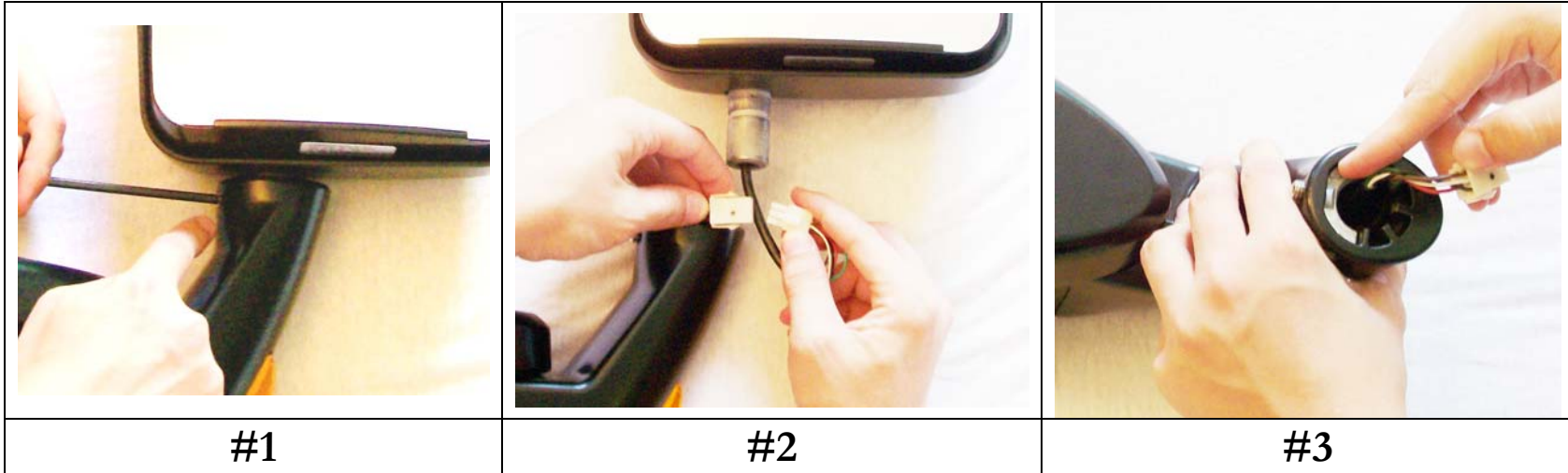
Small Blade Screwdriver

Phillips head screw driver

Thin Wide Putty Knife

Mirror Head Removal

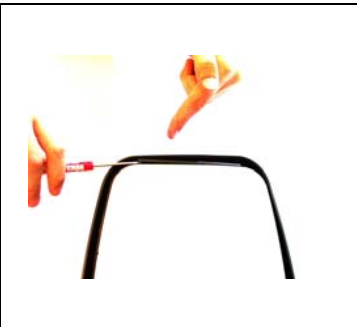

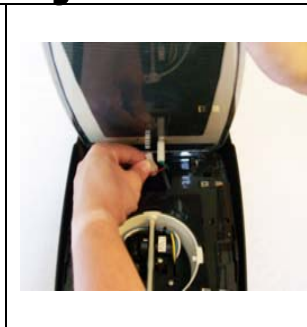
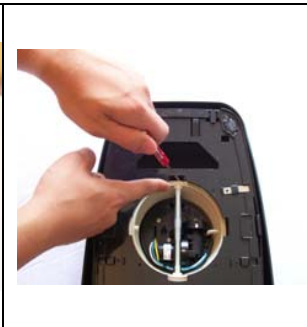



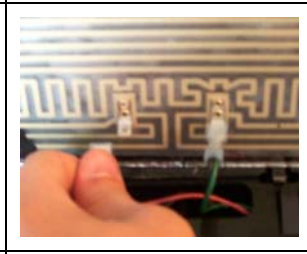

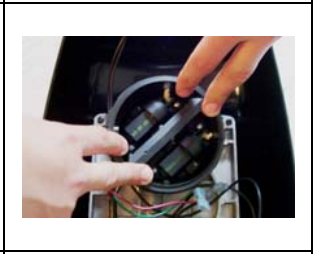
The head removal will be the same all both glass sizes.



- (1) Locate the mirror head set screw. On some mirror assemblies there may be a plastic cover covering the set screw. Loosen the set screw with a 3/16" hex wrench.
- (2) Lift the mirror head from the mounting base/arm and disconnect the plug.
- (3) There is a "C" shaped pivot clamp inside the mirror arm. Note it's position for reassembly.

***Note: On mirror assemblies built prior to 2001 there will not be a plug to allow easy disconnect of the mirror head from the base/arm. To remove the mirror head and continue with the signal glass installation the mirror head wires would have to be cut then connected using butt connectors during final installation.**

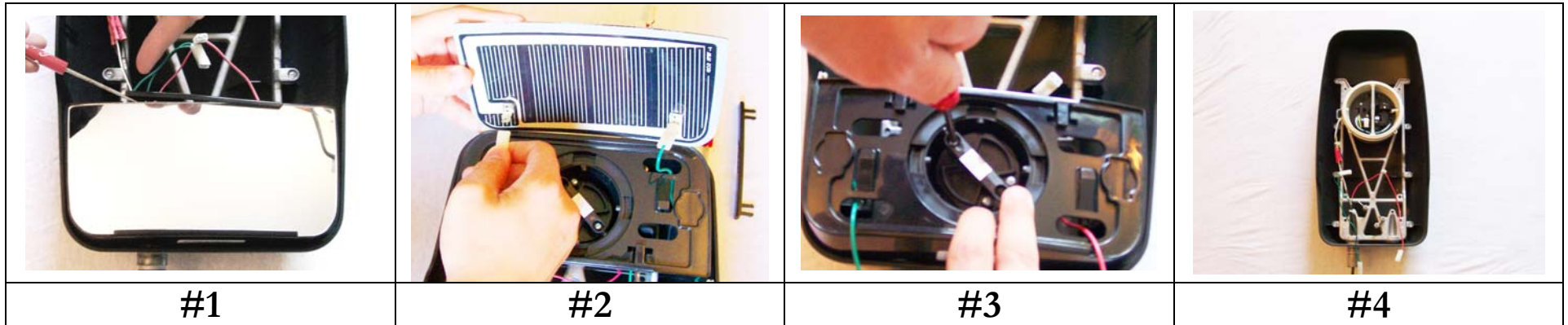
Flat Glass Assembly Removal

<p>8" x 13" V Max and 9" x 8.5" V Max III Flat Glass</p>					
<p>8" x 8" Flat Glass</p>					
<p>Photos</p>	<p>#1</p>	<p>#2</p>	<p>#3</p>	<p>#4</p>	<p>#5</p>

- (1) Locate the removable mirror clip. The V Max and V Max III have the removable mirror clip located at the top of the flat glass. The 8" x 8" mirror glass has the removable clip located at the bottom of the flat mirror glass. With a thin flat head screwdriver, pry the removable mirror clip off the glass housing.
- (2) At the corners of the mirror glass is RTV adhesive, use a thin wide putty knife to slide between the glass and the plastic glass housing. Gently work the putty knife back and forth to release the glass from the adhesive. At the opposite end of the housing is an integrated retaining lip, pull the glass away from the lip and remove.
- (3) Disconnect the heater wires from the heating element. Polarity is not important.
- (4) Insert a thin flat head screwdriver in an access hole for the glass housing. The VMax 8" x 13" and V Max III 9" x 8.5" glass will have 4 access holes. The 8" x 8" glass has 6 access holes. Pry towards the center while gently pulling up on the housing to release the retaining tabs. Continue with each access hole until you are able to remove the glass housing from the motor assembly.
- (5) If all the retaining tabs cannot be released the motor assembly may have to be removed from the mirror shell. Note the screws shown in photo #5. The V Max and V Max III mirror motor have 3 mounting screws, the 8" x 8" motor has 4 mounting screws. By removing the motor, there is better access to the retaining tabs.



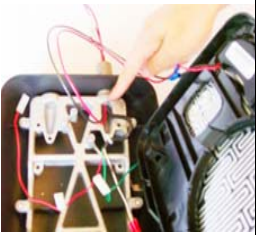




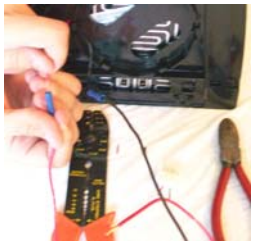
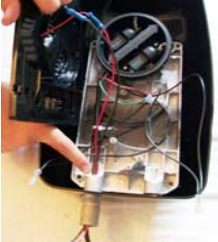
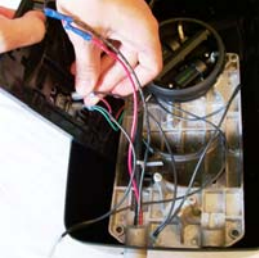


Lower Convex Glass Assembly Removal

The convex glass assembly removal is the same for all glass sizes.



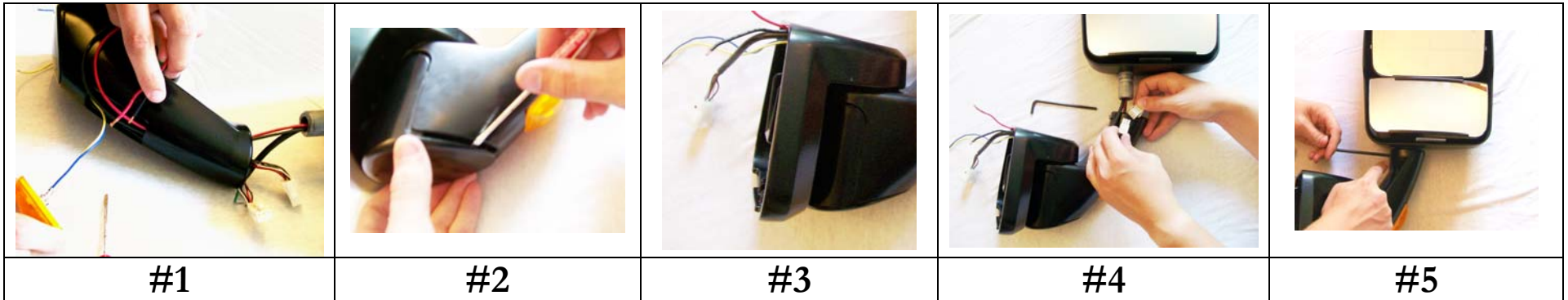
- (1) **Locate the mirror clip. With a thin flat head screwdriver, pry it off the glass housing.**
- (2) **The convex glass does not use any adhesive. Gently lift up on the glass, clearing the integrated retaining clip on the opposite side. Disconnect the heater wires. Polarity is not important.**
- (3) **With the Phillips head screwdriver remove the three-actuator mounting screws. Lift the assembly out of the mirror shell.**
- (4) **With the glass assemblies removed installation of the signal glass can begin.**

Installing the Signal Glass

<p>VMax and V Max III Flat Glass</p>						
<p>8" x 8" Flat Glass</p>						
<p>Photos</p>	<p>#1</p>	<p>#2</p>	<p>#3</p>	<p>#4</p>	<p>#5</p>	<p>#6</p>

- (1) Using a wire cutters remove the wire terminal housing from the signal glass. Note that the black wire is negative and the red wire is positive. These wires are polarity sensitive.
- (2) Measure the length of wire needed from the signal light to the turn signal circuit. 20 Gauge is the recommended wire size for this application. Strip back insulation from signal glass wire leads and extending wire leads approximately ¼ inch. Using butt connectors attach the wire from the turn signal light leads to the wire leads.
- (3) Run the wires through the inner support plate shaft of the mirror head. It is easier to do one wire at a time.
- (4) Connect the heater wires to the new signal glass. With your hand, firmly press the signal glass over the motor pivot ring. Listen for the clicks of the tabs securing to the motor assembly.
- (5) Install the convex assembly in the reverse order of the removal.
- (6) The mirror head is assembled.

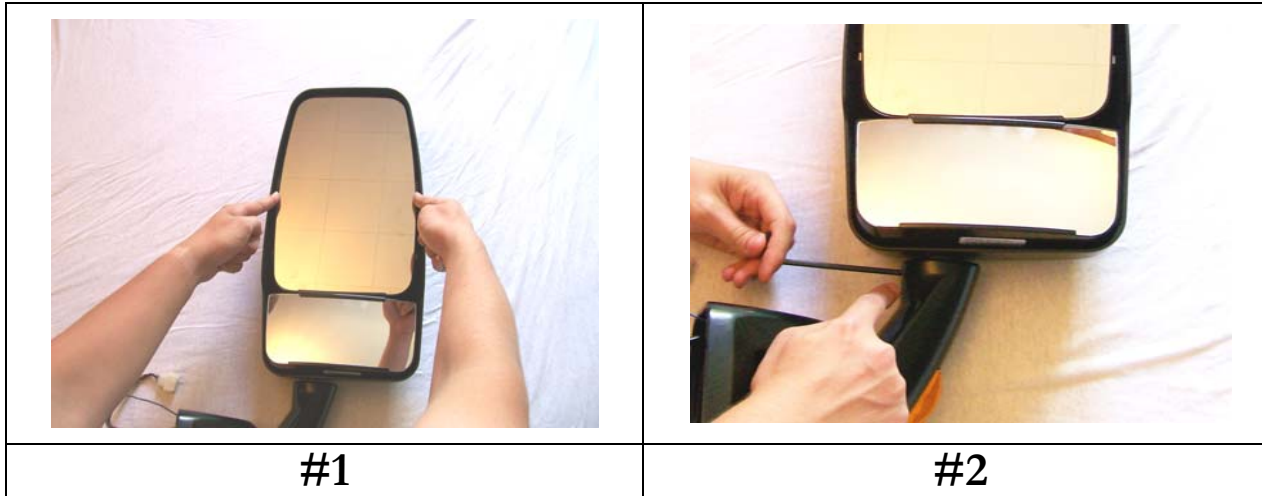
Installing the Signal Glass - Continued



- (1) If using the wiring from the arm light to control the signal glass thread the signal glass wiring through the arm light hole. Determine which wires on the arm/base light are positive and negative to properly connect them to the signal light wire leads. Use butt connectors to join the wires.
- (2) On Revolution bases you can remove the base cover with a thin flat blade screwdriver. This will assist you in running the wires through the mirror base.
- (3) If wiring for the signal glass is being done from the coach's directional circuit inside the coach thread the signal glass wire leads through the mirror arm/base. Connect the signal glass wire leads to the appropriate directional circuit wires. **Refer to the coach manufacturer to determine which wires are part of the directional circuit if needed.**
- (4) Install the mirror head on the arm/base assembly. Ensure that the C Clamp is properly lined up with the groove in the mirror head's inner support plate stem.
- (5) Tighten the mirror head set screw enough to secure the head to the arm/base assembly but loose enough to allow for sideways movement of the head. See the next sections for head and V Max spring finger adjustments.

Instructions for adjusting the mirror head glass

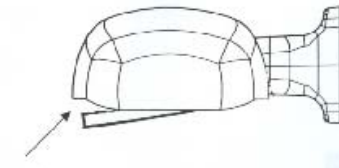
Head and Glass Adjustment



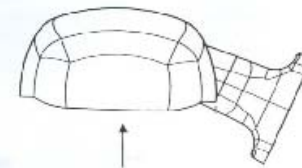
- (1) Adjustment of the mirror head should first begin by ensuring that the mirror glass is positioned equally on all four corners. The mirror glass should be level inside the mirror shell.
- (2) Loosen the mirror head adjustment screw, located on the mirror base under the mirror head, using a 3/16" hex wrench. With driver in the driver's seat rotate the mirror head to the approximate viewing position and tighten the adjustment screw (75-100 in/lbs). For fine adjustment of the mirror glass use the remote control switch.



The drawing below shows in Figure A an improper adjustment of the mirror glass. The head has not been turned in relation to the arm, which for viewing requires the glass to be positioned outside of the mirror shell. This will cause air currents to flow between the glass and mirror shell creating vibration in the mirror glass. Figure B shows a correct adjustment of the mirror head and glass. The mirror head has been positioned in the proper angle on the arm. The glass is encased inside the mirror shell to minimize air turbulence between the mirror shell and the glass.



Glass positioned outside of mirror shell



Mirror head properly positioned on arm to keep glass inside mirror shell

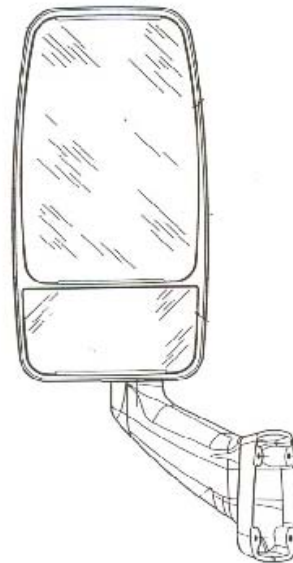


Figure A

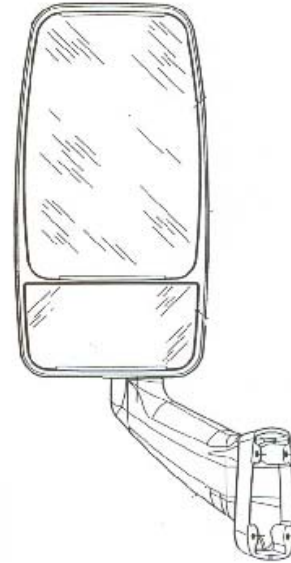


Figure B

Instructions VMax and V Max III Spring Finger Adjustment



- (1) Velvac V Max 8" x 13" and V Max III 9" x 8.5" flat glass comes with 4 spring fingers, 2 on each side of the glass housing.
- (2) To adjust the spring fingers move the mirror glass as far as possible in one direction so the spring clips on one side are visible and almost coming out of the outer housing. Next, pull the clip out of the inside of the outer housing with your fingers or a pliers and bend out so as to increase tension when they are stuffed back inside the outer housing. If the motor turns the glass slowly, add lubrication to the inside of the outer housing where the spring clips will run when the mirror is rotated electrically.

Help!

If you need assistance during this procedure or would like information in obtaining installation instructions, owner's manuals, and replacement parts or have other questions or comments please contact us at:

Technical Support email: technicalsupport@Velvac.com

Phone: 1-800-783-8871 Monday – Friday 7:00am – 4:00pm central time

Fax: 1-262-786-4101

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