



Signal® Mirror Installation Instructions

2000-2005 Chevy Impala



THE safety accessory of the 21st Century.™

P/N 210-0110-0

Rev. A (10/6/05), BTV

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Note: Professional Installation Recommended

Warranty does not cover damage to the vehicle or mirror housing due to improper installation. The following installation instructions are to be considered as a guide only. Door removal procedures, indicator wire color and location may have changed since publication of these instructions. The installer is responsible for any damage that may occur during installation.

INCLUDED ITEMS:

- 1 left and 1 right *Signal*® mirror
- 1 left and 1 right wire harness
- 2 wire taps
- 2 ring connectors
- 1 instruction manual

REQUIRED TOOLS:

- Ratchet with extension or ratcheting screwdriver
- 10mm socket
- Socket wrench
- Torx wrench, T-30
- Large slotted screwdriver
- Small pry bar
- Gopher wire (rod)
- Electrical tape
- Wire crimper and stripper
- Needle nose pliers
- Multimeter or wire tester
- Sturdy gloves
- Safety glasses or goggles
- Utility knife

Please read instructions prior to installation.

PROBLEMS OR QUESTIONS?

Technical Assistance is available by calling
Muth Mirror Systems Technicians at:

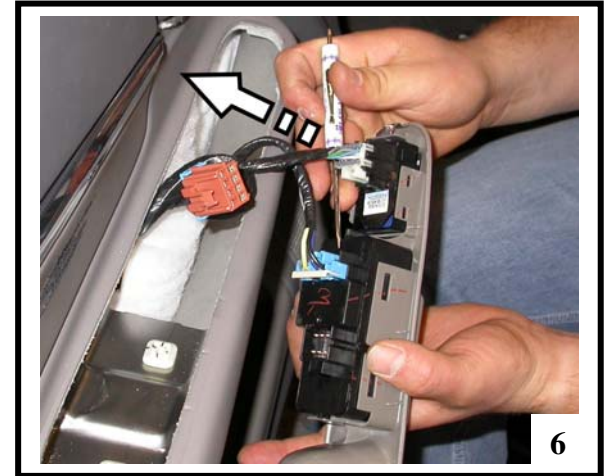
1-800-844-6616

Monday through Friday
Between 8:00 a.m. and 5:00 p.m. CST

Or through the Muth web site: www.muthco.com

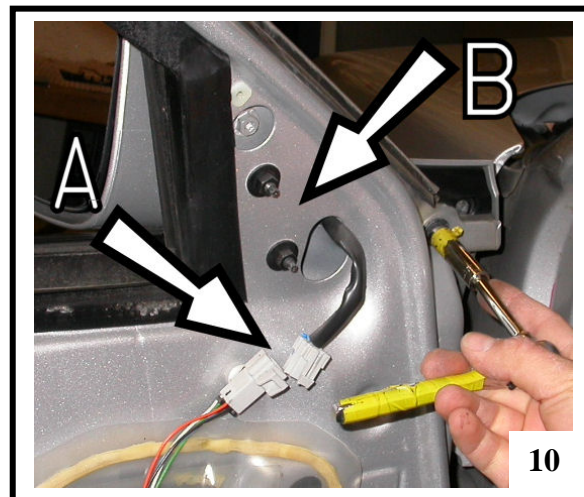
Or via E-mail: techsupport@muthco.com

DOOR PANEL REMOVAL



1) Start with opening the driver's side door and lowering the window. 2) Using a Phillip screwdriver, remove the screw on panel corner. 3) Remove the screw in door handle. 4) Carefully remove door handle cover and disconnect wiring connector. 5) Remove screws in the grab bar with a T-30 torx wrench. With the slotted screwdriver, remove control console on the grab bar. 6) Disconnect wiring connectors behind control console.

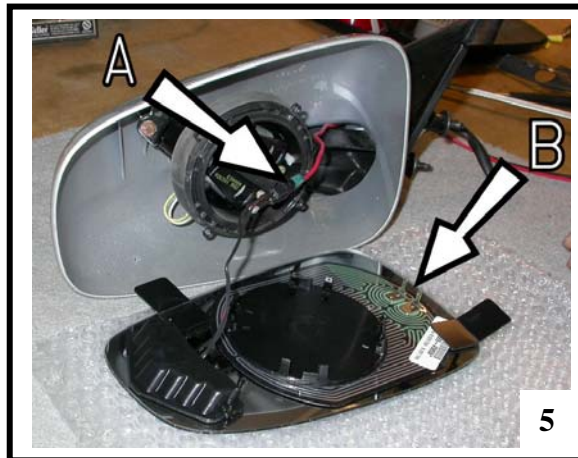
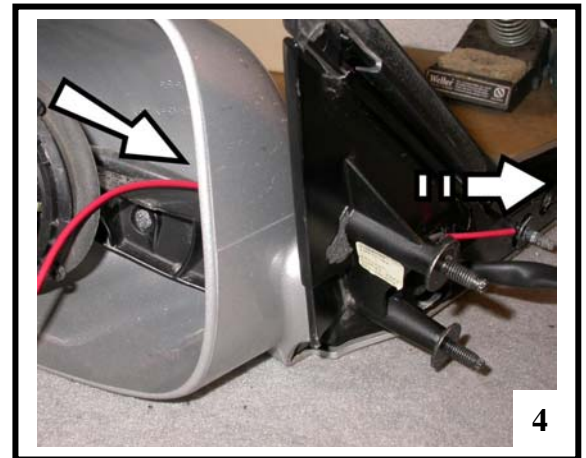
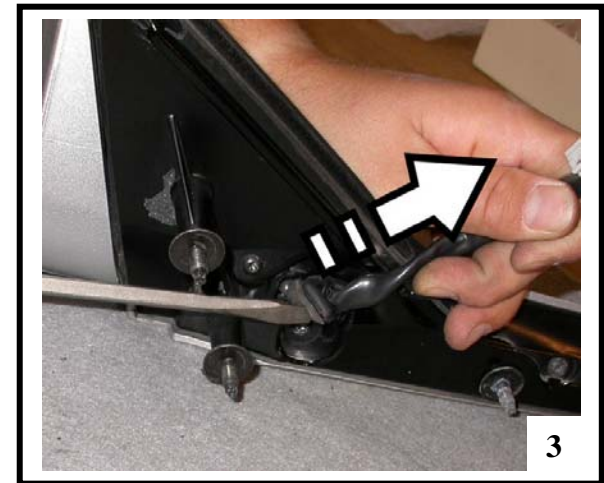
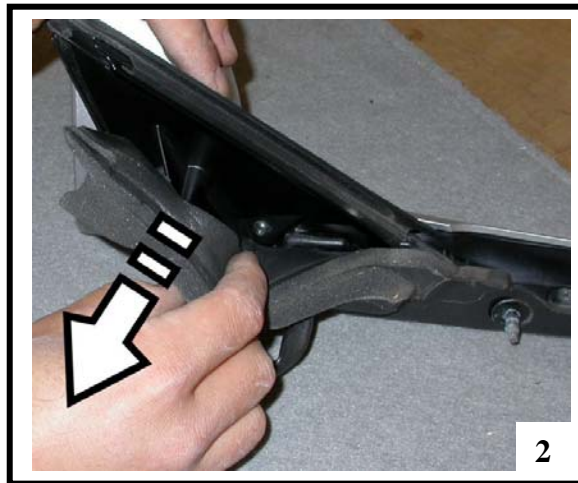
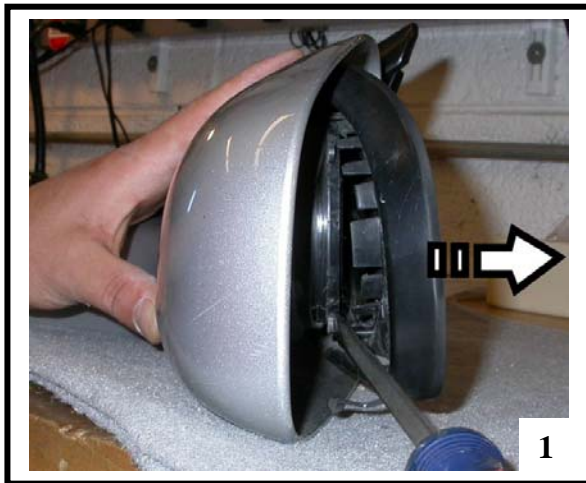
DOOR PANEL & MIRROR HOUSING REMOVAL CONTINUED



7) Release the revealed screws within the grab bar. 8) Remove the (2) bottom screws on the door panel. 9) Pull on door panel to unsnap it from door frame. Lift up and pull door panel out a few inches away. Disconnect tweeter and other remaining wiring connections. Remove door panel and set it aside. 10) Disconnect original wiring harness (A). Secure the mirror housing with one hand, remove the (3) nuts holding the mirror housing to the door frame using a 10mm socket (B).
WARNING: Not securing mirror housing with one hand before loosening the nuts could cause the mirror housing to fall and become damaged. Carefully remove mirror housing from door frame and set mirror housing on a cloth covered surface.

MIRROR REPLACEMENT

WARNING: Safety glasses and sturdy gloves are required for mirror replacement.



1) Push down on the upper inboard edge of glass until mirror pivots fully outward. Insert a large slotted screwdriver in between the mirror backing plate and motor actuator. Carefully pry and twist screwdriver until original mirror pops off. **If heated**, disconnect heater wires from heater terminals and remove mirror. 2) Remove the foam insulation on the housing sail. 3) Carefully remove the rubber plug on the wire access hole in the mirror sail. 4) Using the shorter of the two harnesses from the wiring kit, guide the end without the connector (starting from inside mirror housing) thru the housing sail. 5) Pull the *Signal*® mirror wire harness thru housing sail leaving about 4" to 6" of the wire harness inside mirror housing. Connect the mating connectors on the new *Signal*® mirror and the *Signal*® mirror wire harness (A). **If heated**, reconnect the heater wires to the heater terminals on the back of the new *Signal*® mirror (B). **NOTE: There is no polarity so the wires may be interchanged.** Carefully tuck all wiring behind motor actuator. **Not doing so, could result in wiring interfering with mirror travel.** If anti-vibration tabs are present, carefully tuck all anti-vibration tabs within mirror housing. Align and center the motor mount onto the motor actuator. 6) With the palm of your hand, slowly push down on the glass until the new *Signal*® mirror snaps into position. Press down on all sides to ensure the new *Signal*® mirror is fully seated and functional. Replace the foam insulation onto the housing sail.

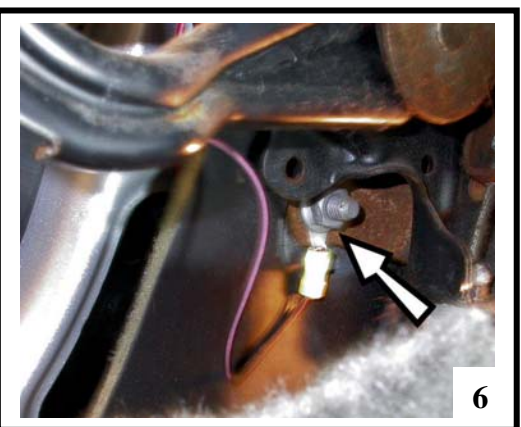
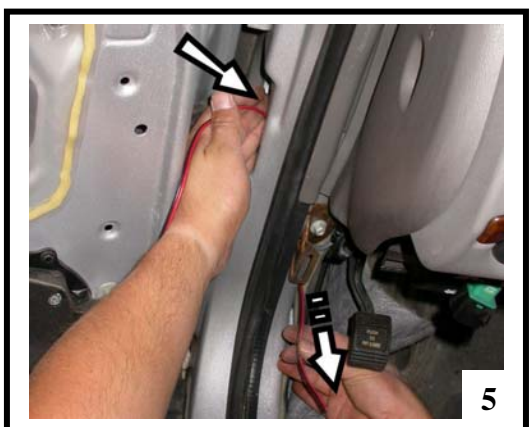
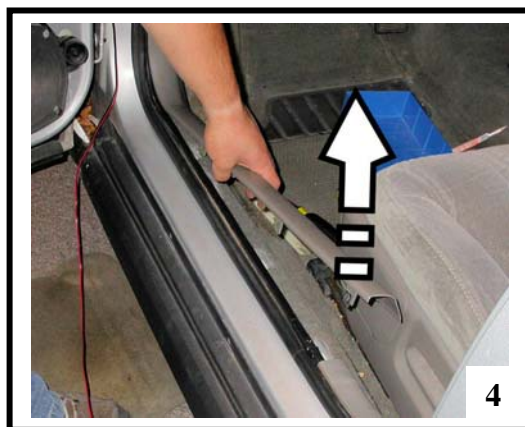
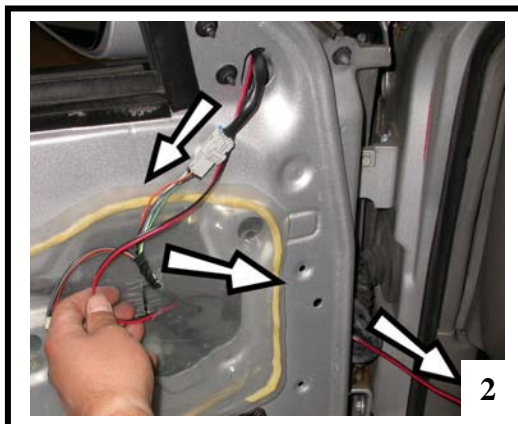
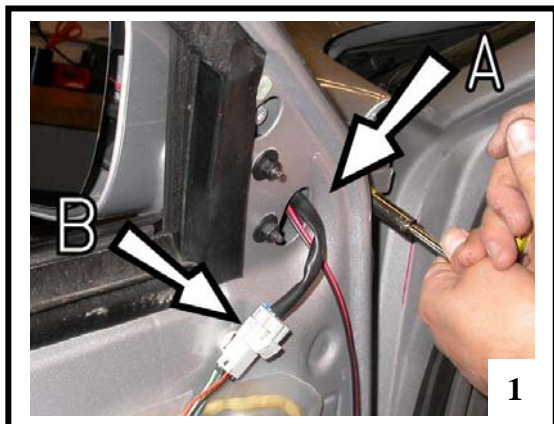
MIRROR REPLACEMENT CONTINUED

WARNING: Safety glasses and sturdy gloves are required for mirror replacement.



7) Using a utility knife, create an access hole by carefully cutting a slot on the rubber plug (on either side of the original wiring). 8) Insert the *Signal*[®] mirror wire harness thru the slot and pull, removing any slack in the *Signal*[®] mirror wire harness. 9) Route the original wire harness and the *Signal*[®] mirror wire harness thru the foam insulation and replace the foam insulation on the housing sail.

WIRE ROUTING



WARNING: When routing wire into vehicle, it is extremely important to not let wire get pinched or crushed at any time.

Avoid window track and sharp edges at all times. Not doing so may cause circuit shortage problems in the long run.

1) Guide all wire harnesses thru the access hole in the door frame and position the mirror housing assembly on the mirror mount. Attach the mirror housing to the mirror mount with three mirror mounting nuts (A). **WARNING!** Do not over tighten the mirror mounting nuts. Reconnect the original mirror harness (B). Find the rubber boot located between the door frame and vehicle frame. Using your fingers, push in and pull out both ends of the rubber boot. 2) Route the *Signal*® mirror wire harness alongside original wire harnesses thru the clear plastic covering, inside door frame, and out the access hole vacated by the removal of the rubber boot. 3) Squeeze the rubber boot together and route the *Signal*® mirror wire harness thru the boot. 4) Unsnap and remove the plastic trim and kick panel. 5) Route the *Signal*® mirror wire harness thru the access hole into the vehicle. Replace the rubber boot back into position. Pull on the *Signal*® mirror wire harness, removing any slack in it. **NOTE:** A wire fish rod maybe use to assist in the *Signal*® mirror wire harness routing process. 6) Locate the grounding bolt within the kick panel. Cut and split the red and black wires on the *Signal*® mirror wire harness. Route the black wire to the grounding bolt location. Cut the black wire to length, making sure enough slack is left for splicing. Splice the black wire and attach it to one of the supplied grounding rings. Attach the grounding ring to the grounding bolt on the vehicle frame.

*** Before proceeding, please read remainder of instructions for information regarding wiring identification and options***

Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new *Signal*® mirror.

WIRE IDENTIFICATION

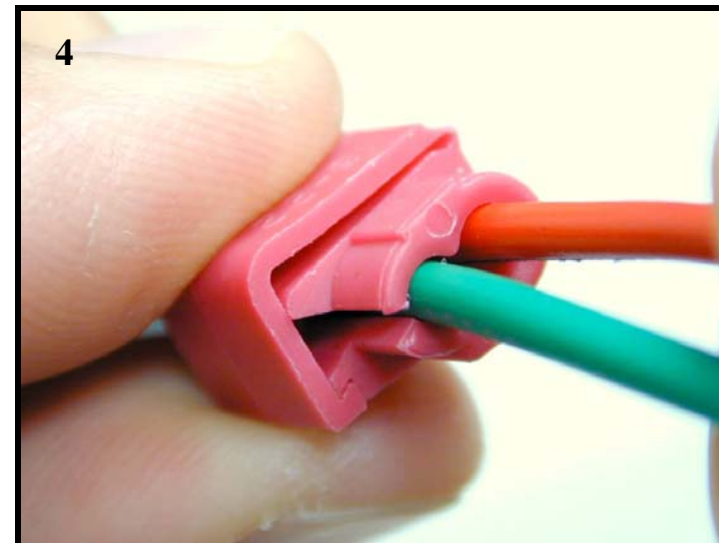
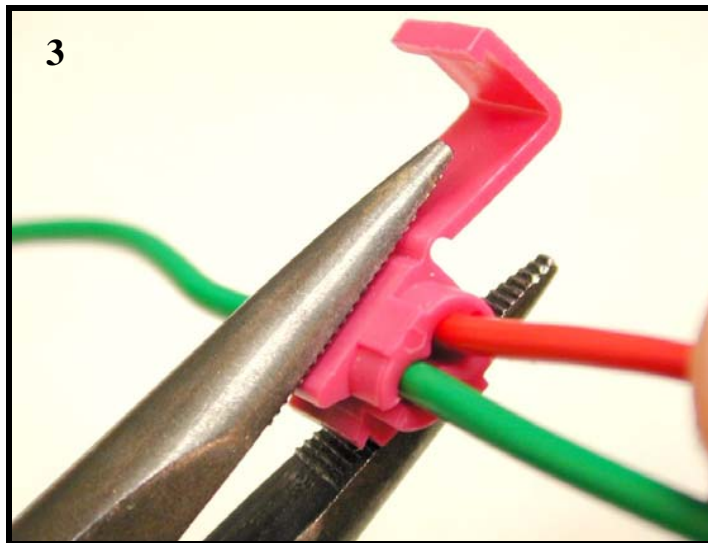
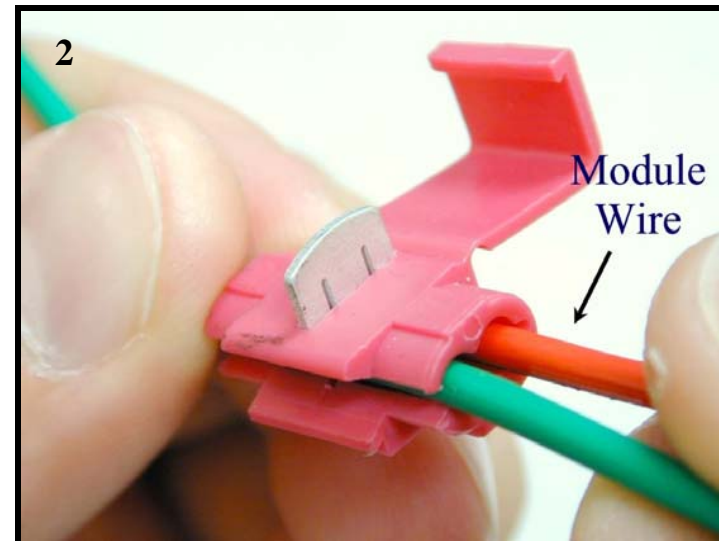
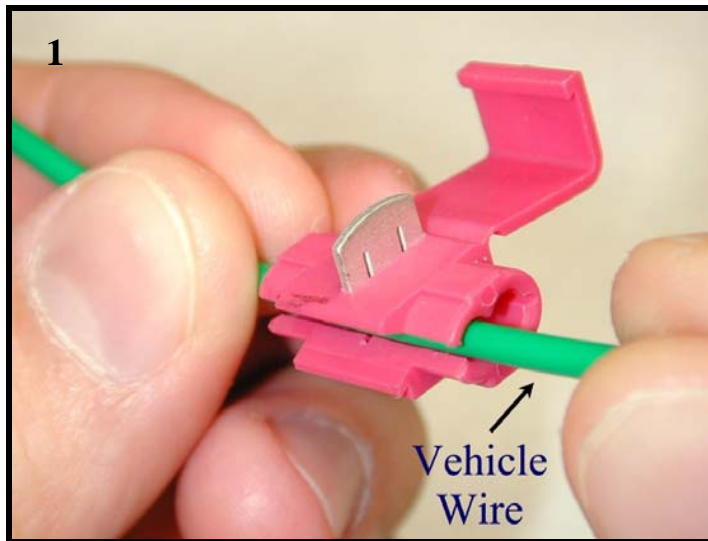


TURN & BRAKE

The vehicle's electrical wiring for the TURN & BRAKE is located within the wire bundle coming down from the steering column. Removal of the knee panel and knee plate to gain access to wiring location is required. Route both red wires to this location and cut to length, making sure enough slack in each wire is left for splicing. Locate the YELLOW wire within the wire bundle. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'driver side indicator'. Find the GREEN wire from within the wire bundle. Turn the ignition key to on. Activate the passenger side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'passenger side indicator'.

TURN ONLY

The vehicle's electrical wiring for the TURN & BRAKE is located within the wire bundle coming down from the steering column. Removal of the knee panel and knee plate to gain access to wiring location is required. Route both red wires to this location and cut to length, making sure enough slack in each wire is left for splicing. Locate the LIGHT BLUE wire within the wire bundle. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'driver side indicator'. Find the DARK BLUE wire from within the wire bundle. Turn the ignition key to on. Activate the passenger side turn indicator. Probe the wire with the wire tester to verify that flashing turn directional power is present. Label that wire as 'passenger side indicator'.



USE THE INCLUDED WIRE TAPS AND FOLLOW THE FOUR STEPS ABOVE TO SPLICE INTO THE TURN INDICATOR WIRES

37. Make sure the harnesses are routed securely and enough slack is left for splicing.
38. Splice the RED wire from the driver side harness into the wire previously labeled 'driver side indicator'.
39. Splice the RED wire from the passenger side harness into the wire previously labeled 'passenger side indicator'.
40. Activate each turn indicator to verify that the *Signal*® mirrors are working properly.
41. Reconnect all original wiring. Turn the ignition power to on, check to verify all features are working properly.
42. Replace the plastic door frame moldings, trim, door panels, and all accessories.