

# Signal<sup>®</sup> Mirror Installation Instructions

GMC Savana Van (2003-2007) & Chevy Express Van (2003-2007)

THE safety accessory of the 21st Century.<sup>TM</sup>

Rev. A4 (9/10/07), BTV

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P/N 210-0087-0

## **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:**

left and 1 right Signal<sup>®</sup> mirror
left and 1 right wire harness
wire taps
ring connectors
instruction manual

#### **REQUIRED TOOLS:**

Ratchet with extension or ratcheting screwdriver 10mm socket Socket wrench Large slotted screwdriver Small pry bar Gopher wire Electrical tape Wire crimper and stripper Needle nose pliers Multimeter or wire tester Sturdy gloves Safety glasses or goggles 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

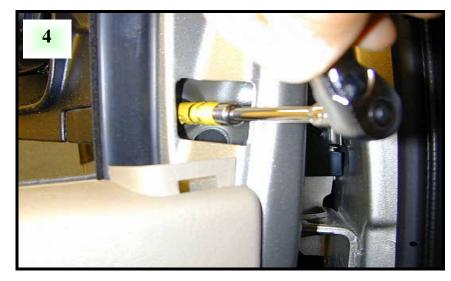
> Or through the Muth web site: www.muthco.com

Or via E-mail: techsupport@muthco.com



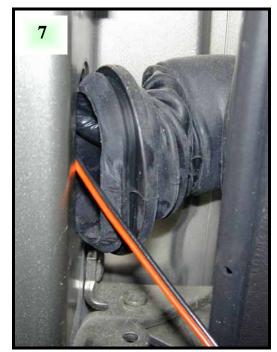


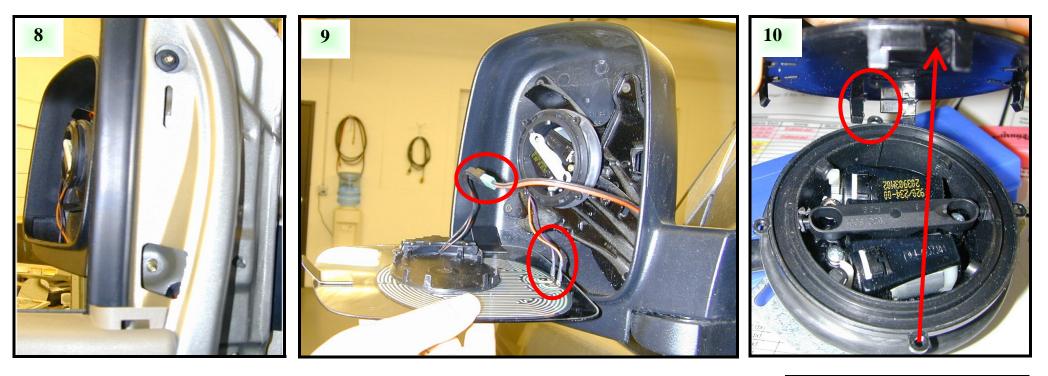
- 1. Open the driver side door and lower window.
- 2. Use a large slotted screwdriver, insert it between the motor actuator and snap ring. Slowly and carefully twist and pry the OEM Mirror until it snaps free from the motor actuator. If heated, disconnect heater terminals from heater wires. Remove OEM Mirror from mirror housing.
- 3. Remove plastic trim cover.
- 4. Take out the (3) bolts securing the mirror housing to the door. Carefully remove mirror housing from door. Note: Be careful not to drop and/or scratch mirror housing.





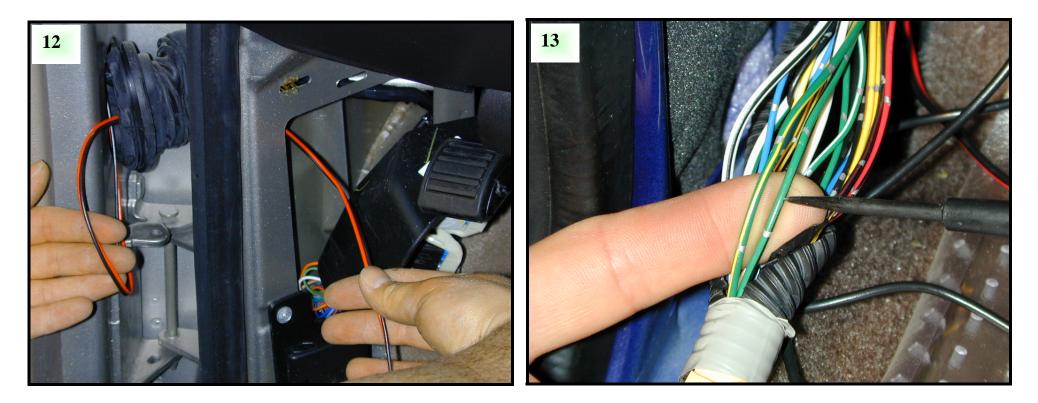
- 5. Carefully lay mirror housing face-up on the window sill as shown. Note: If possible, put a cloth under it and have a second person hold onto the mirror housing to prevent from falling and scratching it.
- 6. Pull away rubber gasket from around the housing sail. Using the shorter of the two *Signal*® mirror wire harnesses, routing the open end wire, from inside the housing, thru the sail and rubber gasket. Pull the *Signal*® mirror wire harness thru leaving about 4-6 inches of slack within the housing for connectivity.
- 7. Insert the *Signal*® mirror wire harness thru the hole on the mirror mount alongside the OEM Wires. Remove the rubber boot between door and car. Guide the *Signal*® mirror wire harness down until you can grab it with your finger thru the hole vacated by the rubber boot, pull the wire thru the door frame.



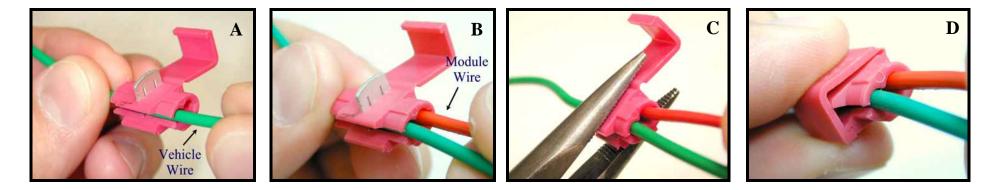


- 8. Secure the mirror housing to the vehicle door.
- 9. Pivot the mirror housing forward and connect the *Signal*® mirror pigtail to the *Signal*® mirror wire harness. Re-connect the heater wires to the heater terminals on the *Signal*® mirror.
- 10. Align the anti-rotation prongs with its corresponding grooves. Carefully tuck the anti-vibration tabs inside mirror housing.
- 11. Center the *Signal*® mirror on the mirror housing and press down firmly until the mirror snaps into place. Continue pressing down on all sides to ensure proper engagement and function.





- 12. Remove kick panel and wire box as shown. Route the *Signal*® mirror wire harness thru rubber boot and into car. Pull the *Signal*® mirror wire harness thru removing any slack in the wire. Replace rubber boot between door and car. Snap the wiring box into place. Split the *Signal*® mirror wire harness and attach the supplied grounding ring to the black wire, and ground it to a suitable grounding bolt near the wire box. Continue routing the red wire to the indicator wiring source located within the bundle of wires behind the brake pedal along firewall.
- 13. Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new Signal<sup>®</sup> mirror. Guide the new red wire harnesses from both sides of the vehicle to the indicator wiring source. On the driver side, locate the LIGHT BLUE (OR LIGHT BLUE w/ WHITE STRIPE) wire from 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 indicator power is present. Label that wire as 'driver side turn'. On the passenger side, locate the DARK BLUE (OR DARK BLUE w/ WHITE STRIPE) wire from within the wire bundle. Activate the passenger side turn indicator and probe the wire with the wire tester to verify that flashing turn indicator power is present. Label that wire as 'passenger side turn'. Side turn indicator and probe the wire with the wire tester to verify that flashing turn indicator power is present. Label that wire as 'passenger side turn'.



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

- 1. Make sure the harnesses are routed securely under the dash and enough slack is left for splicing.
- 2. Splice the RED wire from the driver side harness into the <u>LIGHT BLUE (OR LIGHT BLUE W/WHITE STRIPE</u>) wire previously labeled '<u>driver side turn</u>'.
- 3. Splice the RED wire from the passenger side harness into the <u>DARK BLUE (OR DARK BLUE W/WHITE STRIPE) wire</u> previously labeled **'passenger side turn'**.
- 4. Activate each turn indicator to verify that the *Signal*<sup>®</sup> mirrors are working.
- 5. Replace any door accessories, kick panels, plastic moldings, and trim pieces.

Muth products are protected by these, and other pending, United States Patents 5,005,009 3,075,779 5,014,167 5,128,659 5,207,492 5,355,284 5,361,190 5,481,409 5,528,422 5,619,374 5,619,375 6,700,123 6,749,325 5,788,357 6,005,724 6,045,243 6,076,948 6,257,746 7,008,091 7,015,642 7,104,676 D363.920 6,918,685 D426,507 D425,466 D426,506 D427,128 D428,372 D428,373 D428,842 D429,202 D430,088 D394,833 D409,540

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