

**MUTH**  
**MIRRORS**  
**MIRROR SYSTEMS**®



## *Signal*® Mirror Installation Instructions

2005 -2009 Hummer H3



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

P/N 210-0118-0

Rev. A2 (10/7/09), BTV

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## **PROFESSIONAL INSTALLATION RECOMMENDED:**

Warranty does not cover damage to the vehicle or mirror housing due to improper installation. Muth Mirror Systems, LLC (MMS) assumes no responsibility with regard to the accuracy of this information. MMS assumes no liability or responsibility resulting from improper installation, even in reliance upon this information. Proper installation is the responsibility of the installer. It is your responsibility to verify any circuit before interfacing with it using a digital multimeter.

### **INCLUDED ITEMS:**

1 left and 1 right *Signal*<sup>®</sup> 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  
7mm socket  
3/8" ratchet wrench  
T-30 torx bit  
T-15 torx bit  
Large slotted screwdriver  
Small slotted screwdriver  
Large Phillips screwdriver  
Small Phillips screwdriver  
Small pry bar  
Gopher rod (wire)  
Electrical tape  
Wire crimper and stripper  
Needle nose pliers  
Multimeter or wire tester  
Sturdy gloves  
Safety glasses or goggles  
Utility knife  
3/16" drill bit  
Drill

**Please read instructions prior to installation.**

### **PROBLEMS OR QUESTIONS?**

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

1-800-844-6616

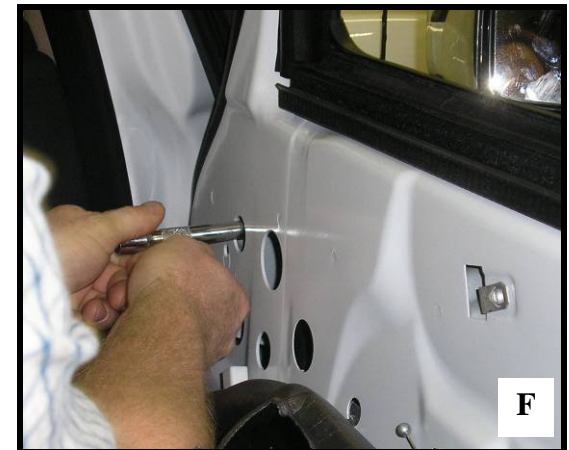
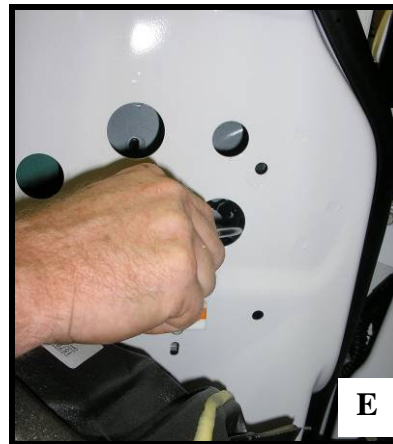
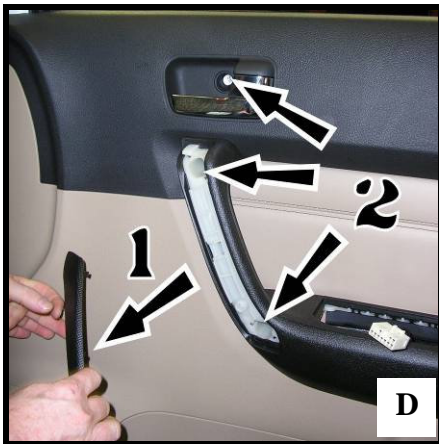
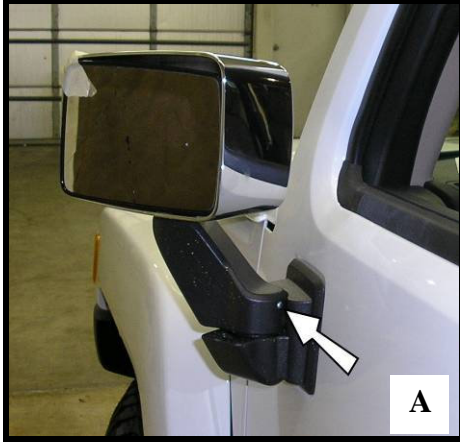
Monday through Friday  
Between 8:00 a.m. and 5:00 p.m. CST

Or through the Muth web site: [www.muthco.com](http://www.muthco.com)

Or via E-mail: [techsupport@muthco.com](mailto:techsupport@muthco.com)



# DOOR PANEL REMOVAL



1. Start with opening the driver's side door and lowering the window. Push mirror arm toward the front of the vehicle exposing the torx head screw (#15) on the lower half of the mount (A). This also exposes galvanized stud on mirror arm. Carefully pry and remove window and lock control using a flat screwdriver and/or a small pry bar (B). Unplug and set aside. Remove grab handle cover using small screwdriver, prying from the bottom and lifting it up (C). Remove round plug in; pull handle recess. Disengage handle bar covering (D1). Remove (3) #30 torx screws (D2). Pull at the bottom of the door panel and remove door panel partially. Unclip door handle, lock cables and other wiring connection behind door panel. Remove door panel and set it aside. Unplug mirror and pry up tie down just inside door (E). Secure the mirror housing with one hand, remove the (4) 10mm bolts holding the mirror housing to the door frame (F). **WARNING: Not securing mirror housing with one hand before loosening the nuts could cause the mirror housing to fall and become damaged. USE EXTREME CAUTION on the lower bolt closest to the glass. DO NOT BREAK THE GLASS!** Carefully remove mirror housing from door frame and set mirror housing on a cloth covered surface. Remove and disconnect door speaker.

# MIRROR REPLACEMENT

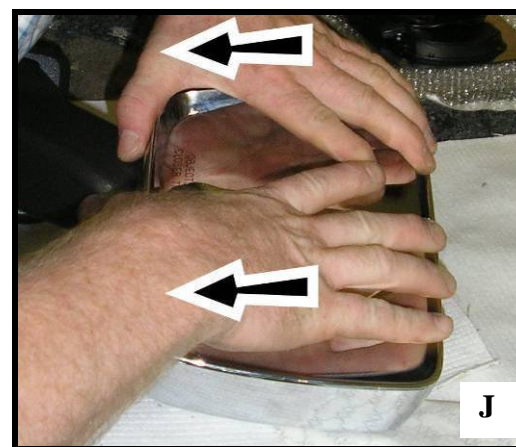
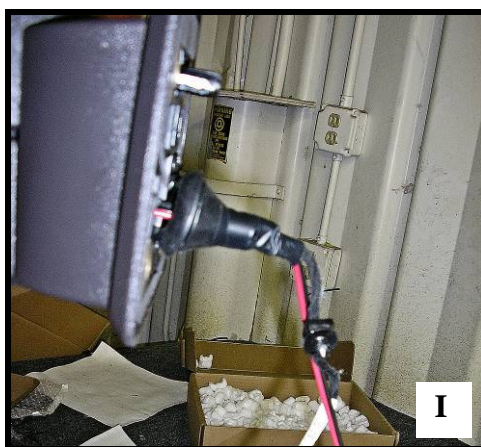
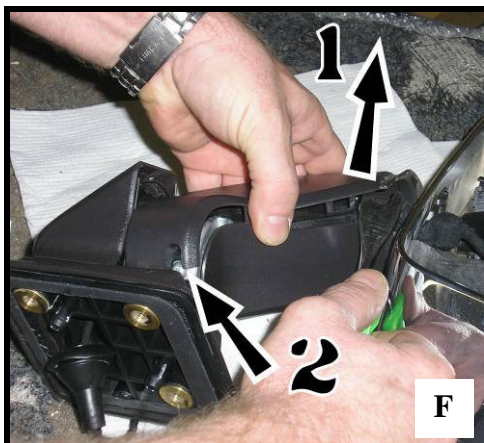
**WARNING:** Safety glasses and sturdy gloves are required for mirror replacement.



Push down on the lower edge of glass until mirror pivots fully outward (A). Using a small pry bar, carefully pry the mirror up toward the top until mirror pops loose (B). **If heated**, disconnect heater wires from heater terminals and remove mirror (C). Unscrew and release the (4) #15 torx screws which attach the mirror housing to housing arm (D). Remove (1) #15 torx screw located on the lower half of the mount (E).

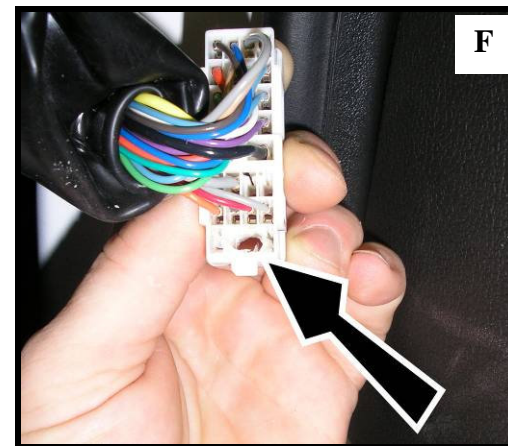
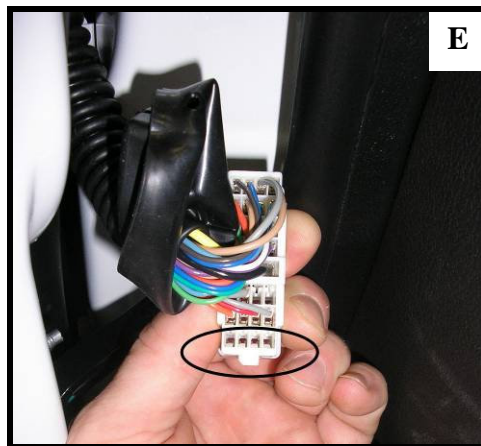
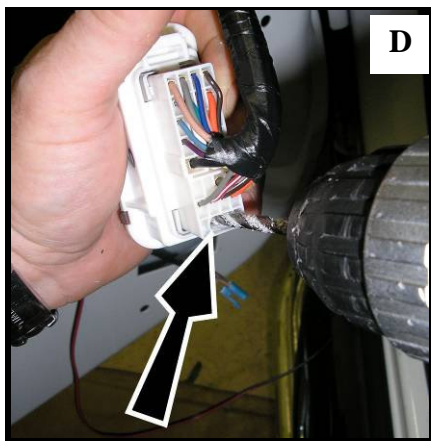
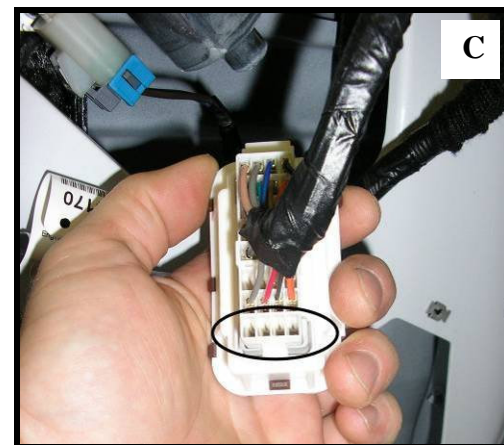
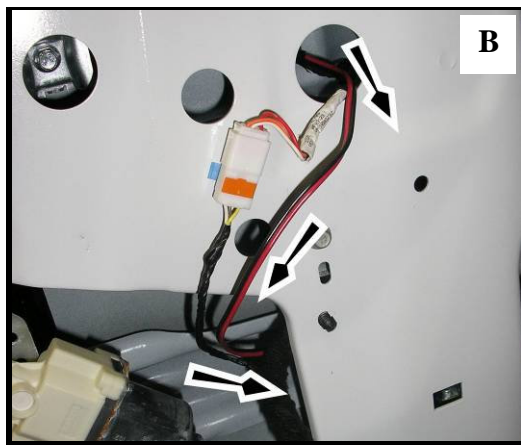


# MIRROR REPLACEMENT CONTINUED



Using a slotted screwdriver, carefully pry up on arm cover and remove it (F1). Unscrew and remove the #15 torx screw (F2). Using the shorter of the two harnesses from the supplied wiring kit, start from inside mirror housing, route *Signal*<sup>®</sup> mirror wire harness thru hole, channel, and seal plug alongside existing wires (G&H). **TIP: A gopher rod may be use to guide the *Signal*<sup>®</sup> mirror wire harness thru narrow passage.** Pull the *Signal*<sup>®</sup> mirror wire harness thru leaving about 4"-6" of slack inside mirror housing for connection purposes. Re-attach torx screw and arm cover. Re-seal the plug using electrical tape (I). Connect the mating connectors on the new *Signal*<sup>®</sup> mirror and the *Signal*<sup>®</sup> mirror wire harness. **If heated**, reconnect the heater wires to the heater terminals on the back of the new *Signal*<sup>®</sup> mirror. **NOTE: There is no polarity so the heater wires may be interchanged.** Carefully tuck all wiring behind motor actuator. **Not doing so, could result in wiring interfering with mirror travel.** Align and center the new *Signal*<sup>®</sup> mirror into the mirror housing. Slowly slide the new *Signal*<sup>®</sup> mirror down until it snaps into position (J). Press down on all sides to ensure the new *Signal*<sup>®</sup> mirror is fully seated and functional. Re-attach the housing arm to the mirror housing.

# WIRE ROUTING

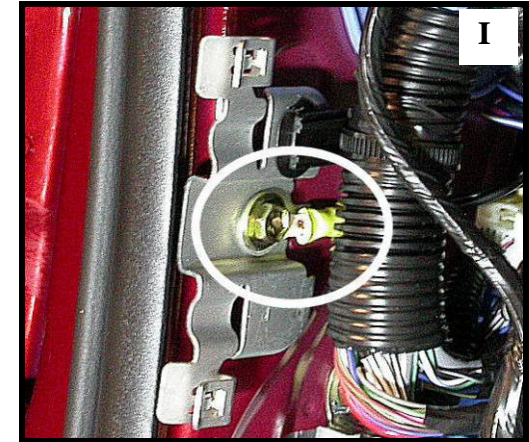
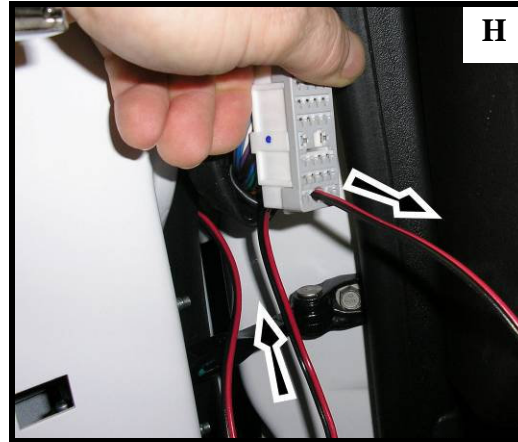
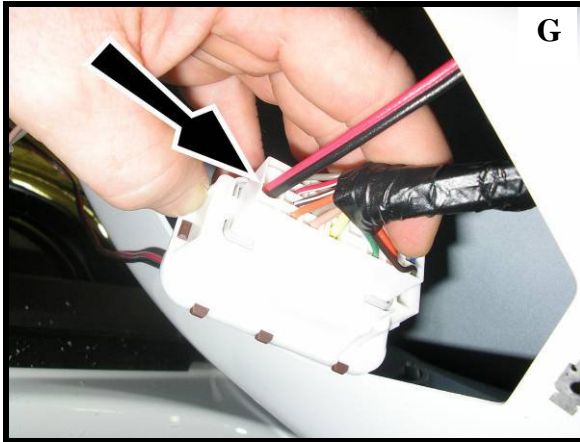


**WARNING:** When routing wire into vehicle, it is extremely important to not let wire get pinched or crushed at any time. Avoid window track and sharp edges at all times. Not doing so may cause circuit shortage problems in the long run.

Guide all wire harnesses thru the hole in the door frame and position the mirror housing assembly onto the mirror mount. Attach the mirror housing assembly to the mirror mount with four mirror mounting bolts. **WARNING!** Do not over tighten the mirror mounting bolts. Reconnect mirror harnesses. Find the rubber boot located between the door frame and vehicle frame. The door stop may be removed to allow for more room to work with, if necessary. Pull up on molex plug handle until vertical and unplug molex connector (A). Guide the *Signal*<sup>®</sup> mirror wire harness alongside original wire harness down and inside door frame and out the hole vacated by the removal of the molex connector (B). Remove molex plug cover by prying up on tab with small slotted screwdriver. Remove rubber cover and locate the (4) empty slots at the bottom of the molex plug (C). Using a 3/16" drill bit, drill a hole in between the two inner slots to make one big hole to pass the *Signal*<sup>®</sup> mirror wire harness thru (D). Locate and remove the other molex connector. Remove rubber covering on the molex connector. Locate and drill a 3/16" hole in between the two inner slots for the *Signal*<sup>®</sup> mirror wire harness to pass thru (E & F).



# WIRE ROUTING CONTINUED

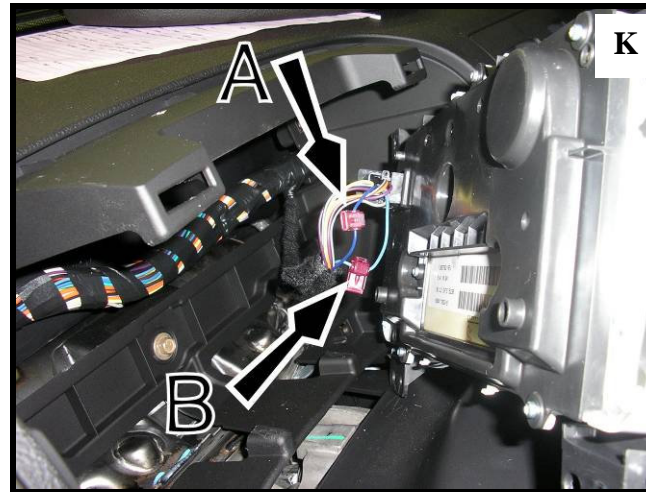
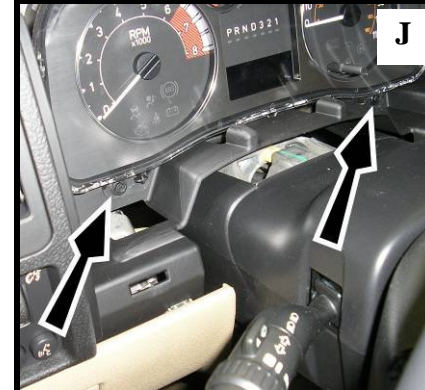


Remove floor trim and kick panel. Guide the *Signal*<sup>®</sup> mirror wire harness through the drilled hole in the first Molex connector (G), through the rubber boot, through the drilled hole in the second Molex connector, and into the vehicle (H). **NOTE: A wire fish rod may be used to assist in the *Signal*<sup>®</sup> mirror wire harness routing process.** Gently pull the *Signal*<sup>®</sup> mirror wire harness through, removing any slack in the *Signal*<sup>®</sup> mirror wire harness. Replace both rubber coverings onto the Molex connectors. Reconnect the Molex connectors on both the door frame side and the vehicle frame side. Locate a suitable grounding bolt near the kick panel area. Using a utility knife, slice between the BLACK w/ RED TRACE wire and BLACK wire on the *Signal*<sup>®</sup> mirror wire harness. Gently and carefully pull on each wire to separate the two. Route the black wire on the *Signal*<sup>®</sup> mirror wire harness to the grounding bolt location. Cut the black wire to length making sure enough slack is left for splicing. Strip about 3/8" off of the black wire. Bend about half of the stripped portion of the black wire back onto itself. Insert the black wire into one of the supplied ring connectors and crimp it into place. Secure the ground ring to the metal framework of the vehicle using the bolt as shown (I). Re-attach control panel and door speaker. Turn the ignition power to on, check to verify all window and mirror features are working properly.

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

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

# WIRE ROUTING & IDENTIFICATION

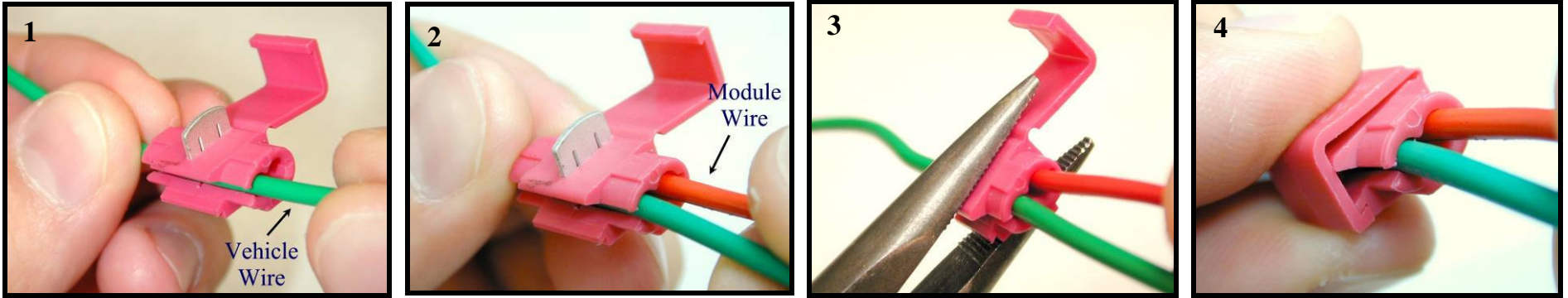


The vehicle's electrical wirings are located on the driver side, behind the instrument panel. To gain access to the wiring location, first remove the driver side lower dash. Second, remove the instrument panel trim cover by pulling straight toward the driver seat (I). Lastly, remove the (4) 7mm screws around the instrument panel (J). Route the BLACK w/ RED TRACE wire on both *Signal*<sup>®</sup> mirror wire harnesses to the wiring location behind the instrument panel.

Locate the DARK BLUE wire behind the instrument panel (K-A). Turn the ignition key so that electrical power is on and 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'. Find the LIGHT BLUE wire behind the instrument panel (K-B). Turn the ignition key to on. 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'.



# WIRE SPLICING PROCEDURES



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

- A. Make sure the harnesses are routed securely and enough slack is left for splicing.
- B. Splice the BLACK W/ RED TRACE wire from the driver side harness into the wire previously labeled 'driver side indicator'.
- C. Splice the BLACK W/ RED TRACE wire from the passenger side harness into the wire previously labeled 'passenger side indicator'.
- D. Activate each turn indicator to verify that the *Signal*<sup>®</sup> mirrors are working properly.
- E. Reconnect all original wiring. Turn the ignition power to on, check to verify all features are working properly.
- F. Replace the plastic door frame moldings, trim, door panels, and all accessories.

**Muth products are protected by these, and other pending, United States Patents**

3,075,779   5,005,009   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  
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