



Signal® Mirror Installation Instructions

Ford Escape 2001-2007, Ford Escape Hybrid 2005-2007, Mazda Tribute 2001-2006, & Mercury Mariner 2005-2007



THE safety accessory of the 21st Century.™

P/N 210-0072-0

Rev C7 (4/2/07), 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*[®] 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
- $\frac{9}{32}$ " socket
- Electric or portable drill
- 3.5 mm drill bit
- Medium Philips screwdriver
- Gopher wire
- Wire crimper and stripper
- Masking tape
- Multimeter
- 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

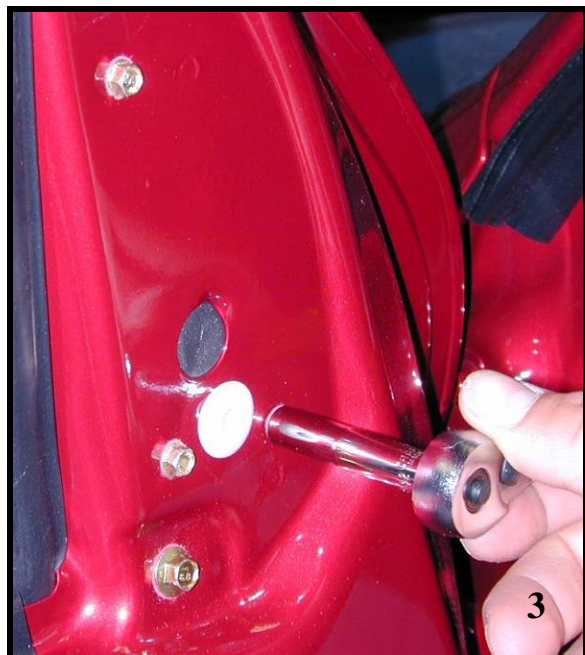
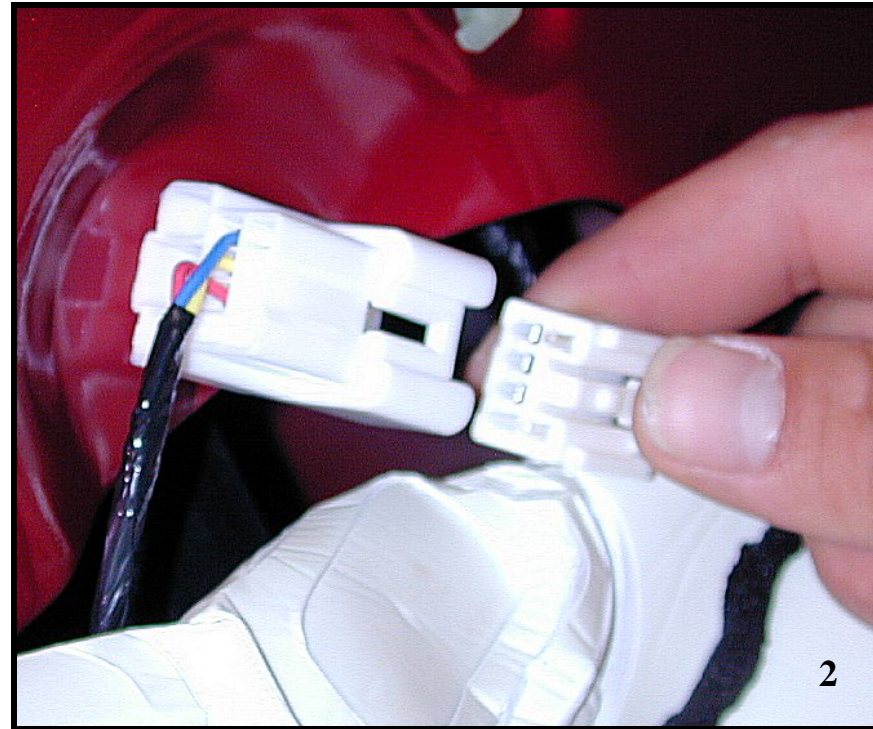
Monday through Friday
Between 8:00 a.m. and 5:00 p.m. CST

Or through the Muth web site:

www.muthco.com

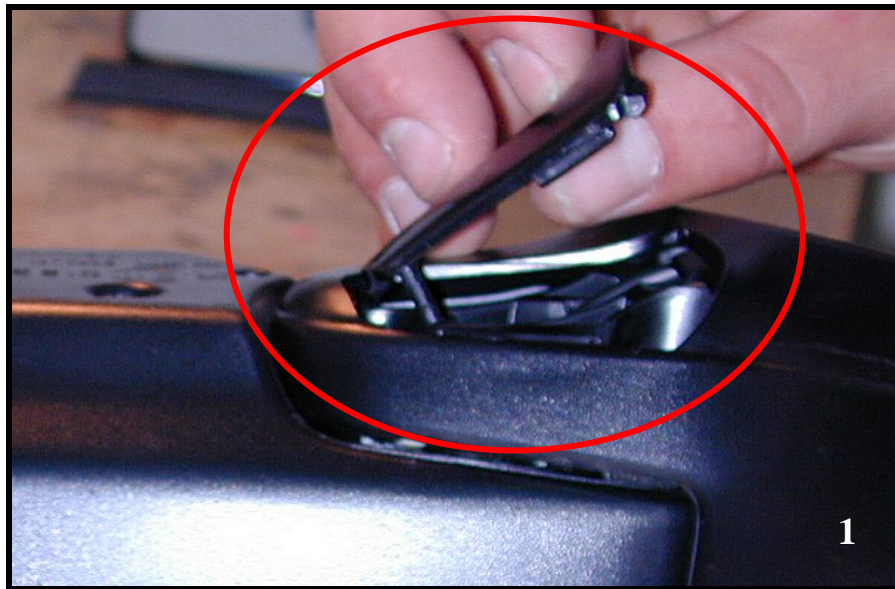
Or via E-mail: techsupport@muthco.com

Mirror Housing Removal



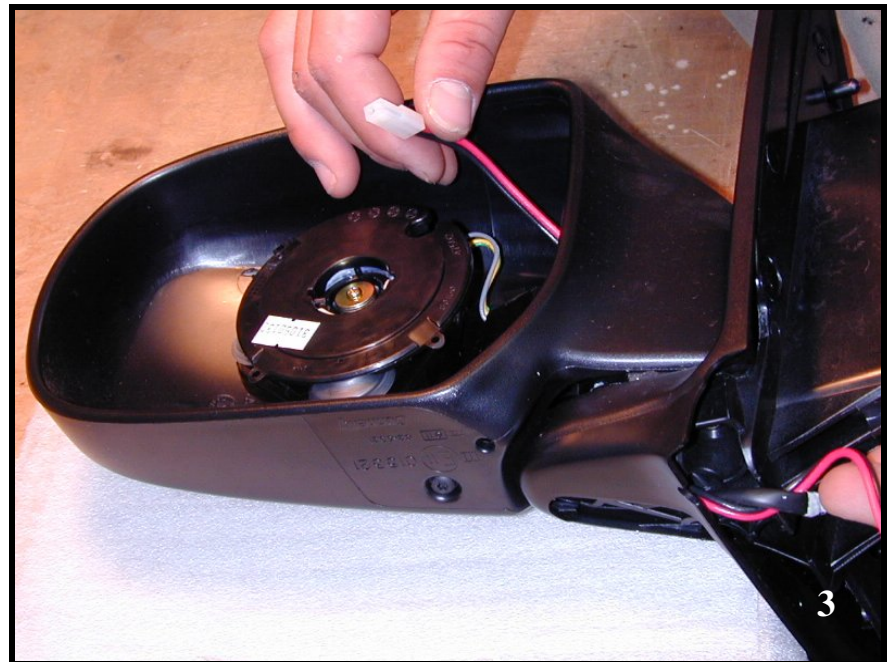
1. Lower the window. Remove the (4) screws holding the door panel in place (A,B,C,D). Unsnap panel from door. Unsnap the 3" speaker from door frame.
2. Gently raise door panel to expose door wiring. Unplug the connection for the mirror, door lock, and window control wires. Remove the door panel.
3. Using a $\frac{9}{32}$ " socket, remove the (3) nuts holding the mirror housing to the doorframe.

Mirror Replacement

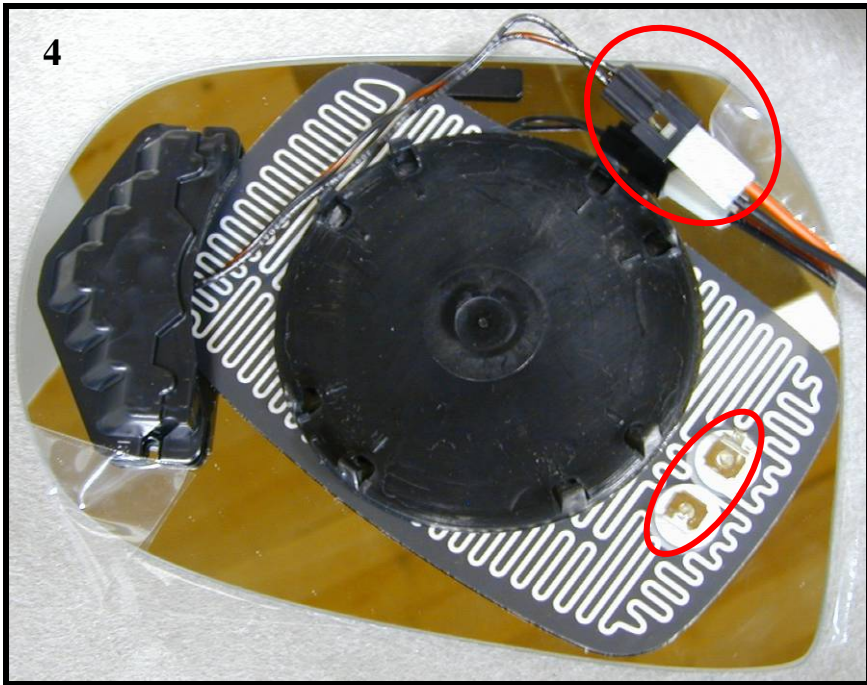


Warning! Be sure to wear safety glasses during this operation as there is the potential for broken glass. Sturdy gloves are recommended.

1. Place the mirror housing with the bottom up, use a flat screwdriver to pry open the little cap cover as shown.
2. Place the mirror housing on a cloth covered, level surface. Push on the upper edge of the mirror to manually pivot it fully upward so a small pry bar can be inserted under the bottom edge. Apply pressure with the pry bar until the mirror backing plate begins to unsnap from the motor. Move the pry bar around the mirror and pry again until the mirror backing plate further unsnaps from the motor. Pull the mirror off of the motor. **If heated**, disconnect the heater wires from the heater terminals on the back of the OE mirror. Remove OE mirror.
3. Using the shorter of the two wire harnesses for the drivers side, fish the *Signal*[®] mirror wire harness alongside OE cable as shown.



Mirror Replacement Continued



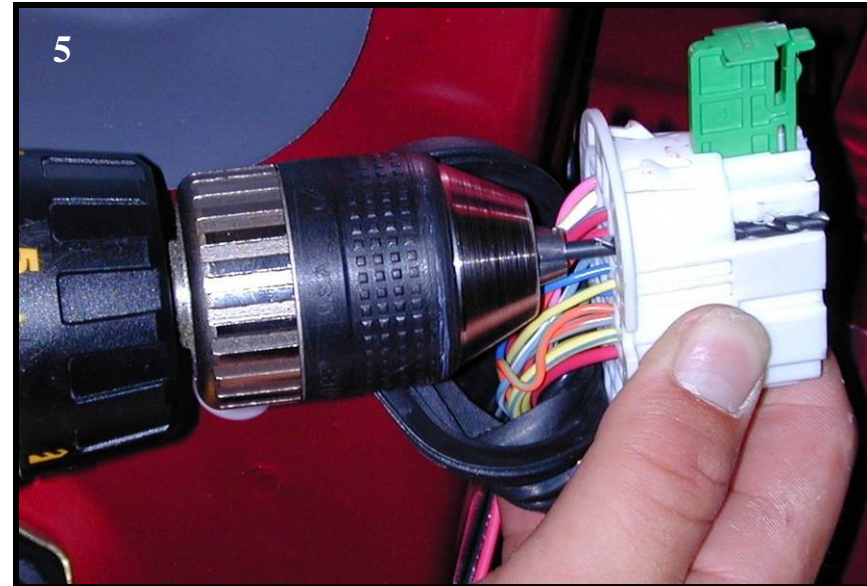
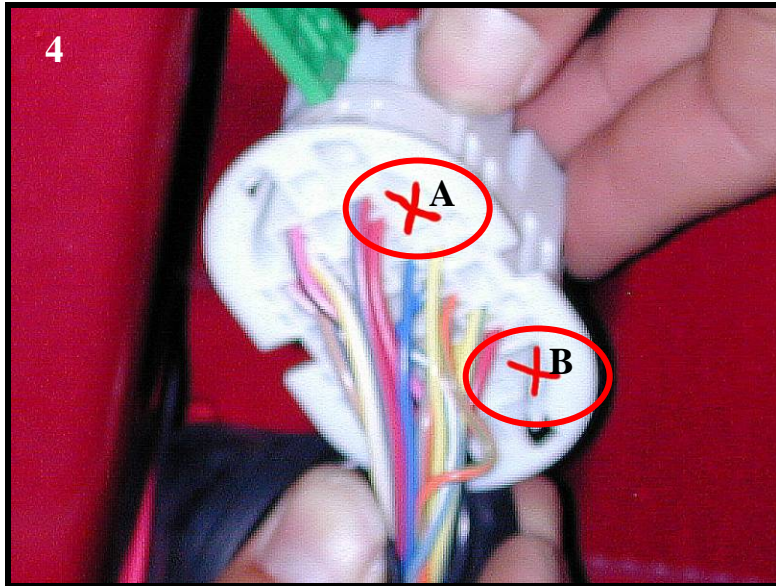
4. Connect the *Signal*[®] mirror wire harnesses with its mating connectors. **If heated**, reconnect the heater wires to the heater terminals on the back of the new *Signal*[®] mirror. **NOTE:** There is no polarity so the wires may be interchanged. Tuck the wires behind motor actuator. Make sure the wires and connectors are not interfering with the motors travel. Replace the little cap cover.
5. Place the *Signal*[®] mirror over the motor puck. With sturdy gloves on, place the palm of your hand on the center of the glass and press firmly until you hear the snaps engage onto the motor puck. Press on the top, bottom, and both sides of the mirror to ensure complete attachment to the motor puck. **(Mirror should be pivoted through its full range of travel during this step)**. Feed wires into door and remount the mirror housing, onto the door, using the (3) nuts.

Wiring

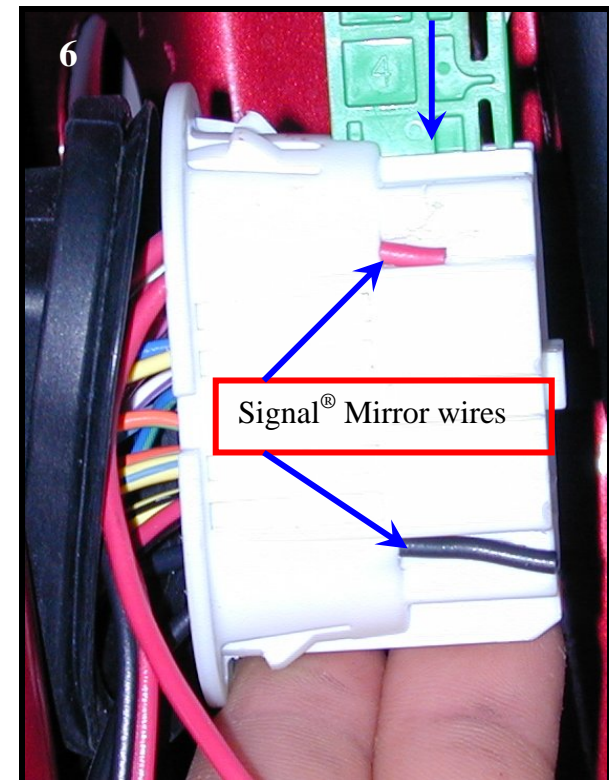


1. With your fingers, push rubber boot in and remove rubber boot from the doorframe. Fish the *Signal*[®] mirror wire harness through the door frame and out the access hole vacated by the removal of the rubber boot. **IMPORTANT: Be sure to run harness around window track. Not doing so could result in a cut or damaged wire. Also watch for any rough edges, moving parts (i.e. Parking brake). If insulation is damaged during installation, it could result in a short, which could cause a number of problems.**
2. Remove the other end of the rubber boot by unsnapping it from the vehicle frame socket. Slide the green tab up (as shown) to release the lock on the mating connectors.
3. Disconnect the two mating connectors.

Wiring Continues



4. Route the *Signal*[®] mirror wire harness through the rubber boot. Using the connector with the 'green tab', locate the two slots mark with 'X' (A,B).
5. Drill (2) holes as shown using a 3.5 MM drill bit. Split the *Signal*[®] mirror wire harness up into two individual wires.
6. Insert each wire into the newly drilled hole and pull it through. Reconnect the two mating connectors. Push down the 'green tab' to secure the mating connectors. Unscrew and remove kick panel. Pass the *Signal*[®] mirror wire harness into the vehicle. Reinsert the rubber boot back in place.



Wire Identification

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

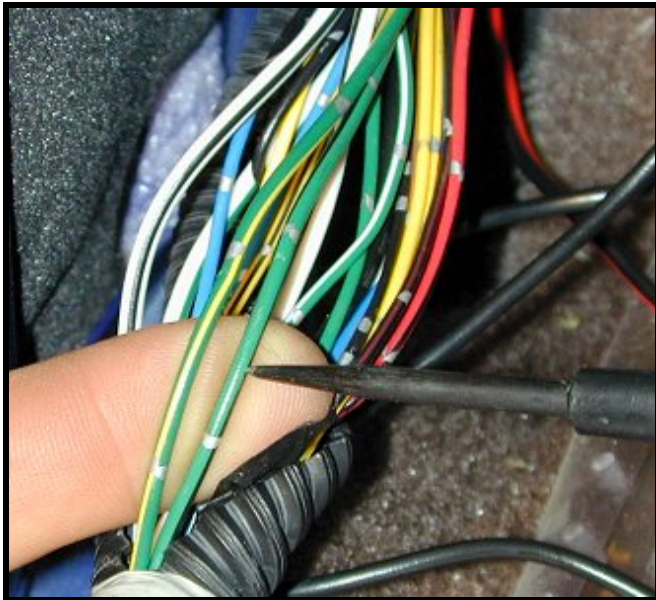
**** Before proceeding, please read remainder of instructions for information regarding wiring identification and options.**

Wiring identification for Ford Escape Hybrid 2005-2006

The vehicle's electrical wiring for the driver side mirror and passenger side mirror is located within the wire bundle on the driver side kick panel (above the ADL diagnostic plug). Passenger side *Signal*[®] mirror wire harness needs to run all the way across the front dash board to the driver side kick panel.

Grounding for passenger side *Signal*[®] mirror wire harness may be done on the passenger side kick panel. Driver side grounding point can be found in the driver side kick panel.

Guide the new wire harnesses from both sides of the vehicle to the electrical wiring location (driver side kick panel). Unwrap tape around the wire bundle. Locate the LT. GREEN with 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'. Locate the WHITE with BLUE STRIPE wire from 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'.

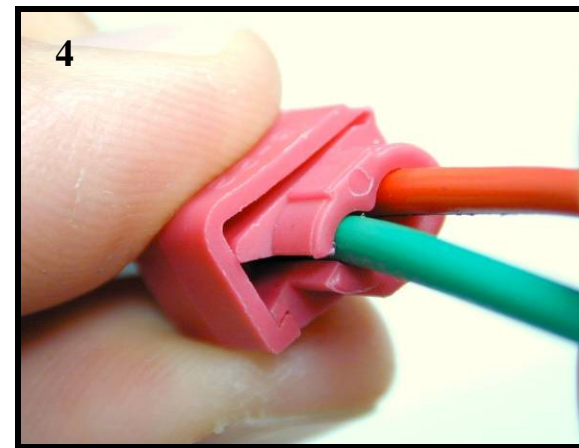
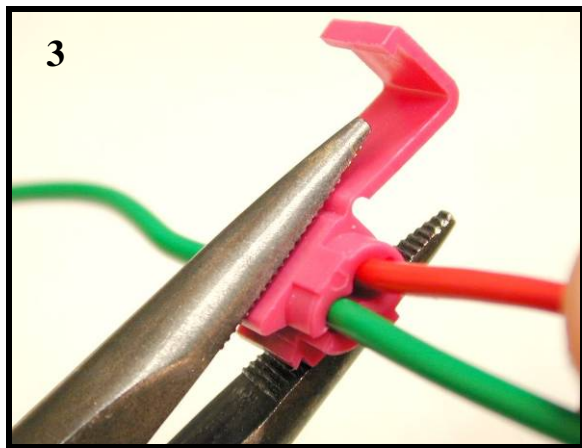
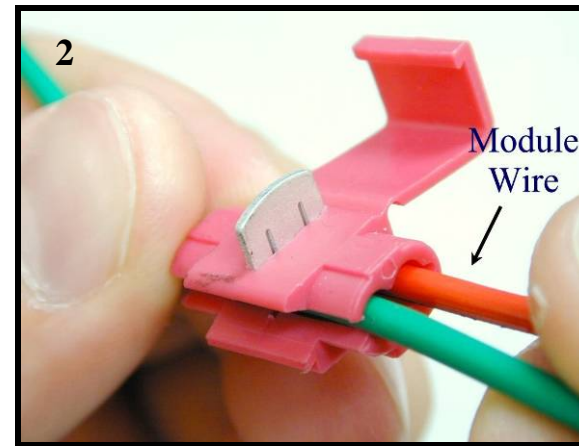
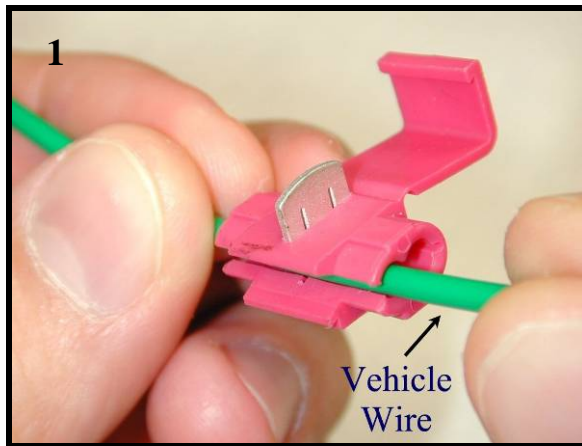


Wiring identification for Ford Escape 2001-2006, Mazda Tribute 2001-2006, Mercury Mariner 2005-2006

The vehicle's electrical wiring for the driver side mirror and passenger side mirror is located on the driver side blue connector going into the right-hand side of the fuse box. Passenger side *Signal*[®] mirror wire harness needs to run all the way across the front dash board to the blue connector, near the fuse box, on the driver side.

Grounding for passenger side *Signal*[®] mirror wire harness may be done on the passenger side kick panel. Driver side grounding point can be found in the driver side kick panel.

Guide the new wire harnesses from both sides of the vehicle to the electrical wiring. Locate the GREEN with WHITE STRIPE wire from the blue connector near the fuse box. 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'. Locate the WHITE with BLUE STRIPE wire from the blue connector near the fuse box. 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'.



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 to the wire bundle and enough slack is left for splicing.
2. Splice the RED wire from the driver side harness into the green with white stripe wire previously labeled 'driver side turn'.
3. Splice the RED wire from the passenger side harness into the white with blue stripe wire previously labeled 'passenger side turn'.
4. Strip and twist the ends of the black wires from both harnesses. Crimp each black wire in the supplied ring connectors and ground to a suitable grounding location on the metal framework of the vehicle.
5. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.
6. Replace all panels, door accessories, insulation, plastic moldings, and trim pieces.

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	
5,788,357	6,005,724	6,045,243	6,076,948	6,257,746	6,700,123	6,749,325	6,918,685	7,008,091	7,015,642	7,104,676	D363,920
D394,833	D409,540	D425,466	D426,506	D426,507	D427,128	D428,372	D428,373	D428,842	D429,202	D430,088	

