



Signal[®] Mirror Installation Instructions
Ford Crown Victoria 1998-2010, Mercury Grand Marquis 1998-2010



THE safety accessory of the 21st Century. TM

P/N 210-0030-0

Rev E3 (10/6/09), 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*[®] mirror
- 1 left and 1 right wire harness
- 2 wire taps
- 4 Terminal quick connectors
- 2 ring connectors
- 1 instruction manual

REQUIRED TOOLS:

- Ratchet with extension or ratcheting screwdriver
- 11mm socket
- Small slotted screwdriver
- Medium Philips screwdriver
- Small pry bar
- Electrical tape
- Wire crimper and stripper
- Needle nose pliers
- Side cutter
- 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:

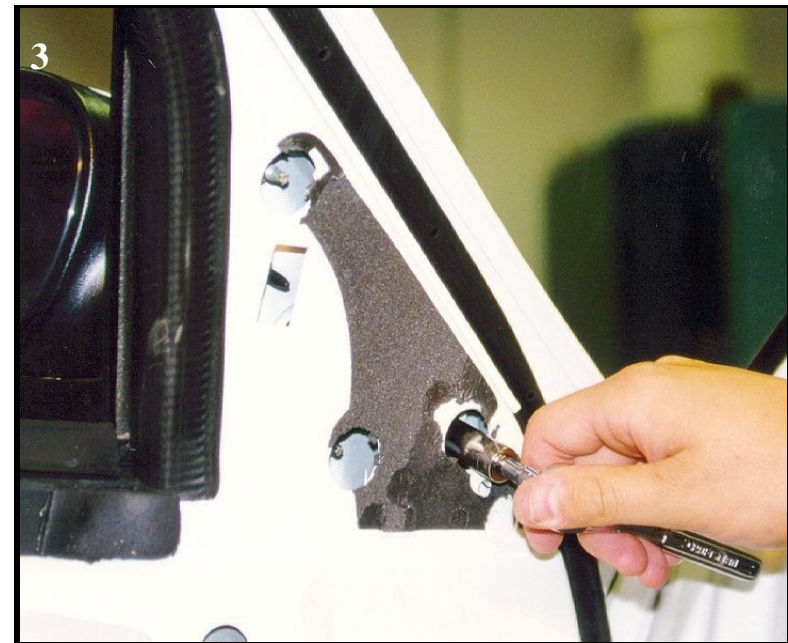
1-800-844-6616

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

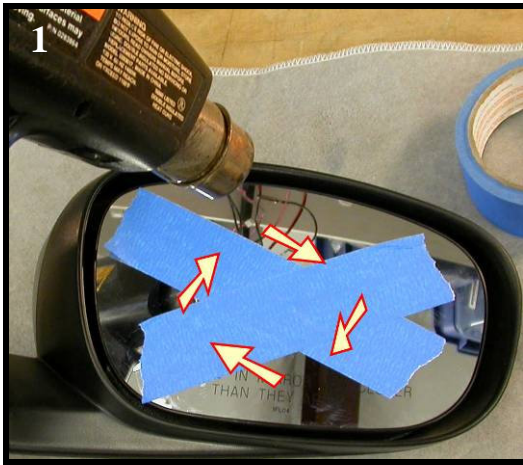
Mirror housing removal



- 1) Open the driver side door and lower the window. Remove the door panel.
- 2) Disconnect the mirror wire harness.
- 3) Remove the three mirror mounting nuts and remove the mirror housing from the vehicle.

Mirror replacement and wiring

WARNING! Safety glasses and sturdy gloves are recommended for mirror glass replacement.



For easier removal of the original mirror, tape an 'X' on mirror with masking tape to prevent mirror breakage. Using a heat gun or a hair dryer, heat around original mirror to help expand [loosen] the mirror backing plate.



Push in on the outboard edge of glass. Insert a large flat screwdriver into the notch as shown above. **NOTE:** There are two notches. Choose notch furthest inside of housing along motor.

WARNING: Different motor mounts have been seen on similar vehicle models. Therefore, if original mirror does not 'pop' off on the first try, re-heat with heat gun and pry it at different locations around the motor.



Twist the screwdriver about a 1/4 to 1/2 turn to disengage the motor mount from the housing. **NOTE:** If heated, disconnect heater wires from heater terminals. Remove OE Mirror from mirror housing.



Pull six inches of the factory wire harness back through the mirror housing. Using the shorter of the two wire harnesses from the kit for the driver side door, tape the end without the mating connector to the factory wire harness.



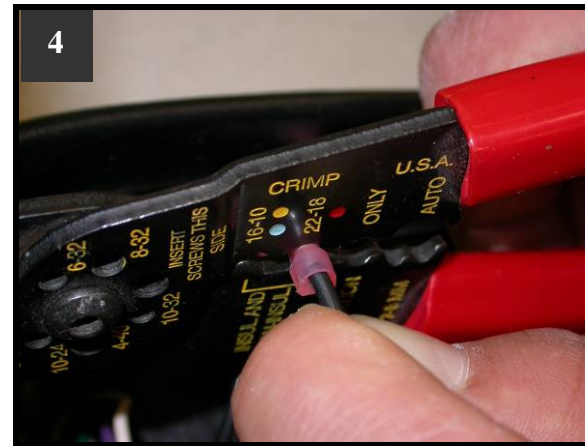
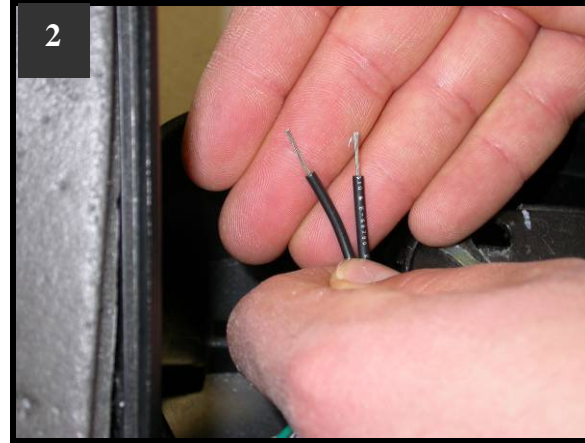
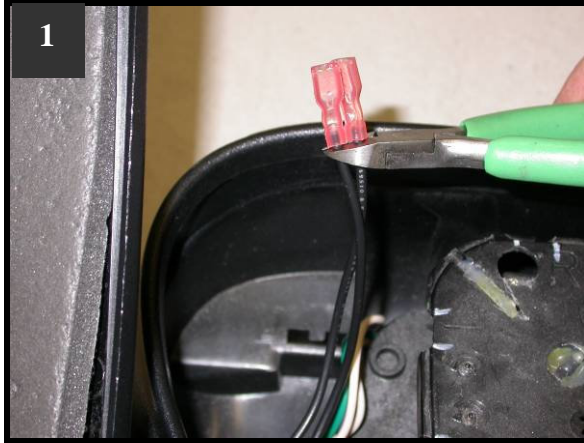
Pull the factory wire harness back to its original position. Remove the tape from the end of the new wire harness and pull enough slack through the mirror housing so that seven inches remain exposed.



Connect the *Signal*® mirror mating connector to the *Signal*® mirror wire harness. **NOTE:** If the mirrors are heated, connect the heater wires to the *Signal*® mirror heater terminals. **ATTENTION:** For 2007+ model year, see next page for swapping out existing heater terminal connectors.

For heated 2007 Crown Victoria and Grand Marquis ONLY

Use the following steps to replace existing heater terminal connectors

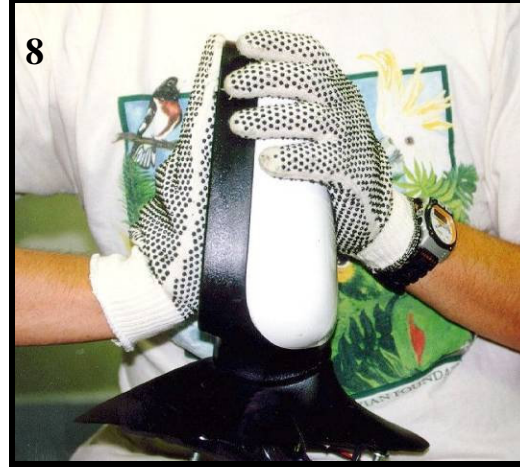


- 1) Using a side cutter, cut off the 2 existing heater terminal connectors directly at the base of the connectors.
- 2) Strip both heater wires approximately 3/8".
- 3) Position supplied, larger heater terminal quick connector fully onto the stripped portion of wire.
- 4) Crimp into place. Check that the heater terminal quick connector is secured onto the wire by pulling on the connector to ensure that the crimp is securely fastened.
NOTE: If newly crimped terminal begins to slide when tugged, crimp again to secure it. Avoid pulling off terminal when checking.

Mirror replacement and wiring continued



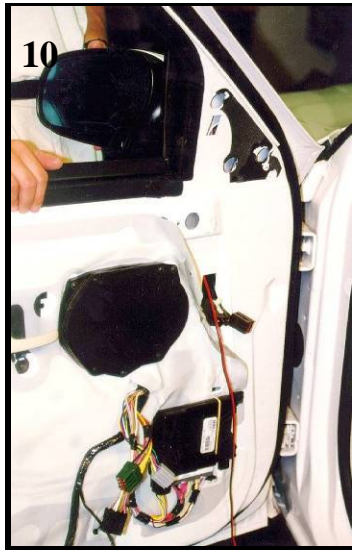
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Position the *Signal*® mirror wire along the back edge of the mirror housing. Center the mirror over the mirror housing.



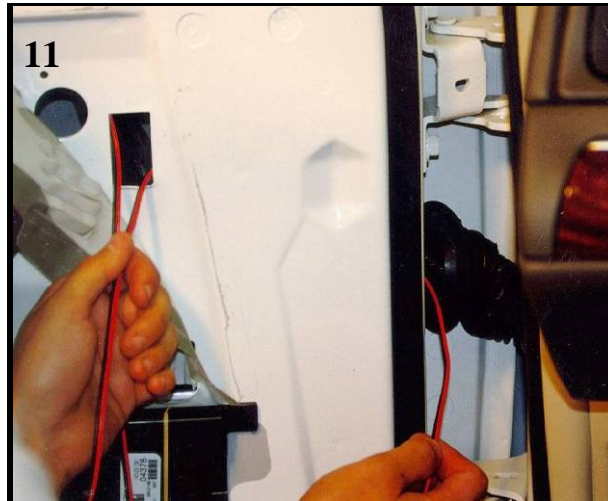
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Use the palm of your hand and firmly press the *Signal*® mirror into the mirror housing until it is fully seated on the center hub.



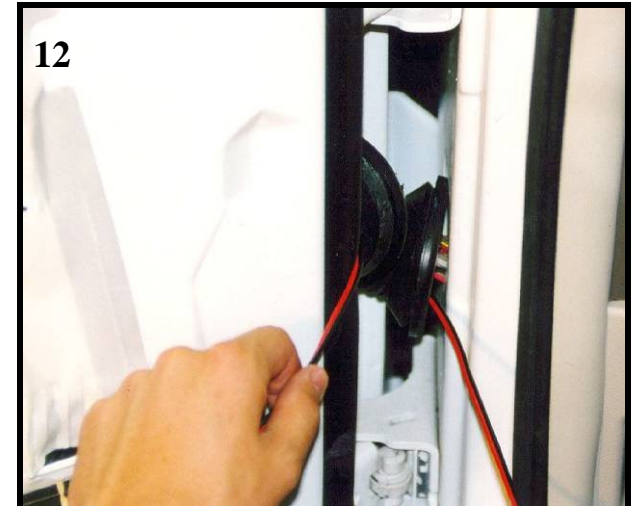
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Guide the new wire harness through the center of the foam insulation. Position the foam insulation back on the mirror sail.



10
Guide the new wire harness and factory mirror wire harness down into the door and bolt the mirror back into position.

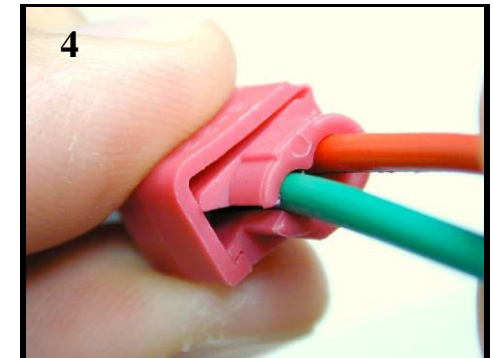
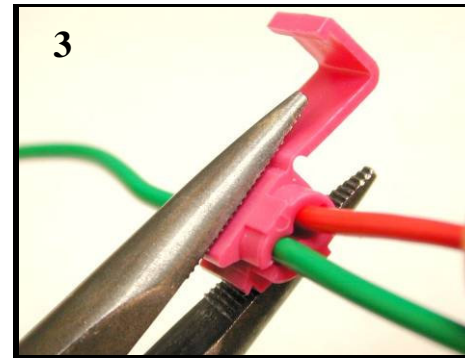
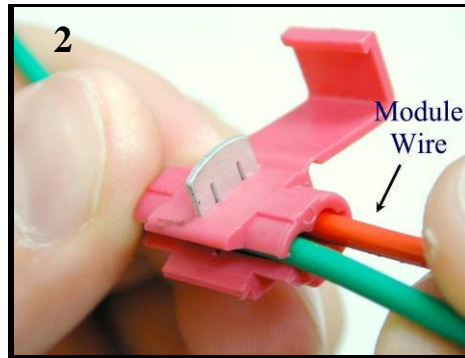
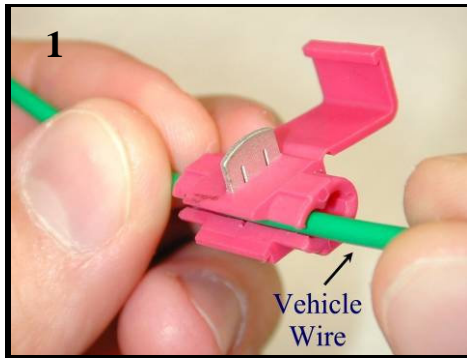


11
Pull the rubber boot out between the door and door frame. Pass the wire harness through the opening vacated by the rubber boot. Remove any slack in the wire.



12
Pull the rubber boot off of the door frame and guide the harness through the rubber boot and into the vehicle. Remove any slack in the wire.

Use the included wire taps and follow these four steps

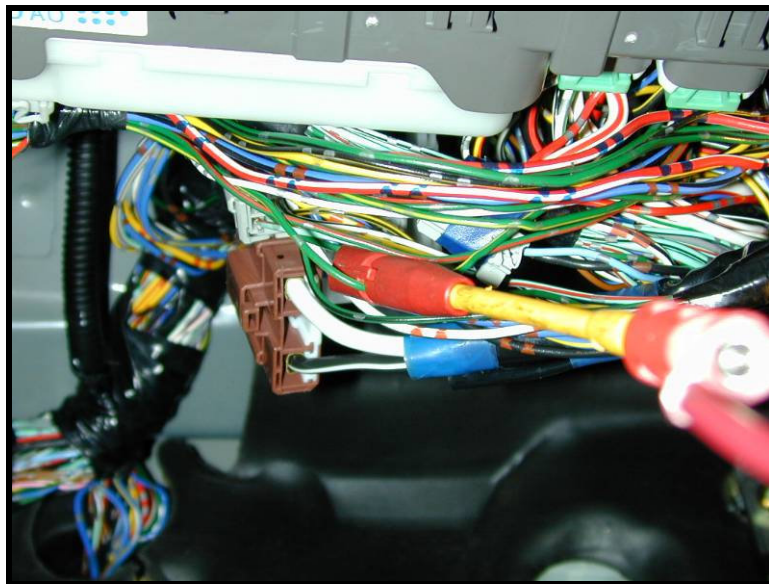


For 1998-1999 model year vehicles follow these wiring instructions

1. Guide the wire harness from the driver side door to underneath the driver side dash. Locate the GREEN WITH WHITE STRIPE wire from within the wire bundle located underneath the driver side dash. Turn the ignition key so that electrical power is on. Activate the driver side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the driver side harness into the green with white stripe wire.
2. Guide the wire harness from the passenger side door to underneath the passenger side dash. Locate the WHITE WITH BLUE STRIPE wire from within the wire bundle located underneath the passenger side dash. Activate the passenger side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the passenger side harness into the white with blue stripe wire.
3. Strip and twist the ends of the black wires from each harness. Crimp each of them in a supplied ring connector and ground each one to a suitable nearby location on the metal framework of the vehicle. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.

For 2000-2003 model year vehicles follow these wiring instructions

1. Guide the wire harness from the driver side door to the driver side kick panel. Locate the GREEN WITH ORANGE STRIPE wire from within the wire bundle located behind the driver side corner panel. Turn the ignition key so that electrical power is on. Activate the driver side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the driver side harness into the green with orange stripe wire.
2. Guide the wire harness from the passenger side door along the dash to the driver side kick panel. Locate the ORANGE WITH BLUE STRIPE wire from within the wire bundle located behind the driver side corner panel. Activate the passenger side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the passenger side harness into the orange with blue stripe wire.
3. Strip and twist the ends of the black wires from each harness. Crimp them together in a supplied ring connector and ground to a suitable nearby location on the metal framework of the vehicle. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.



For 2004+ model year vehicles follow these wiring instructions

1. **TURN & BRAKE:** Guide the wire harness from the driver side door to underneath the driver side dash. Locate the LIGHT GREEN WITH ORANGE STRIPE wire from within the wire bundle located behind the driver side corner panel. Turn the ignition key so that electrical power is on. Activate the driver side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the driver side harness into the light green with orange stripe wire.
2. **TURN & BRAKE:** Guide the wire harness from the passenger side door along the dash to underneath the driver side dash. Locate the ORANGE WITH LIGHT BLUE STRIPE wire from within the wire bundle located behind the driver side corner panel. Activate the passenger side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the passenger side harness into the orange with light blue stripe wire.
3. **TURN ONLY:** Guide the wire harness from the driver side door to the driver side kick panel OR underneath the driver side dash. Locate the LIGHT GREEN WITH WHITE STRIPE wire from within the wire bundle located behind the driver side kick panel OR underneath the driver side dash. Turn the ignition key so that electrical power is on. Activate the driver side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the driver side harness into the light green with white stripe wire.
4. **TURN ONLY:** Guide the wire harness from the passenger side door along the dash to underneath the driver side dash OR the driver side kick panel. Locate the WHITE WITH LIGHT BLUE STRIPE wire from within the wire bundle located underneath the driver side dash OR behind the driver side kick panel. Activate the passenger side turn indicator and probe the wire with a wire tester to verify that flashing turn indicator power is present. Splice the BLACK W/ RED TRACE wire from the passenger side harness into the white with light blue stripe wire.
5. Strip and twist the ends of the black wires from each harness. Crimp them together in a supplied ring connector and ground to a suitable nearby location on the metal framework of the vehicle. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.

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

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D394,833	D409,540	D425,466	D426,506	D426,507	D427,128	D428,372	D428,373	D428,842	D429,202	D430,088