



Signal® Mirror Installation Instructions

Ford Explorer, Ford Explorer SportTrac, Ford Ranger, Mazda B-2500\B-3000\B-4000,
Mercury Mountaineer – All 2002 – 2005 model years



THE safety accessory of the 21st Century.™

INCLUDED ITEMS:

1 left and 1 right *Signal*[®] mirror
1 left and 1 right wire harness
2 wire taps
1 ring connector
1 instruction manual

REQUIRED TOOLS:

Ratchet with extension or ratcheting screwdriver
Large side cutter or Dremel tool
6mm socket
11mm socket
10mm box wrench (**mirror friction pins**)
Small slotted screwdriver
Medium Philips screwdriver
Small pry bar
Gopher wire (**Ford Ranger/Mazda B-Series**)
Electrical tape
Wire crimper and stripper
Heat gun, 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

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.

Ford Explorer \ Mercury Mountaineer door panel removal



1. Open door and lower window. Remove two screws at bottom of panel.
2. Remove plastic trim by pulling from the front end.
3. Dislodge window control panel by pulling up as shown.
4. Remove screw located behind trim piece and disconnect all window control plugs. Pass window control wiring panel through opening in door panel. Remove door panel.
5. Peel off foam insulation and remove the three bolts holding the mirror housing to the door frame. Unplug connector and remove mirror housing from door frame.



6. Unplug mirror remote.
7. Remove bolts around speaker.
8. Disconnect wire and remove speaker from door frame.
9. Disconnect the mirror wire harness from inside door.

Ford Ranger \ Mazda B-Series door panel removal



1. Open door and lower window.
2. Remove two screws behind door handle.
3. Remove screw from lower left corner of door.
4. Pull window control panel out from door panel.

6. Lift door panel away from door and pass window control panel through opening in center of door panel.



7. Remove screws around speaker. Remove speaker from door and disconnect speaker wire.



8. Disconnect mirror wire harness from inside door.



9. Peel off foam insulation from corner of door.



10. Remove three mirror mounting nuts from corner of door and remove mirror housing assembly.



Ford, Mercury, Mazda mirror replacement



Lay the mirror housing on a flat surface with a cloth under it. Remove foam insulation.



Remove wire clip and plug as shown.



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.

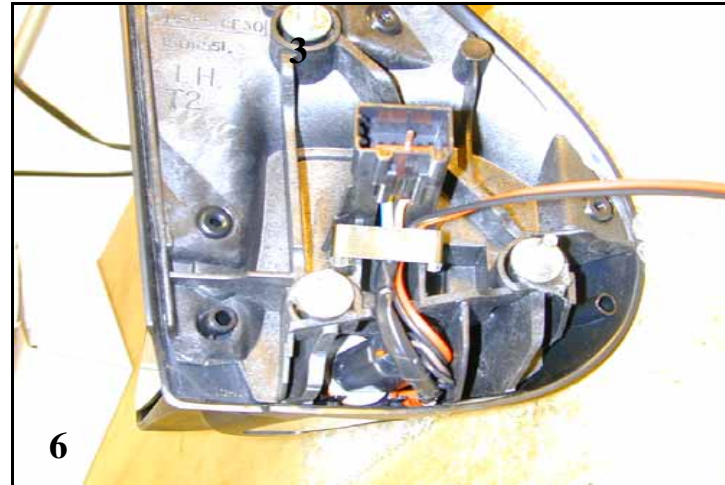


Twist the screwdriver about a 1/4 to 1/2 turn to disengage the motor mount from the housing. **NOTE:** If heated, disconnect heater wires from heater terminals. Remove OE Mirror from mirror housing.

Ford, Mercury, Mazda mirror replacement



Route the *Signal*® mirror wire harness through as shown using a fish wire. **NOTE: Route wire from inside housing out.**



Run *Signal*® mirror wire harness alongside OE wire plug. Attach clip, *Signal*® mirror wire harness, and plug into place as shown. Replace foam insulation.



This is the area that can potentially cause interference in the Up / Down mirror travel.



Remove approximately 1/4" of the plastic with a cutter or Dremel type tool.

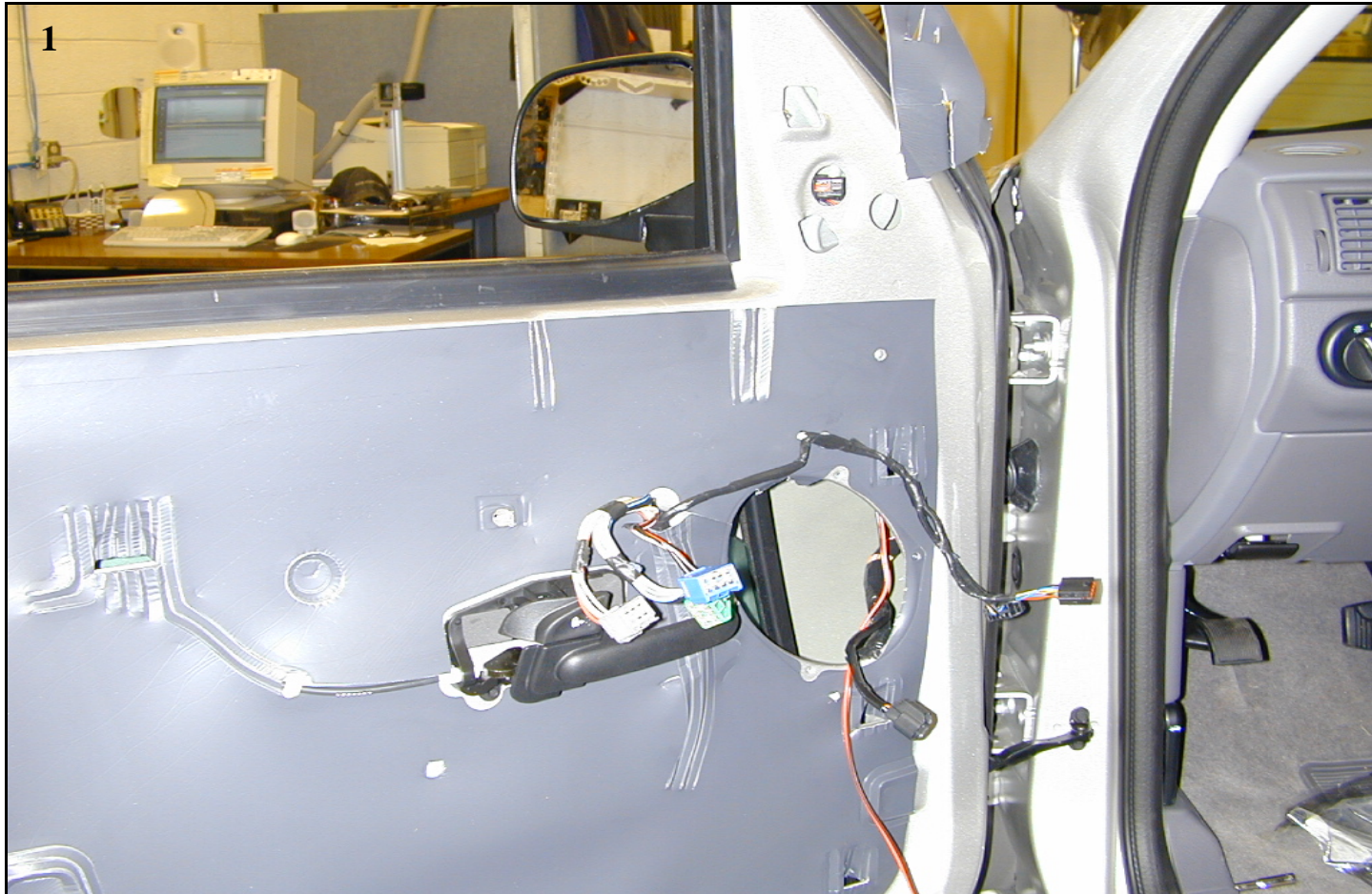


Connect the *Signal*® mirror wire harness to the new *Signal*® mirror. **NOTE: Make sure to run wire where the *Signal*® mirror wire connectors will not interfere or restrict mirror travel. If heated,** reconnect heater wires to the heater terminals on the new *Signal*® mirror.



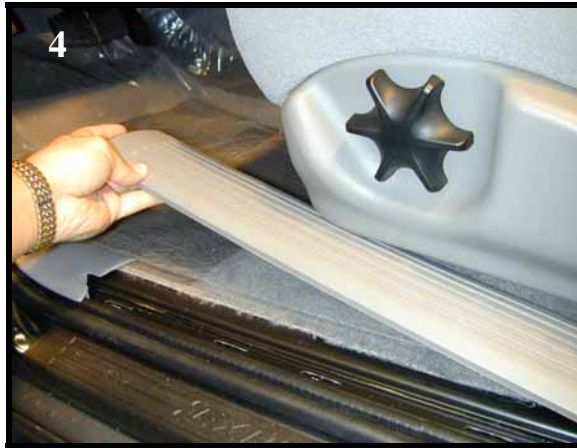
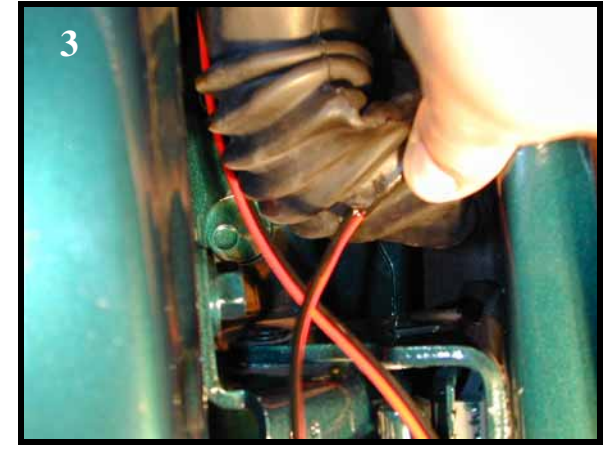
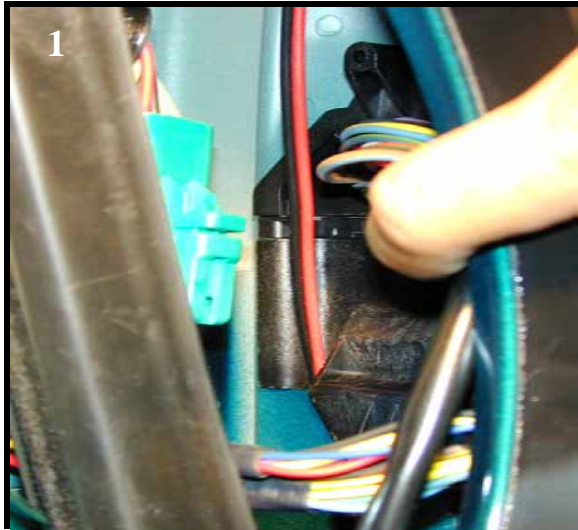
Align the motor mount socket with the motor and apply steady pressure to the center of the mirror until it snaps into position. Press down on all sides of the mirror to ensure proper engagement and operation.

Mounting mirror housing assembly to door frame



Position mirror housing assembly to door frame and Insert OE wire and *Signal*® mirror wire harness thru the hole on the door frame. Fasten the (3) bolts holding the mirror housing assembly to the door frame. Reconnect OE plug and route the *Signal*® mirror wire harness down within door frame as shown above. **NOTE: If no plastic canister is found, route wire to inside of vehicle. CAUTION: Make sure the routing of the *Signal*® mirror wire harness does not run inside the window track.** Replace insulation trim.

Ford Explorer \ Mercury Mountaineer wiring



1. On the inside of the door there are two small holes at the bottom of where the plastic canister base is attached. The holes may be hidden behind foam insulation. Guide the wire harness through the left hole and out of the door.
2. Pull out the rubber boot from the door frame.
3. There is a hole at the bottom of the rubber boot. Pass the wire harness through the hole and into the vehicle. Remove any slack.
4. Remove the plastic molding along the bottom edge of the door frame.
5. Remove the plastic grommet from the corner molding and remove the molding.
6. Repeat all of the previous steps on the passenger side door to replace the factory mirror with the new *Signal*® mirror. Guide the wire harness through the passenger side door and into the vehicle as shown.

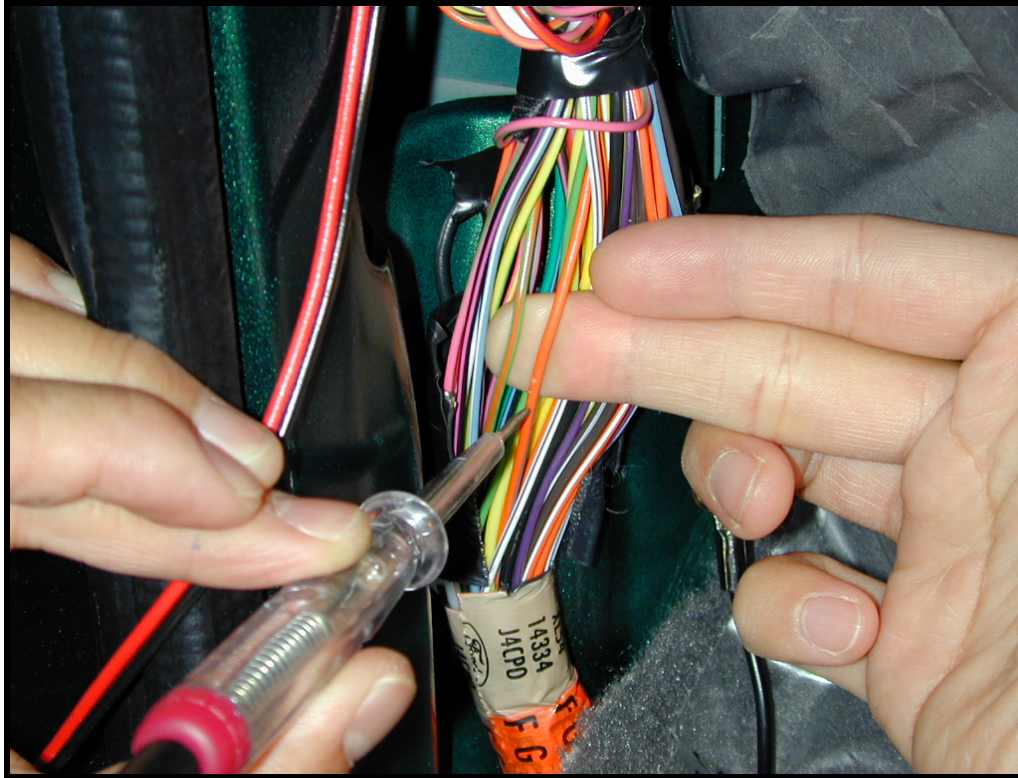


Ford Ranger \ Mazda B-Series wiring

1. Remove the plastic molding along the bottom edge of the door frame.
2. Remove the plastic grommet from the corner molding and remove the molding.
3. Pull out the rubber boot from the door.
4. Guide the wire harnesses down into the door. Guide the wire harness through the hole vacated by the rubber boot. Route a length of gopher wire up into the rubber boot and into the vehicle. Attach the *Signal*[®] mirror wire harness to the gopher wire and pull the wire harness into the vehicle. Remove any slack.
5. Repeat all of the previous steps on the passenger side door to replace the factory mirror with the new *Signal*[®] mirror.

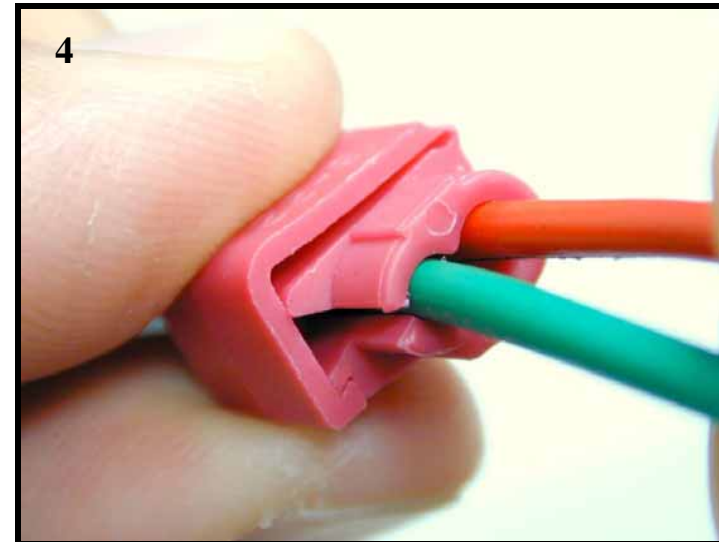
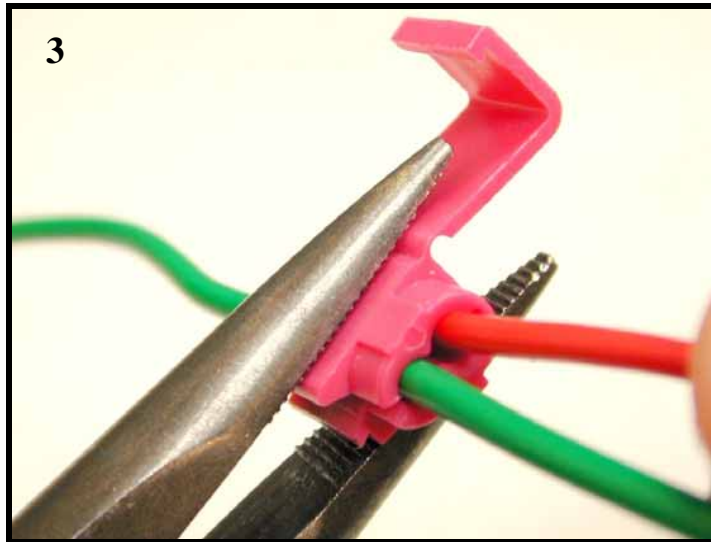
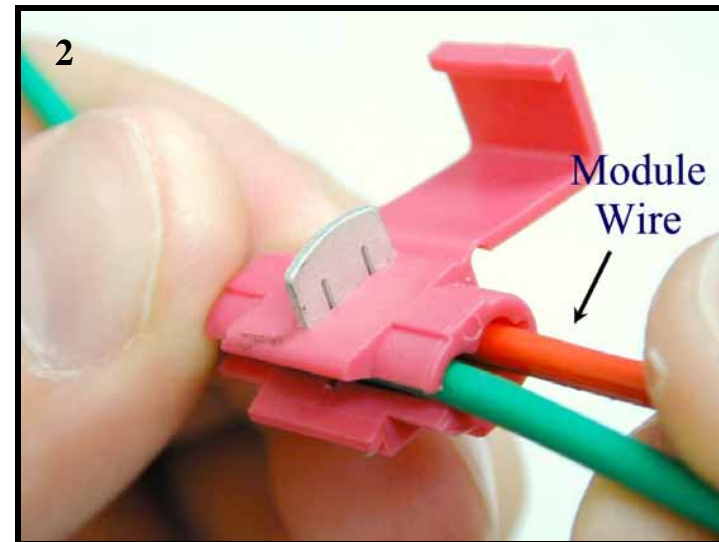
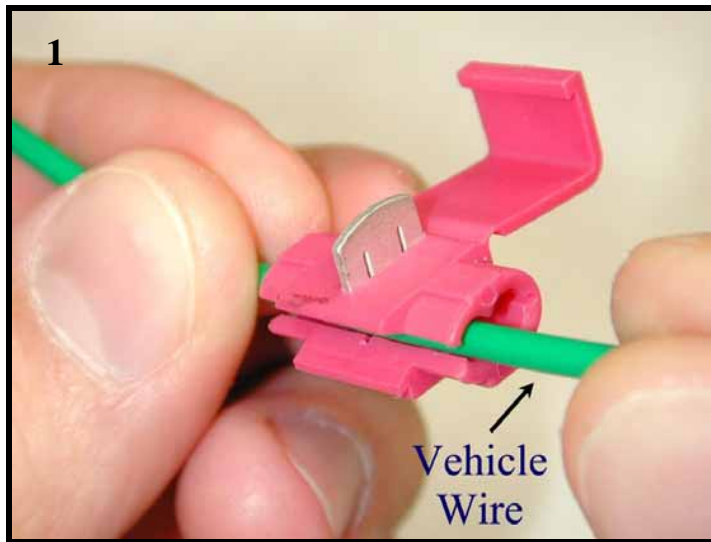


Wire Identification



1. Guide the new wire harnesses from both sides of the vehicle down to the appropriate wire bundle. The electrical wiring for the Ford Ranger and Mazda B-Series is located on the left side of the steering wheel underneath the dash (there is a gray plug with 14 cables). The electrical wiring for the Ford Explorer SportTrac is located within the wire bundle coming in from the firewall. The location for **turn only** wires are at the fuse junction or the steering column. **For turn and brake**, wires can be found along each side of the sill plate. **Turn only – driver side**, the wire color is *GREEN W/ WHITE STRIPE*. **Turn and brake – driver side**, the wire color is *DARK BLUE W/ WHITE STRIPE*. 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'.
2. **Turn only - passenger side**, the wire color is *WHITE W/ BLUE STRIPE*. **Turn and brake - passenger side**, the wire color is *BROWN W/ YELLOW STRIPE*. 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'.

NOTE: *No brake module needed if using turn and brake wiring.*



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 wire previously labeled 'driver side turn'.
3. Splice the RED wire from the passenger side harness into the wire previously labeled 'passenger side turn'.
4. Strip and twist together the ends of the black wires from each harness. Crimp them together in the supplied ring connector and ground to a suitable nearby location on the metal framework of the vehicle.
5. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.
6. Replace any door accessories, door panels, plastic moldings, and trim pieces.