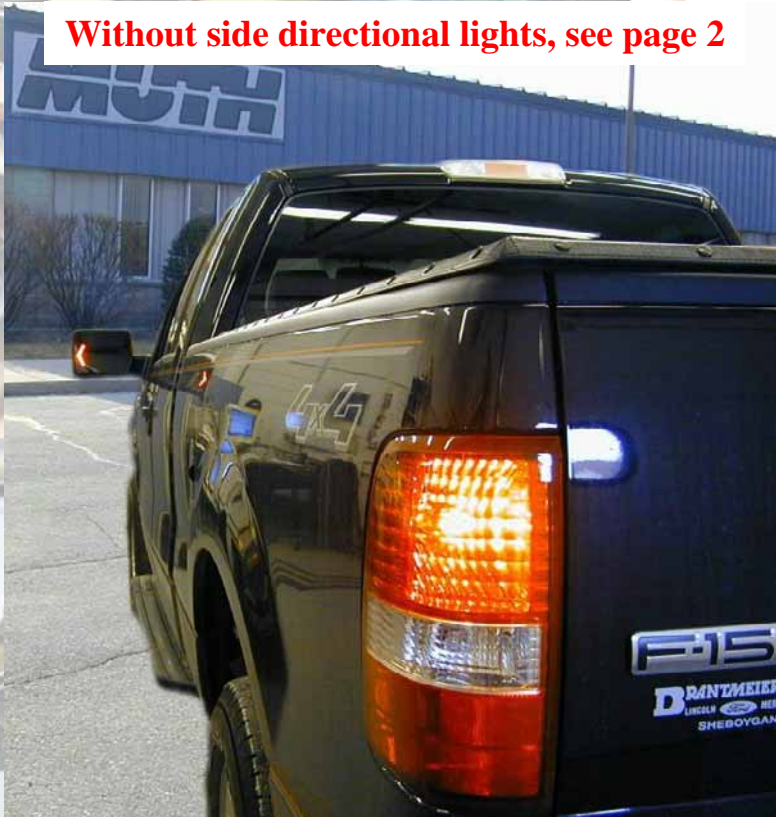




Signal[®] Mirror Installation Instructions

2004 – 2008 Ford F-150 XLT, FX4, & Lariat

Without side directional lights, see page 2



With side directional lights, see page 6



THE safety accessory of the 21st Century.[™]

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:

- 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
- T-27 Torx
- 4mm socket
- 6mm socket
- 8mm socket
- 10mm socket
- 11mm socket
- 7/32" 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:

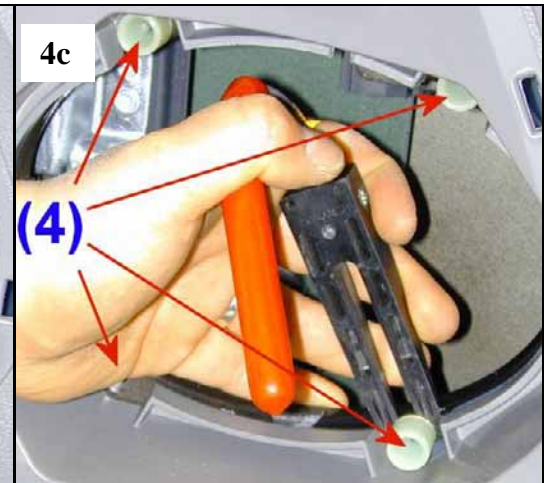
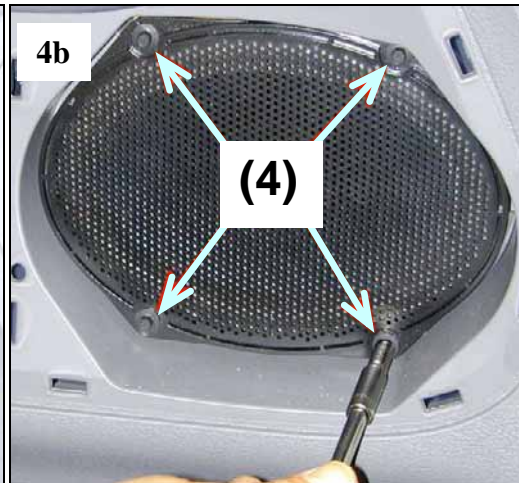
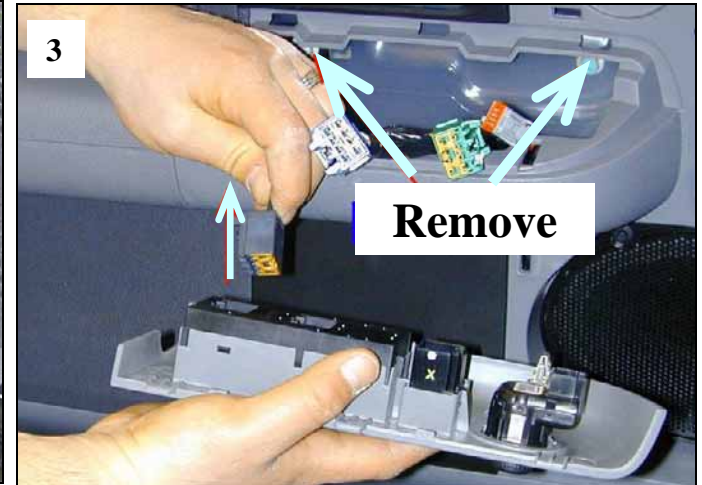
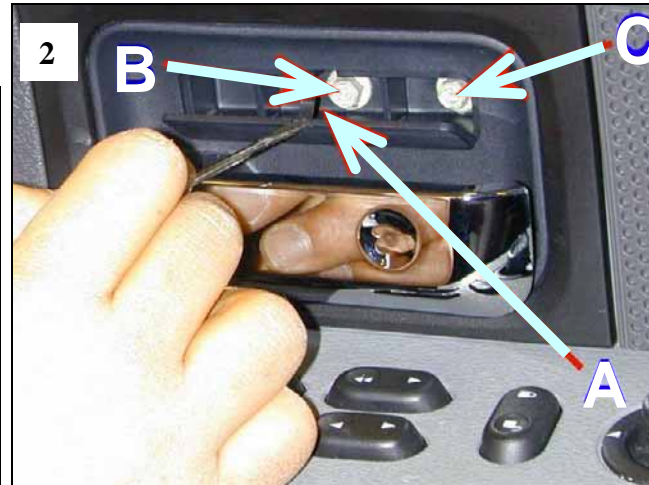
www.muthco.com

Or via E-mail: techsupport@muthco.com

Downloadable installation instructions are
available via the internet at:

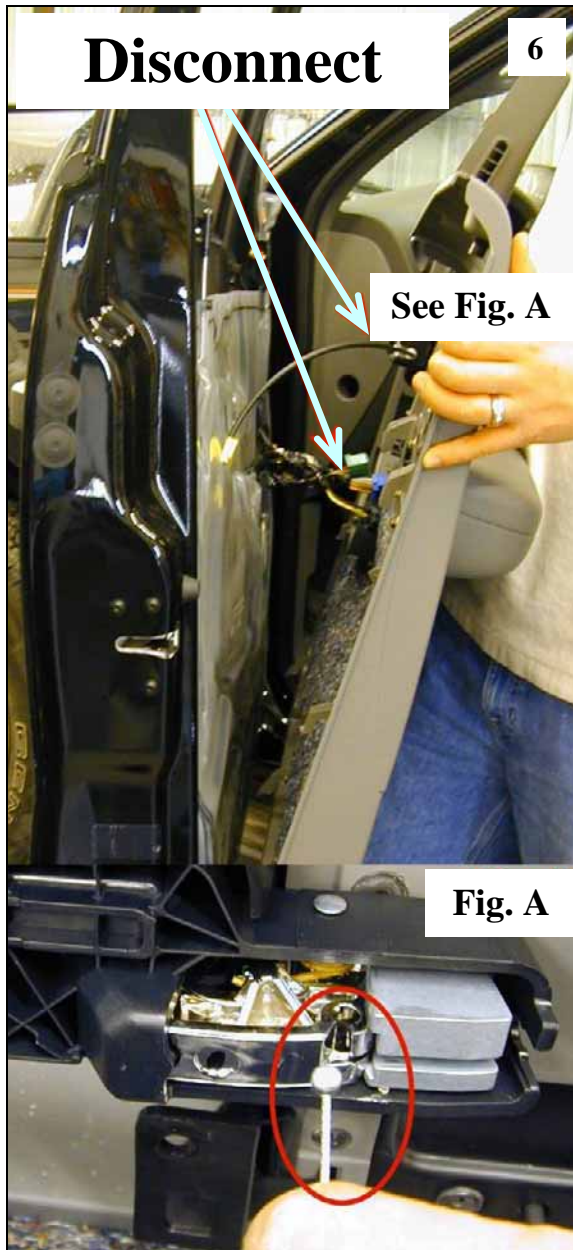
www.muthco.com

Door Panel Removal



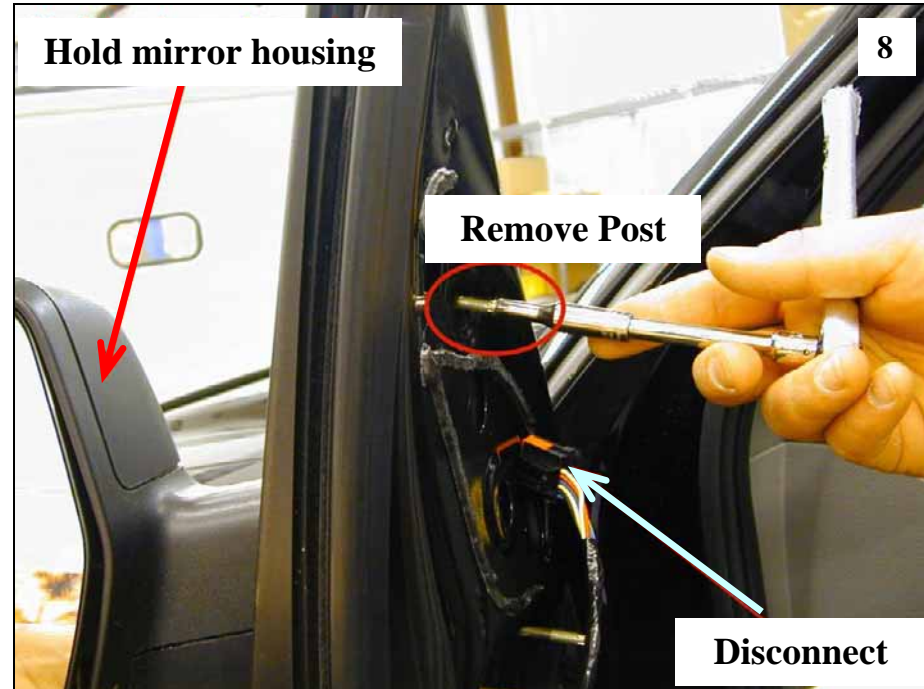
1. Open driver's side door and lower the window.
2. Insert a small flathead screwdriver into small slot. Press down and pull out plastic cover above door handle (A). Using an 8mm socket, unscrew the (2) bolts revealed by the removal of the plastic cover (B&C).
3. Use a small pry bar, pop open the control console. Disconnect all wiring connections behind control console and remove control console. Remove (2) bolts revealed by the removal of the control console using a 10mm socket.
4. Using a small pry bar, remove speaker cover (4a). Remove (4) screws with 7/32" socket (4b). Unplug and remove speaker. Remove plastic shield. Pop out the (4) plastic inserts with a small pry bar (4c).
5. Remove (2) screws located on the bottom of the door panel.

Door Panel Removal Continued



6. Lift the door panel off of the door and hold it a few inches away from the door. Disconnect all wiring connections between door and door panel. Lift and remove rod from behind door handle (**Fig. A**). Remove door panel and set it aside.

Housing Removal



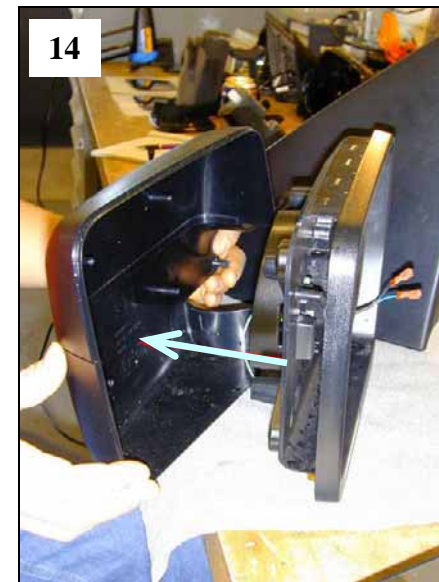
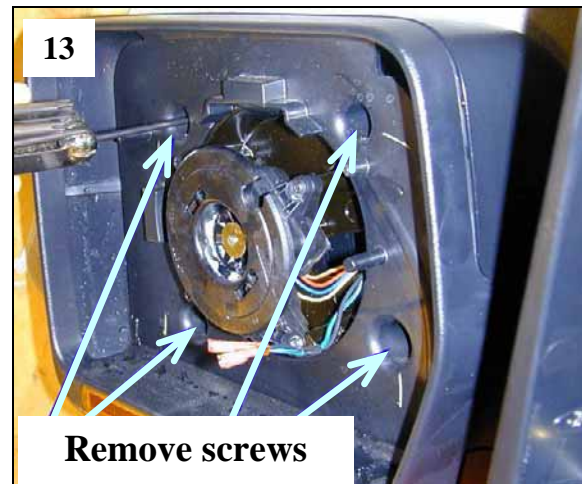
7. Remove plastic cover. Using an 11mm socket, remove the (4) nuts holding the mirror housing to the door.
8. Disconnect the wiring connector. **CAUTION: Before going on to the next step, you must hold onto mirror housing. Not doing so, could result in mirror housing falling to the ground and breaking.** Remove the top post that holds the mirror housing to the door frame using a 4mm socket. Jiggle and remove mirror housing from door frame.

Glass Replacement

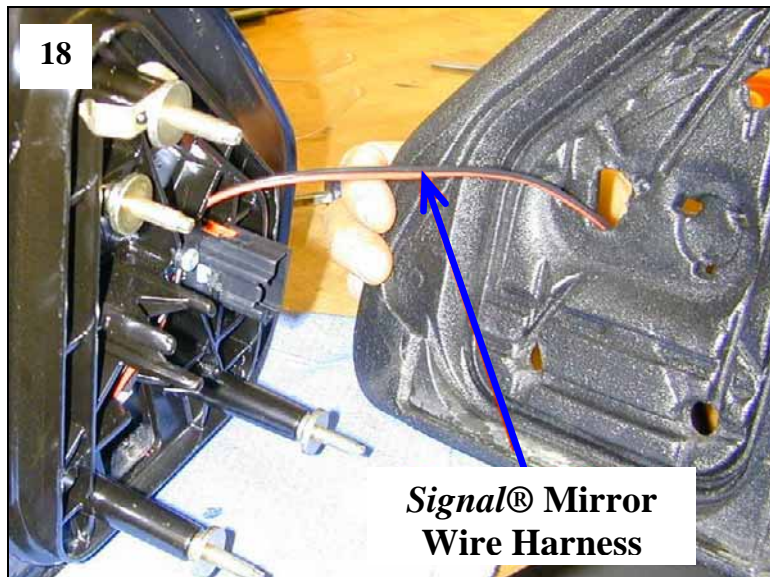
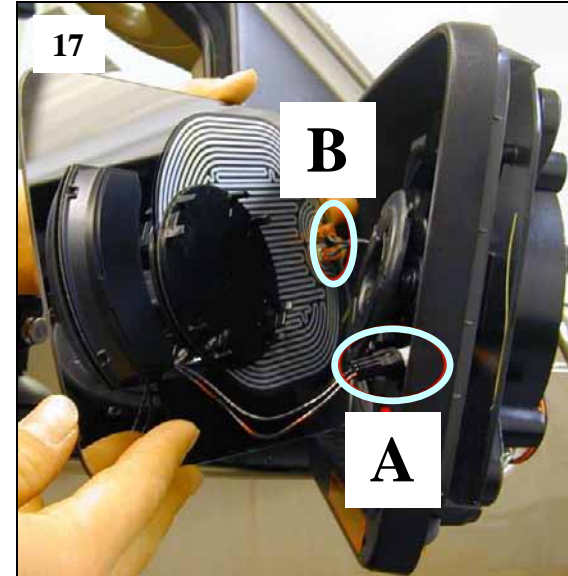
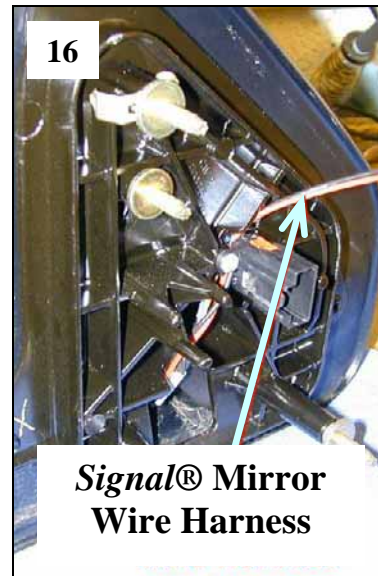


WARNING! Safety glasses and sturdy gloves are recommended for mirror glass replacement.

9. Place mirror housing on a cloth covered, flat surface. Re-insert top post back into housing sail.
10. Remove foam cover.
11. Push in the inboard side of the mirror to pivot the outboard edge outward. Insert a large flat head screwdriver in between motor actuator and mirror backplate. Slowly twist and pry backplate away from motor actuator. Repeat process around motor actuator until backplate dislodges.
12. **If heated**, disconnect the heater terminals from the back of the OE glass. Remove OE glass from mirror housing.
13. Using a T-27 Torx, remove (4) screws holding the mirror housing cover in place.
14. Remove mirror housing cover.



Glass Replacement Continued



15. Using the shorter of the two supplied wire harnesses, route the open end alongside OE wires as shown.
16. Keep routing the supplied wire harness by following OE wires on the housing sail.
17. Connect the *Signal*® mirror wires to the *Signal*® mirror wire harness (A). **If heated**, reconnect the heater wires to the heater terminals on the back of the new *Signal*® mirror (B). NOTE: There is no polarity so the wires may be interchanged. Disregard heater connections on vehicles not equipped with outside heated mirrors. Carefully tuck wires behind motor actuator. Pull on the *Signal*® mirror wire harness to ensure there is no slack within mirror housing. Replace mirror housing cover with the (4) screws. Align the snap ring with the motor actuator and snap into place. Press down on all sides to ensure proper engagement of the snap ring to the motor actuator.
18. Insert the *Signal*® mirror wire harness through the hole in the foam insulation. Replace foam insulation onto mirror housing sail.

Non Pre-wired Vehicle Mirror Mounting/Wire Routing

19

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19. Route *Signal*® mirror wire harness through mirror mount hole and mount mirror housing to the door frame by securing all (4) posts. Reconnect the OE mating connector.
20. Pull and lift-up floor board trim.
21. Remove kick panel cover as shown above.
22. Remove kick panel.

Pre-wired Vehicle Mirror Mounting/Wire Routing

19

20

Secure (3) of the
(4) posts in place

Trim/split wires

19. Route *Signal*® mirror wire harness through mirror mount hole. Secure (3) of the (4) posts on the housing sail to the door frame. **Note: The 4th post will be used later to mount the grounding ring to it.** Reconnect the OE mating connector. Strip the routed *Signal*® mirror wire harness to about 4" – 6". Cut and split the (2) bonded wires as shown above.

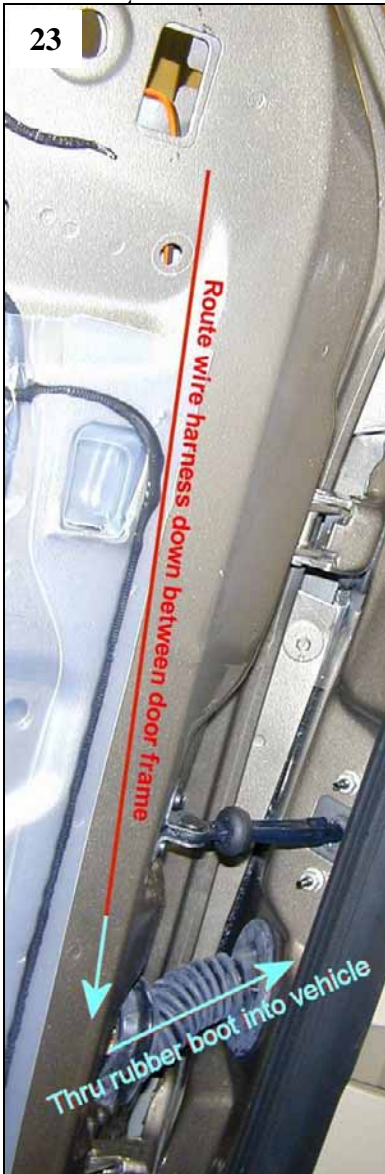
*****Repeat steps for passenger side *Signal*® mirror*****

- 20a. DRIVER SIDE: Carefully strip back OE wire sheathing as needed. Find the GREEN WITH WHITE STRIPE wire. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the GREEN WITH WHITE STRIPE wire with the wire tester to verify that flashing turn indicator power is present. Label that wire as 'driver side turn'.
- 20b. PASSENGER SIDE: Carefully strip back OE wire sheathing as needed. Find the WHITE WITH BLUE STRIPE wire. Turn the ignition key so that electrical power is on and activate the passenger side turn indicator. Probe the WHITE WITH BLUE STRIPE wire with the wire tester to verify that flashing turn indicator power is present. Label that wire as 'passenger side turn'.

Non Pre-wired Vehicle Wire Routing Continued

Pre-wired Vehicle Wire Routing Continued

23



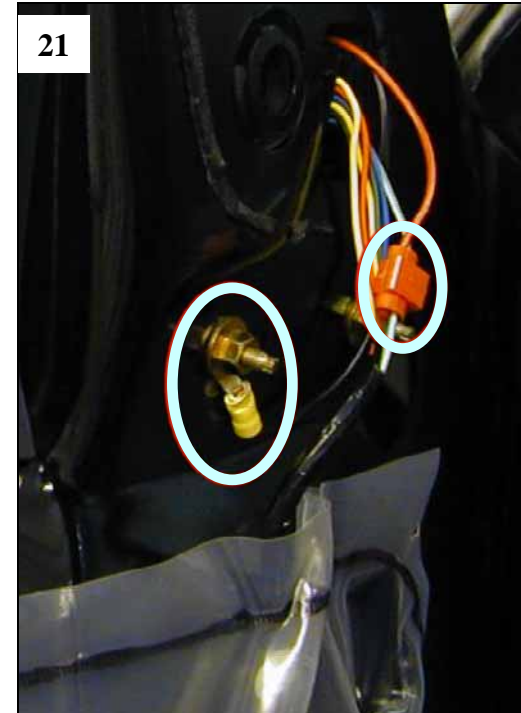
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23. Remove both ends of the rubber from the door frame and vehicle. Route the *Signal*® mirror wire harness down inside door frame and out the hole vacated by the removal of the rubber boot. **Caution: Make sure *Signal*® mirror wire harness does not go inside of window track.** Continue routing the *Signal*® mirror wire harness through the rubber boot and into the vehicle. Gently pull on the *Signal*® mirror wire harness to eliminate any slack during routing.
24. Cut and split the bonded wires. Route the black wire from *Signal*® mirror wire harness to a grounding location. Cut and strip the black wire. Crimp it to a supplied grounding ring. Attach the grounding ring to a suitable grounding source as shown.

*****Repeat steps for passenger side *Signal*® mirror*****

21



DRIVER SIDE *SIGNAL*® MIRROR

- 21a. Route the black wire from *Signal*® mirror wire harness to the unsecured bolt. Cut and strip the black wire, and crimp it to a supplied grounding ring. Attach the grounding ring to the 4th post and secure it with its nut. Splice the red wire from the *Signal*® mirror wire harness to the wire labeled 'driver side turn'.

PASSENGER SIDE *SIGNAL*® MIRROR

- 21b. Route the black wire from *Signal*® mirror wire harness to the unsecured bolt. Cut and strip the black wire, and crimp it to a supplied grounding ring. Attach the grounding ring to the 4th bolt and secure it with its nut. Splice the red wire from the *Signal*® mirror wire harness to the wire labeled 'passenger side turn'.

22. Replace the plastic door frame moldings and trim, door panels, and all accessories.

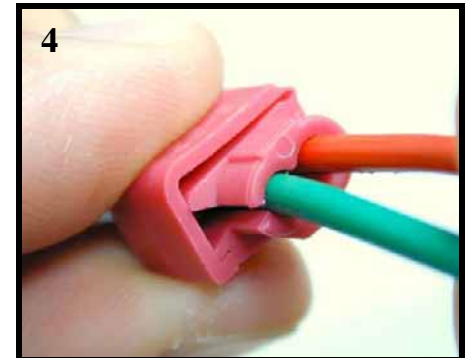
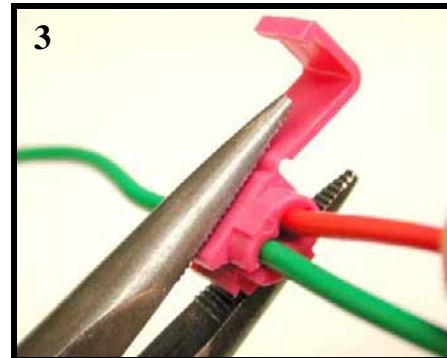
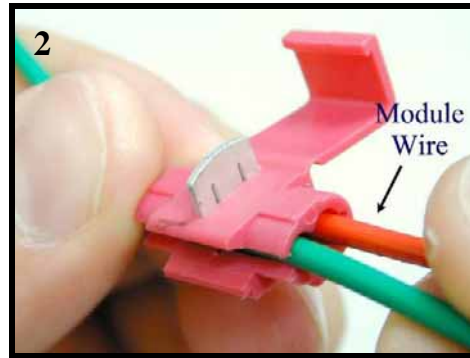
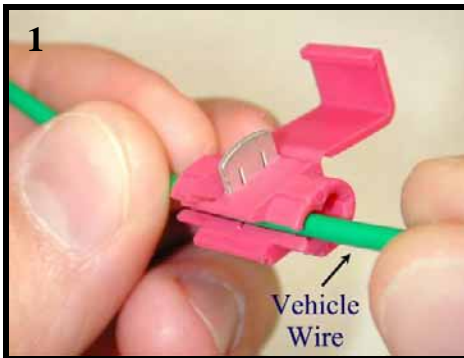
*****For splicing procedures, go to step 26*****

Non Pre-wired Vehicle Only

Wire Routing Continued



25. The vehicle's electrical wiring is located in a wire bundle under the dash. Route both red wires from the *Signal*® mirror wire harnesses to this wiring location. Make sure there is enough slack in the wires for splicing. Locate the GREEN WITH WHITE STRIPE wire. Turn the ignition key so that electrical power is on and activate the driver side turn indicator. Probe the GREEN WITH WHITE STRIPE 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. Activate the passenger side turn indicator and probe the WHITE WITH BLUE STRIPE 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

- A. Splice the RED wire from the driver side harness into the GREEN WITH WHITE STRIPE wire previously labeled 'driver side turn'.
- B. Splice the RED wire from the passenger side harness into the WHITE WITH BLUE STRIPE wire previously labeled 'passenger side turn'.
- C. 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.
- D. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.
- E. Replace the plastic door frame moldings and trim, door panels, and all accessories.

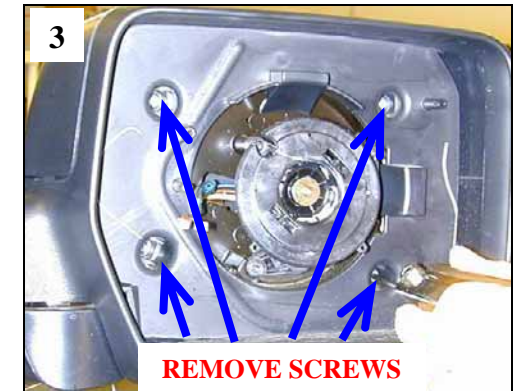
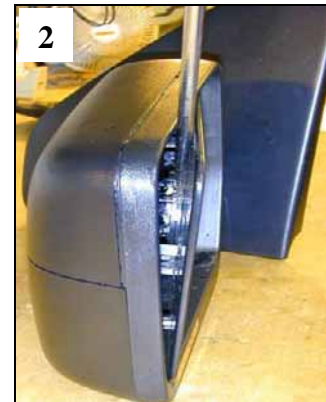
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5,788,357 6,005,724 6,045,243 6,076,948 6,257,746 6,700,123 6,749,325 6,918,685 7,008,091 7,015,642 7,104,676 D363,920
D394,833 D409,540 D425,466 D426,506 D426,507 D427,128 D428,372 D428,373 D428,842 D429,202 D430,088

Vehicle with Side Directional Lights

If your vehicle comes equipped with side directional lights (as shown), use the following steps to complete your installation of our *Signal®* mirror.

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



****For ease of access, you may need to pivot mirror housing back and forth****

- Push in the inboard side of the mirror to pivot the outboard edge outward. Insert a large flat head screwdriver in between motor actuator and mirror backplate. Slowly twist and pry backplate away from motor actuator. Repeat process around motor actuator until backplate dislodges. **If heated, disconnect heater connectors and remove OE mirror backplate.**
- Use a T-27 Torx, remove the (4) screws.
- Remove mirror housing cover.
- Using one of the supplied *Signal®* mirror wire harness, insert (from the front) the open end (the end without connector) behind motor actuator (A) and out the center hole (B). Locate the black wire and the green w/ white stripe wire coming off of the side indicator. Route the *Signal®* mirror wires to the OE indicator wires and cut to length. Split the *Signal®* mirror wire harness up about 2 inches. Using (1) of the supplied wire-tap connectors, splice together the red wire (on the *Signal®* mirror wire harness) and the green w/ white stripe wire (on the OE indicator wire harness). With another wire-tap connector, connect the black wire from the *Signal®* mirror wire harness to the black wire from the OE indicator wire harness (C). Replace mirror housing cover with the (4) screws.
- Connect the two mating connectors between the *Signal®* mirror and the *Signal®* mirror wire harness (A). If heated, connect the heater terminals to the OE heater wires (B). NOTE: There is no polarity so the wires may be interchanged. Carefully tuck wires behind motor actuator. Align the snap ring with the motor actuator and snap into place. Press down on all sides to ensure proper engagement of the snap ring to the motor actuator.
- Insert key in the ignition and activate turn indicator to verify that the *Signal®* mirror is working properly. Repeat step 2 - 7 for the installation of the other side *Signal®* mirror.

