

**MUTH**  
**MUTH**<sup>®</sup>  
**MIRROR SYSTEMS**



## *Signal*<sup>®</sup> Mirror Installation Instructions

**Ford F-250/F-350 Pick-Up, Super-Duty 1998-2006**

**Ford Excursion XLT/Limited 2000-2002**

**Ford Excursion (all models) 2003-2006**



THE safety  
accessory of the  
21st Century.™

P/N 210-0021-0

Rev D3 (6-29-06), 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
- 7mm socket, 10mm socket
- 7/32" socket, 9mm box wrench
- Medium slotted screwdriver
- Small wooden wedge
- Needle nose pliers
- Wire crimper and stripper
- Small pry bar, 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](http://www.muthco.com)

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

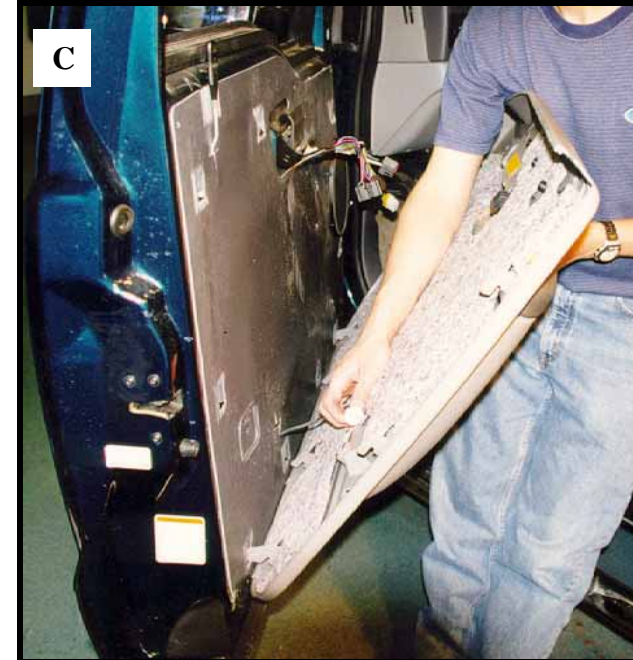


1. Start with the driver's side door and lower the window. **(A)**
2. Pull the plastic covering off from out of the corner of the door. **(B)**
3. Remove the tape from underneath the plastic covering. **(C)**





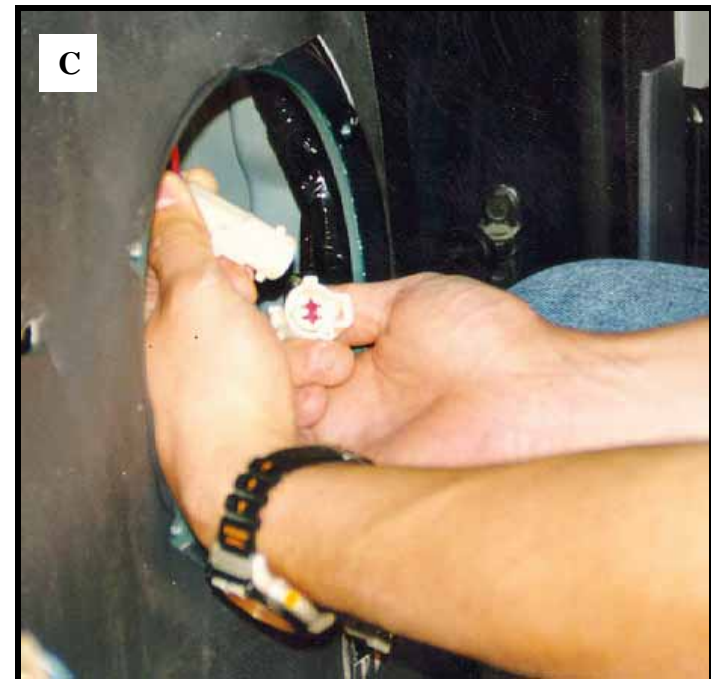
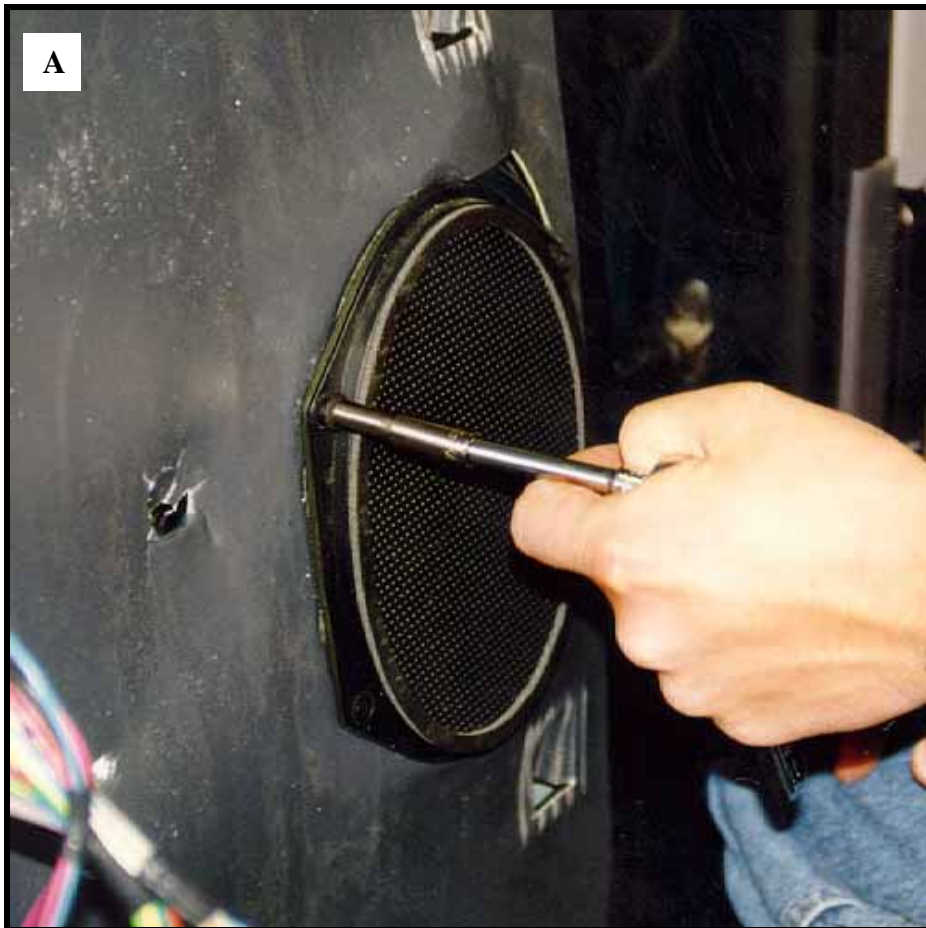
4. Pry the window control panel out of the armrest. Start by prying from the top of the panel as shown. **(A)**
5. Disconnect all four wire harnesses from the window control panel. **(B)**
6. Remove the exposed screw to the right of the door handle. **(C)**



7. Pry the door reflector out of the door panel. There is a notch on the right side of the reflector where you can insert a medium slotted screwdriver. **(A)**
8. Remove the screw from underneath where the door reflector used to be. **(B)**
9. Lift the door panel up and off of the door. From behind the door panel, twist the door light socket about a half turn and pull it out of the door panel. Set the door panel aside. **(C)**



10. Remove the four screws holding the speaker in place. (A)
11. Remove the speaker from the door and disconnect the wire. Set the speaker aside. (B)
12. The mirror wire harness is secured to a wire bundle on the inside of the door with a plastic plug. Dislodge the plug and pull the wire harness slightly out of the speaker hole. Disconnect the mirror wire harness. (C)





13. There are three rubber plugs in the corner of the door. Remove only the top and bottom rubber plugs to expose the mirror mounting nuts. **(A)**

14. Secure the mirror with one hand and remove the four mirror mounting nuts. **(B)**

**WARNING!** Be careful not to drop components into the door cavity.

15. Remove the mirror housing from the door. **(C)**





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

16. Before the mirror can be removed from the mirror housing, two drive pins need to be dislodged from behind the mirror. Press the outside edge of the mirror into the housing to lift up the inner edge of the mirror and expose the inboard drive pin. Place the fork of a small pry bar around the neck of the drive pin. **(A)**



**NOTE:** The neck of the drive pin is located at the base of the mirror.

17. Carefully twist the small pry bar until the head of the drive pin pops out of the socket. Lift the inside edge of the mirror further to expose the bottom drive pin. Repeat the procedure above to dislodge the bottom drive pin. **(B)**

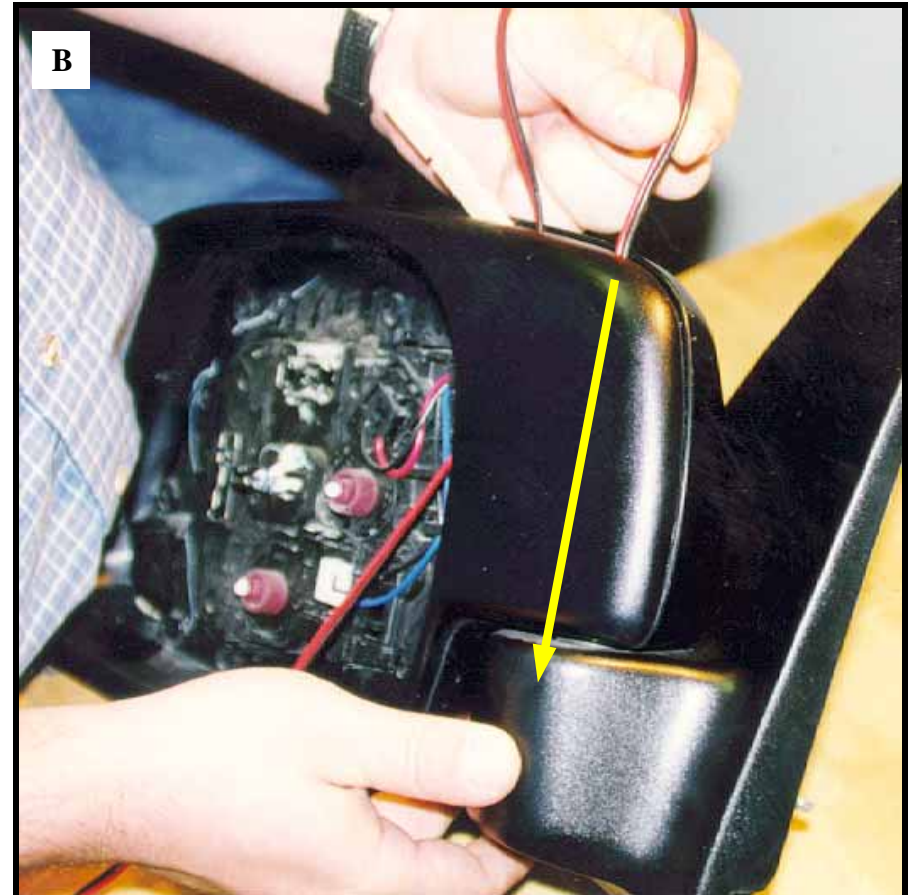




18. Once the drive pins are dislodged from the mirror, hold the mirror housing in your lap. Push on the outer edge of the mirror to pivot the mirror fully outward. Reach behind the mirror as shown. **(A)**
19. Carefully pull the mirror out of the mirror housing. If you have heated mirrors, disconnect the heater wires at this time. Set the mirror aside. **(B)**
20. In order to route the *Signal*<sup>®</sup> mirror wire harness through the mirror housing the two halves of the mirror housing must be partially separated. The new wire harness will follow the same path as the existing factory mirror wiring. Use the squared end of a small pry bar or other similar object and pry up on the inboard side of the mirror as shown. **(C)**

NOTE: Pry up on the section of mirror housing that is directly above the existing mirror wire bundle.





21. Once the mirror housing is partially separated, insert a small wooden wedge in the gap created to hold the two halves of the mirror housing apart. Using the shorter of the two harnesses from the wiring kit, guide the end without the mating connector into the corner of the mirror housing where the existing factory wire bundle is located. Pass several inches of wire through the gap between the two halves of the mirror housing. **(A)**

22. Swivel the mirror on the base as if it were pushed fully outward on the vehicle. There is an open chamber that runs down along the inside of the mirror mount. Loop the wire back into the mirror housing and down into the chamber until it bottoms out at the base of the mirror mount. **(B)**



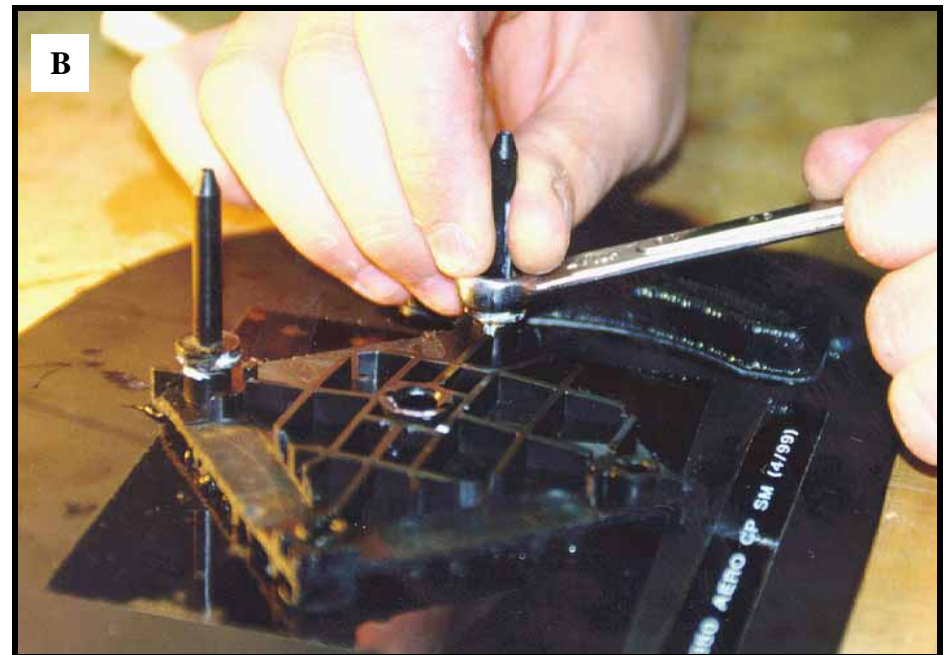


23. Pull the wire through the mirror housing and through the foam backing on the mirror mount. Leave about five inches of wire remaining in the mirror housing. **(A)**

24. Remove the small wooden wedge. Insert the tip of a medium slotted screwdriver on the snap above the factory wire harness. Press down and twist the screwdriver until the two halves of the mirror housing snap together. **(B)**





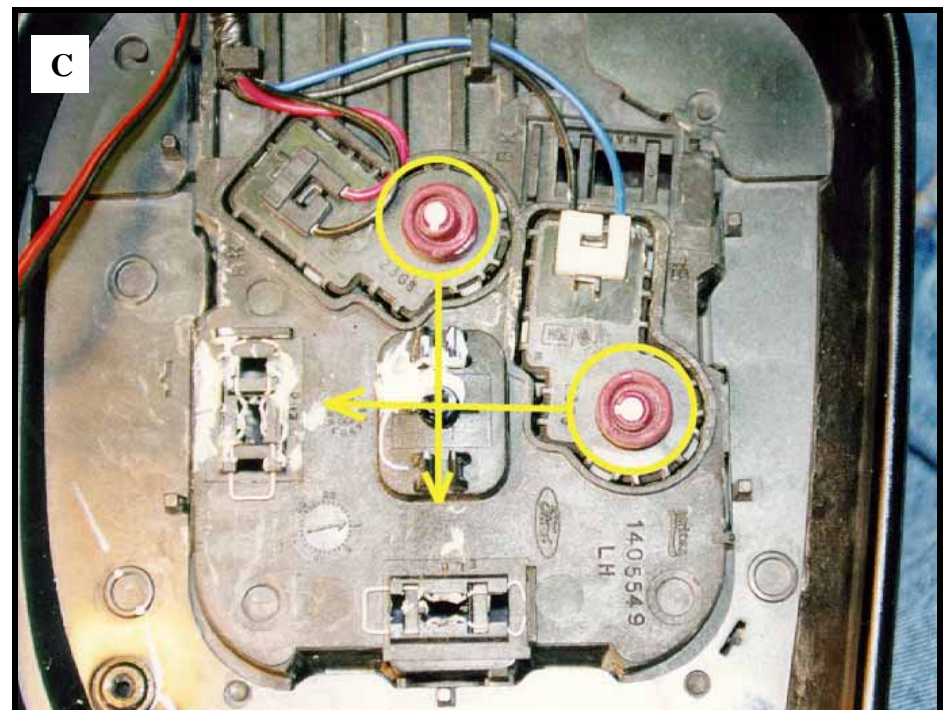


25. Set the factory mirror assembly on a clean flat surface. Using a small pry bar, remove both black friction pins from the back of the factory mirror assembly. (A)

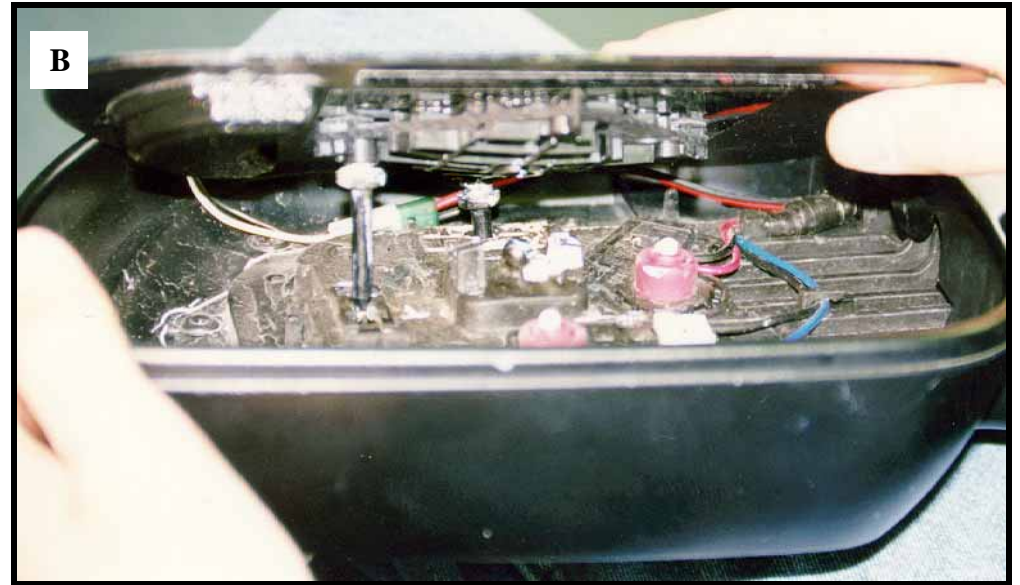
26. Set the new *Signal*<sup>®</sup> mirror on a clean flat surface. The friction pins go in the outboard and top holes on the back of the mirror assembly. Use a 9mm box wrench to apply even pressure around each friction pin until it snaps into position. (B)

27. Before installing the *Signal*<sup>®</sup> mirror in the mirror housing, push the white drive pins down until they bottom out in the motor mount. Align the nubs on the drive pins so that they point to the center of the hub where the mirror mounts. (C)

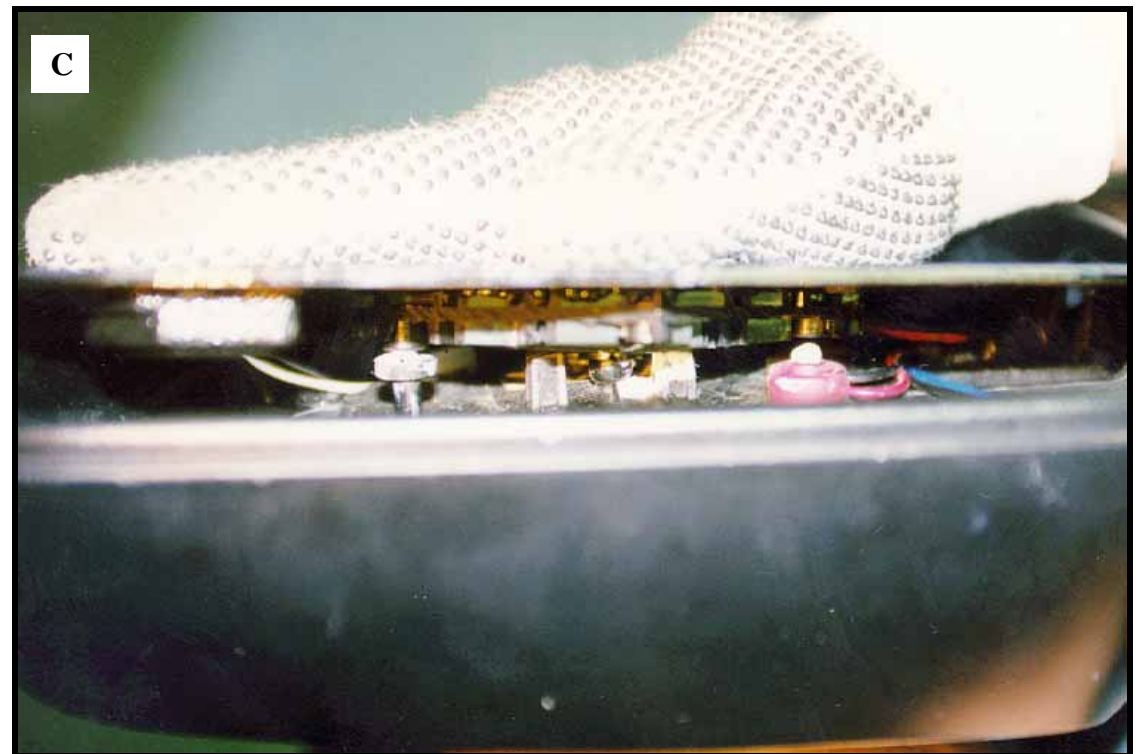
**WARNING!** The drive pins must be aligned or else the new *Signal*<sup>®</sup> mirror will not mount correctly.

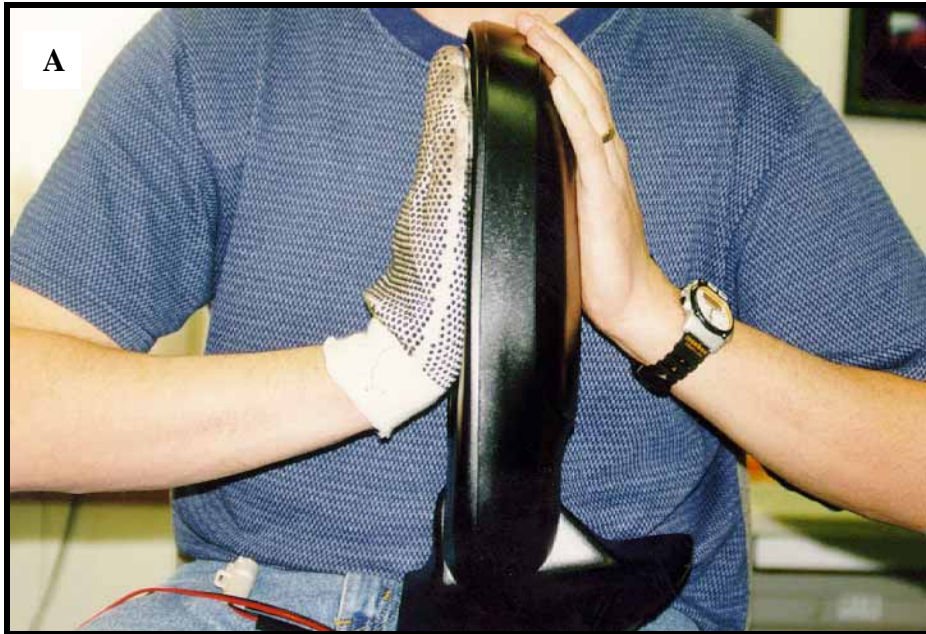




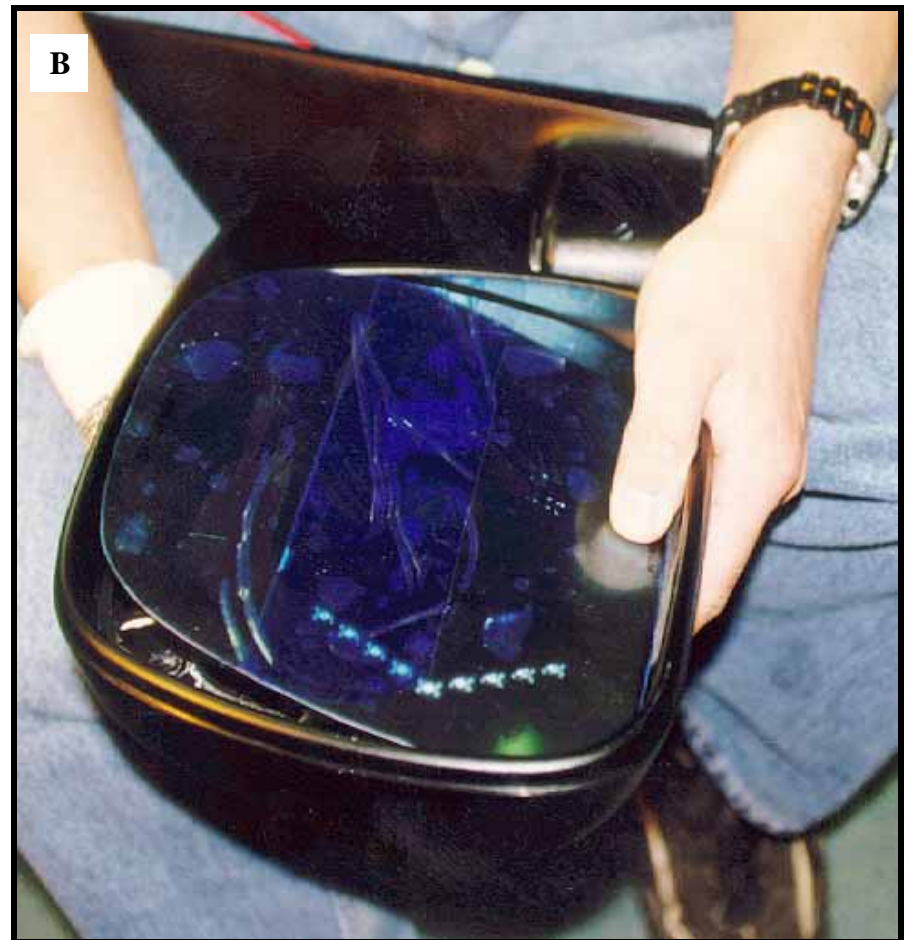


28. Connect the *Signal*<sup>®</sup> mirror mating connector to the *Signal*<sup>®</sup> mirror wire harness. If you have heated mirrors, connect the heater wires. (A)
29. Place the *Signal*<sup>®</sup> mirror over the mirror housing. Guide the top friction pin into its socket and move the *Signal*<sup>®</sup> mirror closer to the mirror housing. (B)
30. Guide the outboard friction pin into its socket. Align the center hub of the *Signal*<sup>®</sup> mirror over the mirror mount. (C)





31. Use the entire palm of your hand and apply even pressure until the *Signal*<sup>®</sup> mirror snaps into position. (A)



32. Firmly press down on the inboard and bottom edges of the *Signal*<sup>®</sup> mirror to snap it into the drive pegs. Press on all four sides to ensure that the *Signal*<sup>®</sup> mirror is fully seated into the mirror housing. (B)

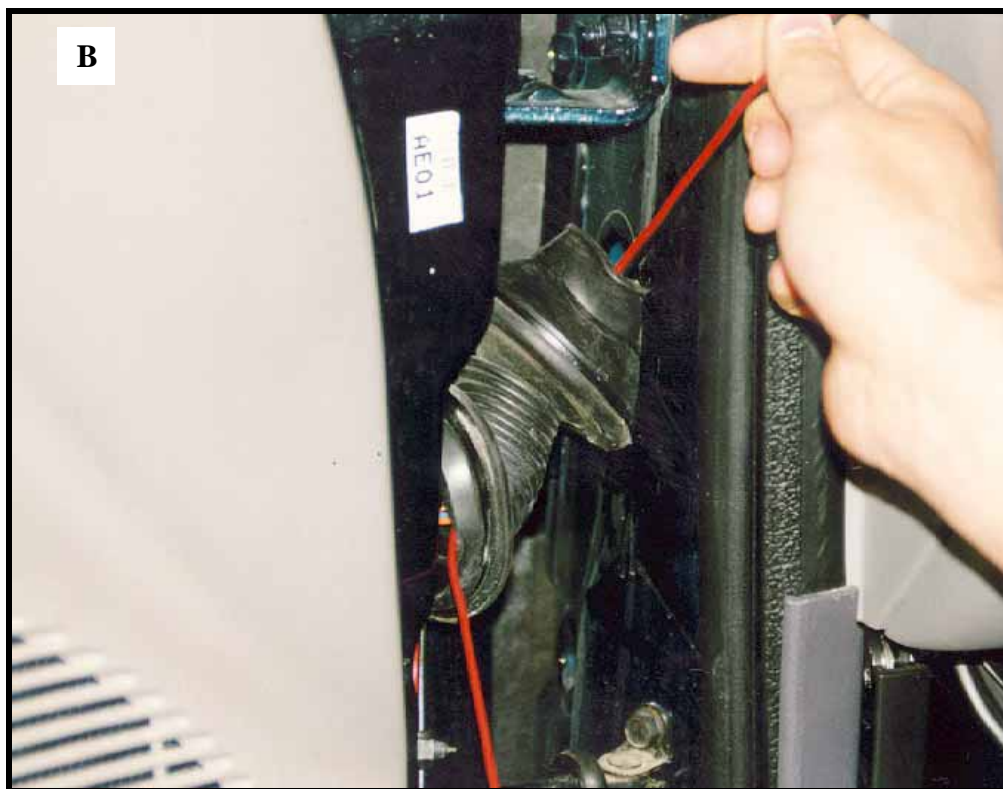
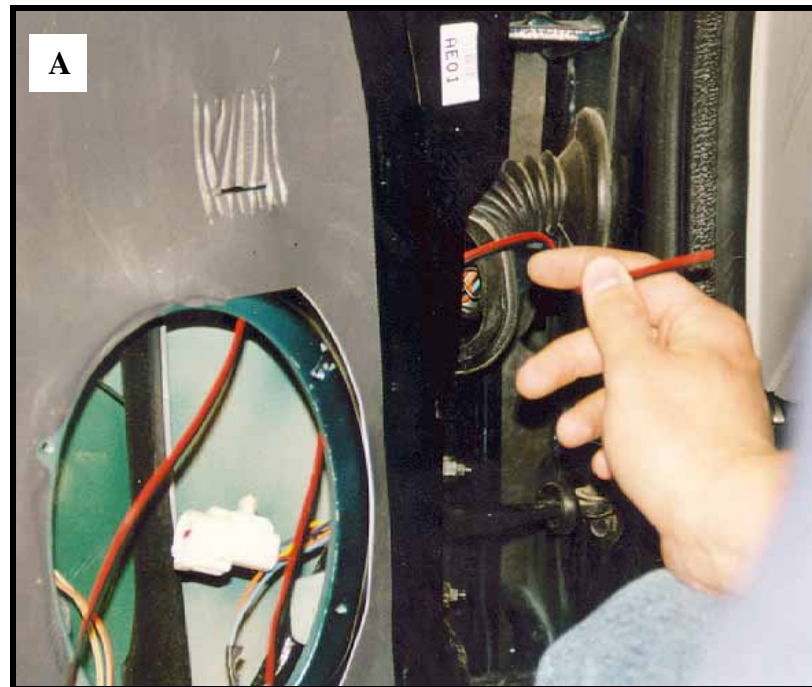


33. Guide the wire harnesses through the door and position the mirror housing assembly on the mirror mount. Bolt the mirror housing to the mirror mount with the four mirror mounting nuts.

**WARNING!** Do not over tighten the mirror mounting nuts.

**Note:** It is possible that your vehicle may be pre-wired for *Signal*® mirrors. To determine this, verify whether there is a (driver side) green with white stripe wire & a (passenger side) white with blue stripe wire in the doors. If you locate these wires, probe to verify presence of current with turn indicator activated. If signal is present, make connections as indicated on page 18. If these wires are not present in the doors, then proceed with the following instructions.

Pull the rubber boot out from between the door and door frame. Pass the wire harness through the opening vacated by the rubber boot. Reconnect the factory wire harness. **(A)**



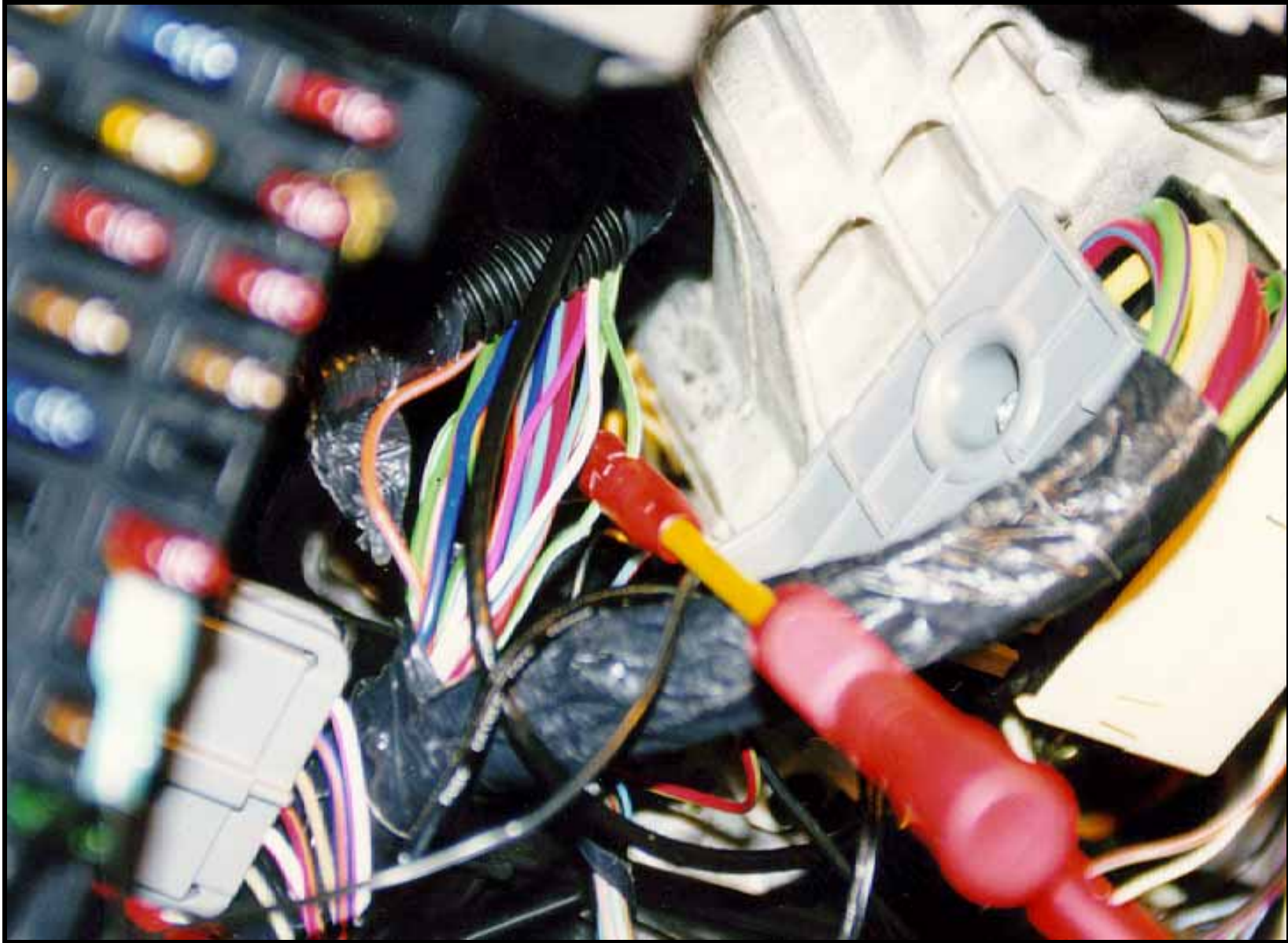
34. Replace the speaker, door panel, and all accessories. Pull the rubber boot off of the door frame and guide the harness through the rubber boot and into the vehicle through the door frame. **(B)**

35. Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new *Signal*<sup>®</sup> mirror. Guide the *Signal*<sup>®</sup> mirror wire harness through the door frame and up underneath the lower dash panel. Run the wire harness along to the driver's side lower dash panel. (A)



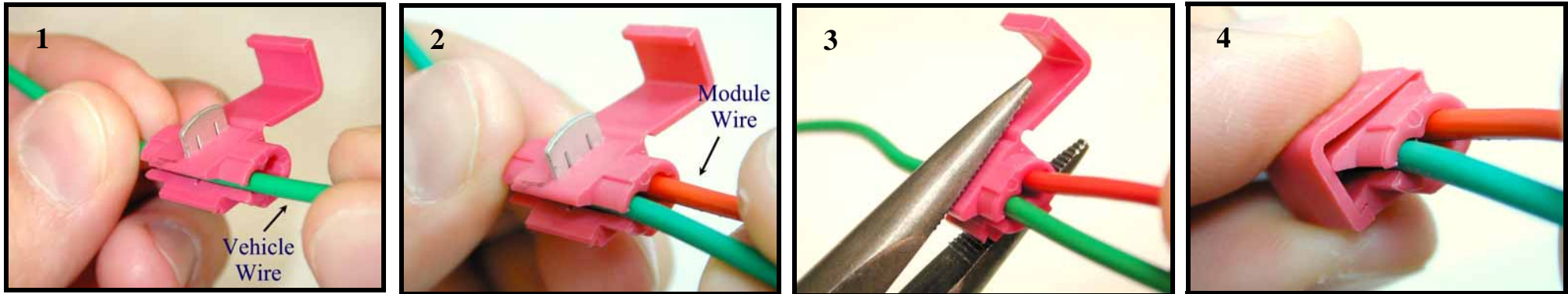
36. To gain access to the vehicle's electrical system, remove the lower dash panel from the steering column by removing the four screws in each corner of the panel. (B)





37. Locate the 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 within 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'.

**Note: Wire colors may vary between different years, makes, and models. Always probe for correct wires prior to making connections!**



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

38. Make sure the harnesses are routed securely under the dash and enough slack is left for splicing.
39. Splice the RED wire from the driver side harness into the green with white stripe wire previously labeled 'driver side turn'.
40. Splice the RED wire from the passenger side harness into the white with blue stripe wire previously labeled 'passenger side turn'.
41. 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.
42. Activate each turn indicator to verify that the *Signal*<sup>®</sup> mirrors are working. Replace the driver's side lower dash panel.

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

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