



## *Signal*® Mirror Installation Instructions

**Pontiac Grand Prix 1997-2003; Sedan and Coupe**



## 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*<sup>®</sup> mirror  
1 left and 1 right wire harness  
2 butt splices  
1 ring connector  
1 instruction manual  
2 white (two pin) Molex connectors

### REQUIRED TOOLS:

Ratchet with extension or ratcheting screwdriver  
Metric socket set  
Small slotted screwdriver  
Small Philips screwdriver  
Needle nose pliers, Wire crimper  
Retainer remover, Small pry bar  
Small sharp knife, Heat gun  
Masking tape, Multimeter  
Sturdy gloves  
Safety glasses or goggles

### INSTALLATION TIME:

About 90 minutes

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. Pry the window control panel out of the door handle. Start by prying from the bottom of the panel. **(B)**
3. Disconnect all four wire harnesses from the window control panel. **(C)**



4. Remove the two plastic plugs that cover the screws hidden underneath the armrest. Remove the screws. **(A)**
5. Pry the door reflector out of the door panel as shown starting from the inboard side of the door panel. **(B)**
6. Pull the speaker cover out from the mounting triangle on the inside of the door. Pull and lift the door panel off. **(C)**

7. Pull the door panel away from the door, disconnect the speaker wire, and set the door panel aside. **(A)**



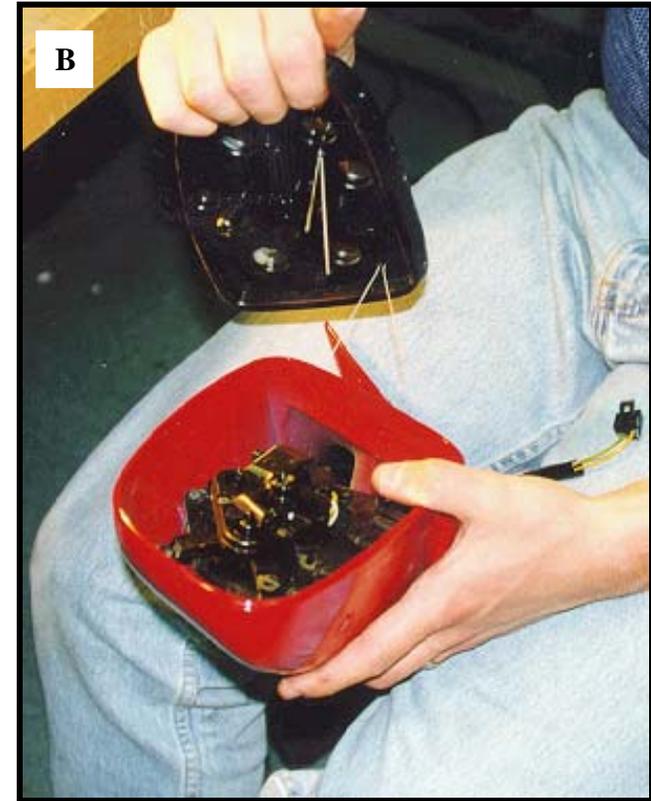
8. Disconnect the mirror wires. **(B)**

9. Secure the mirror with one hand and remove the three mirror mounting nuts. (A)

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



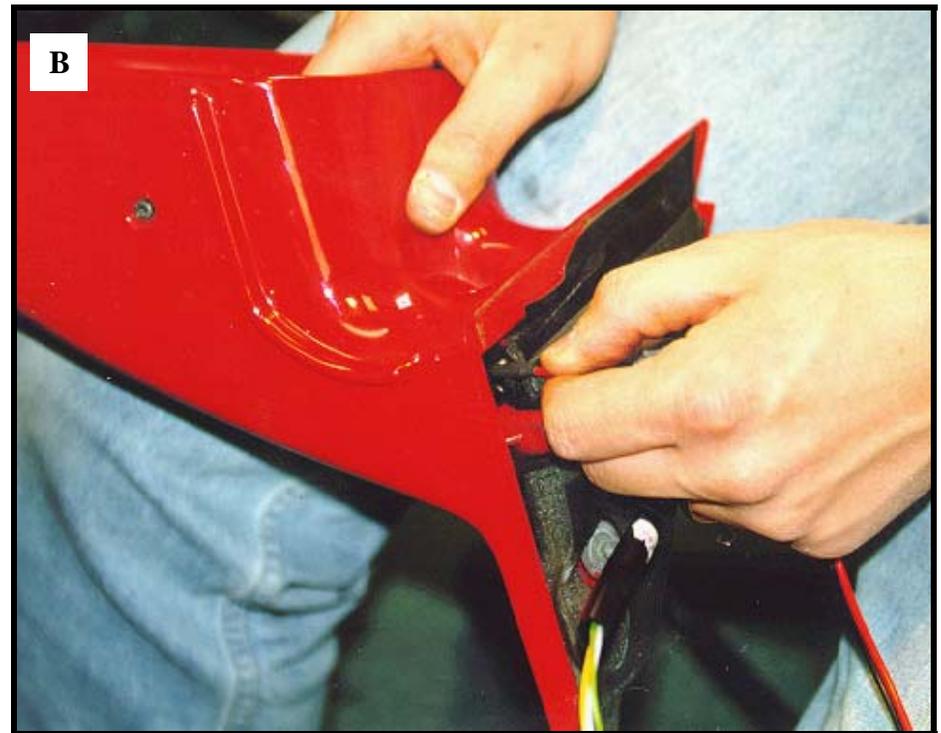
10. Remove the mirror housing from the door. (B)



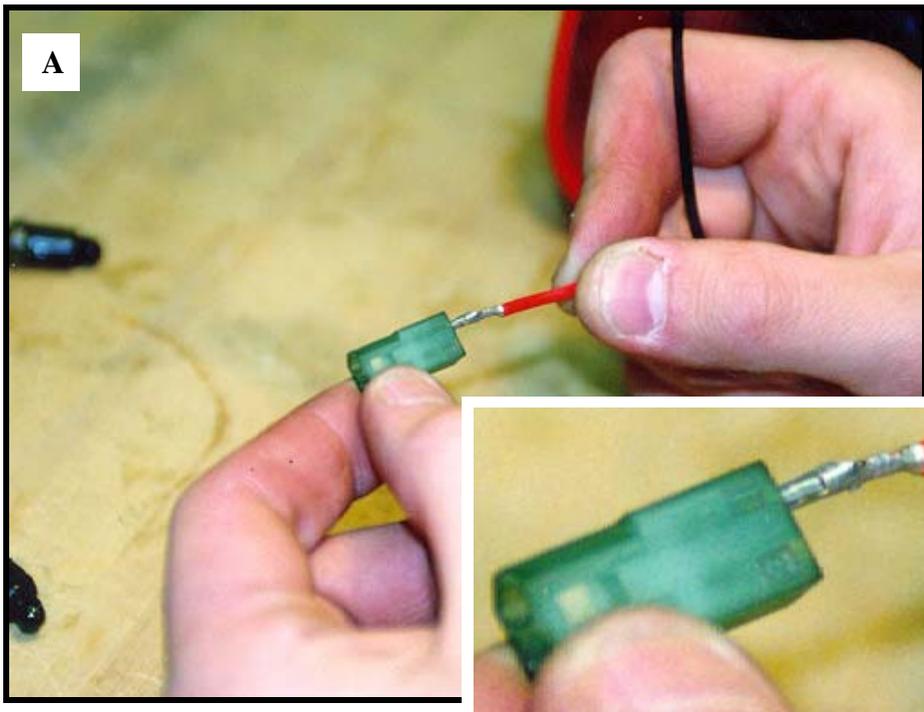
**WARNING! Safety glasses and sturdy gloves are recommended for mirror glass removal.**

11. Hold the mirror housing in your lap. Push on the inner edge of the mirror to manually pivot it fully outward. Reach behind the mirror as shown. **(A)**
12. Carefully pull the mirror out of the mirror housing and set aside. **(B)**
13. Set the factory mirror assembly on a clean flat surface. Using a small pry bar, remove both black drive pins from the back of the factory mirror assembly. **(C)**





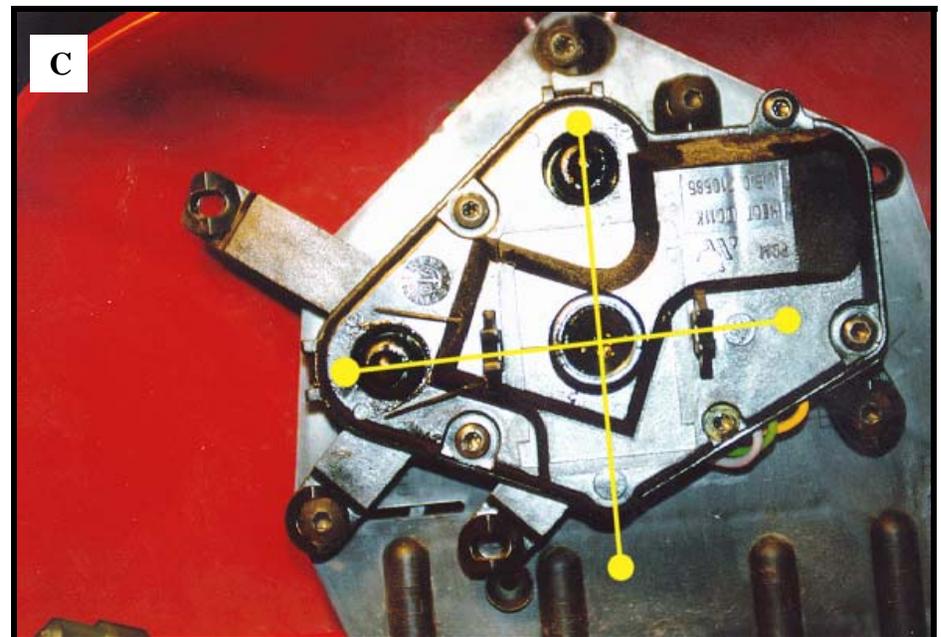
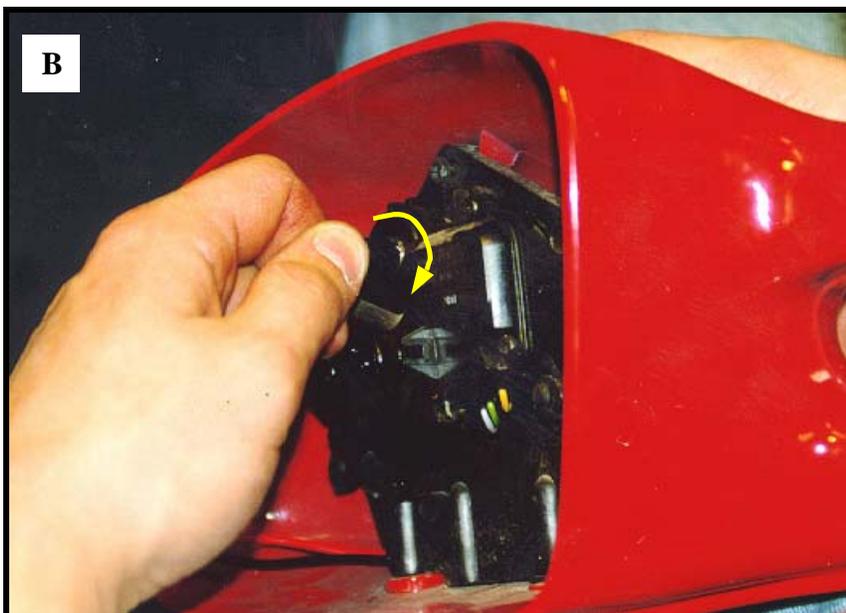
14. To make room for the additional wire harness, gently insert a small Philips screwdriver along side the existing mirror wire and into the mirror housing. Be sure to use a twisting motion while inserting the screwdriver. **(A)**
15. Using the shorter of the two harnesses from the wiring kit, guide the end with the shrink-wrap covering into mirror housing along side the existing mirror wire. **(B)**
16. Pull about a foot of slack through the mirror housing and set the mirror housing on a clean flat surface. Use a small sharp knife and carefully cut away the shrink-wrap on the end of the wire. **(C)**



17. Separate the black and red ends of the wire. Guide the red wire into pinhole 1 of a mating connector (rounded on opposite end). Guide the black wire into pinhole 2 of the same mating connector (square on opposite end). **(A)**

**WARNING!** Wiring the leads incorrectly will cause the *Signal*<sup>®</sup> mirror to malfunction.

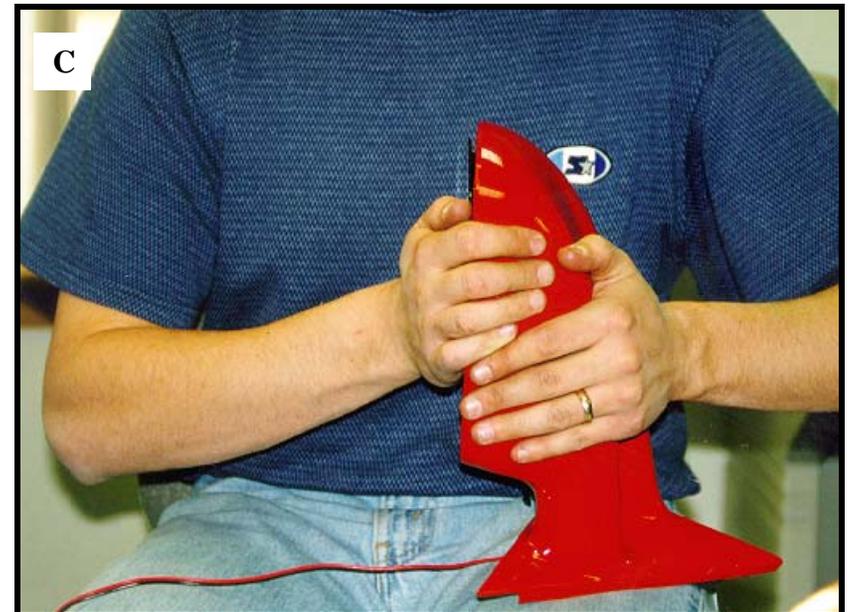
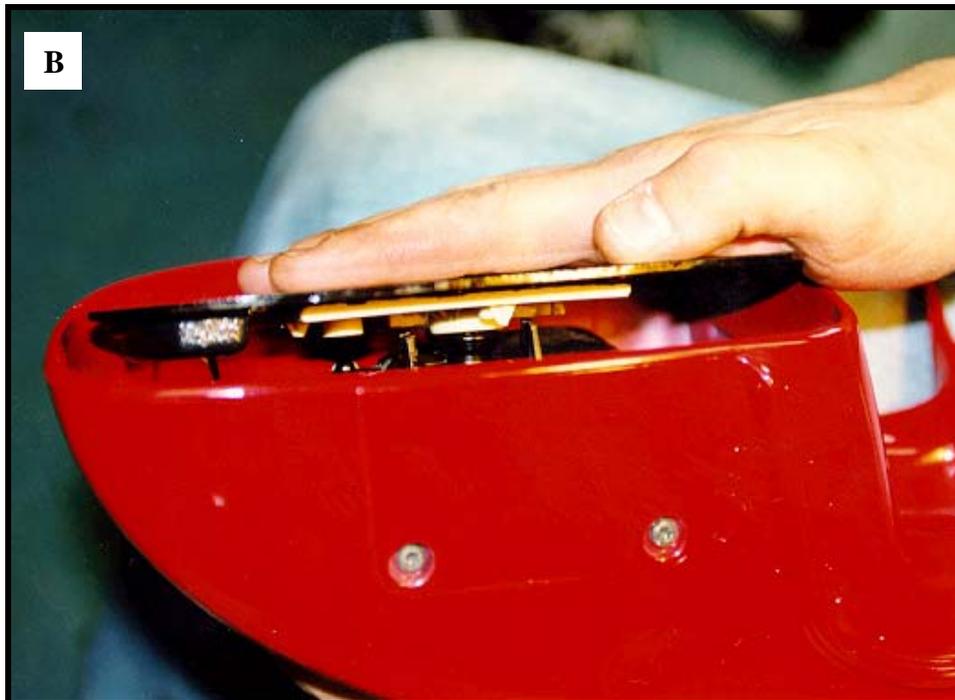
18. Insert both drive pins into the mirror motor assembly. Turn the drive pins clockwise until they bottom out. **(B)**
19. Align the drive pins so that their guide tabs (nubs) are perpendicular to the center of the mirror motor assembly. This is necessary in order to mount the new mirror. **(C)**

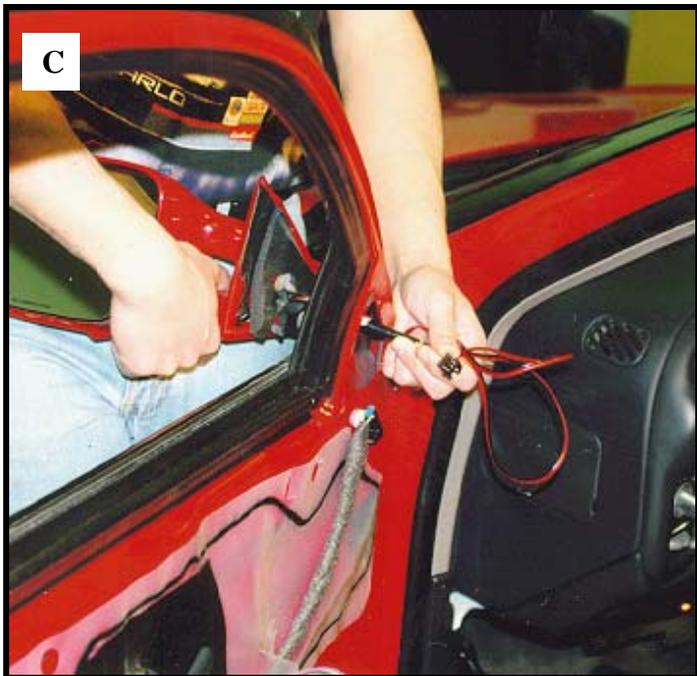
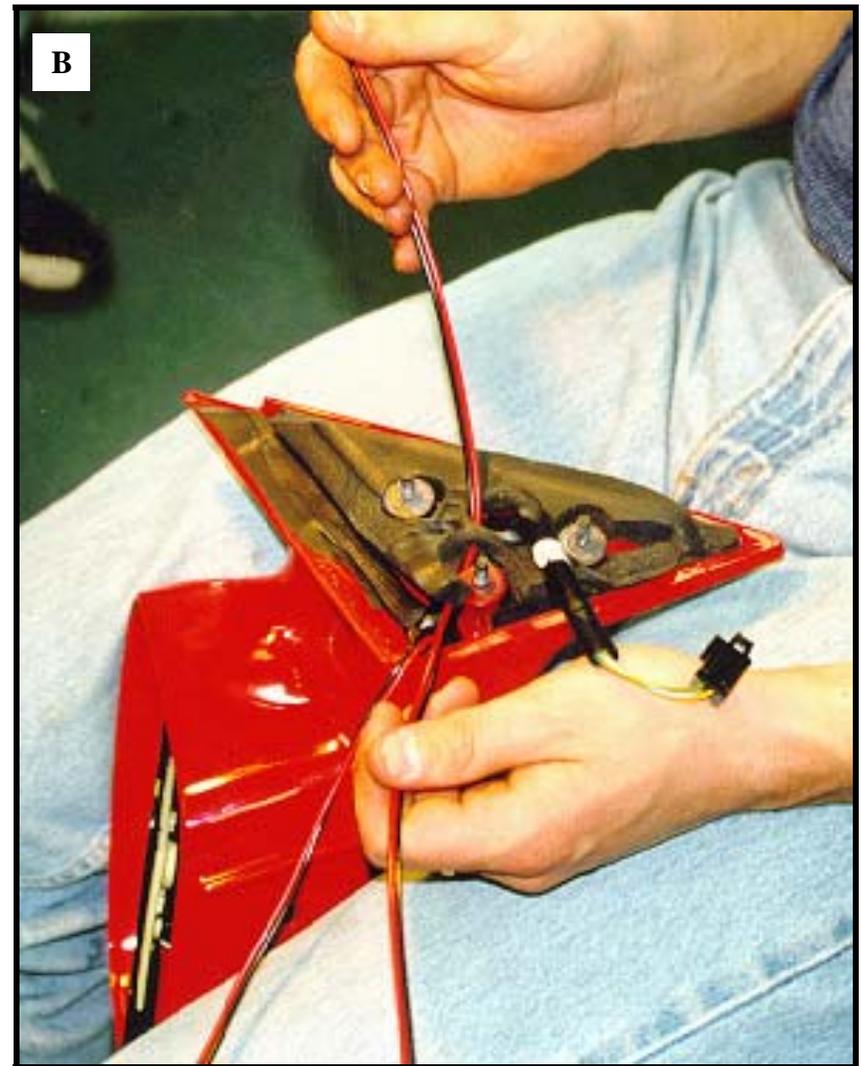
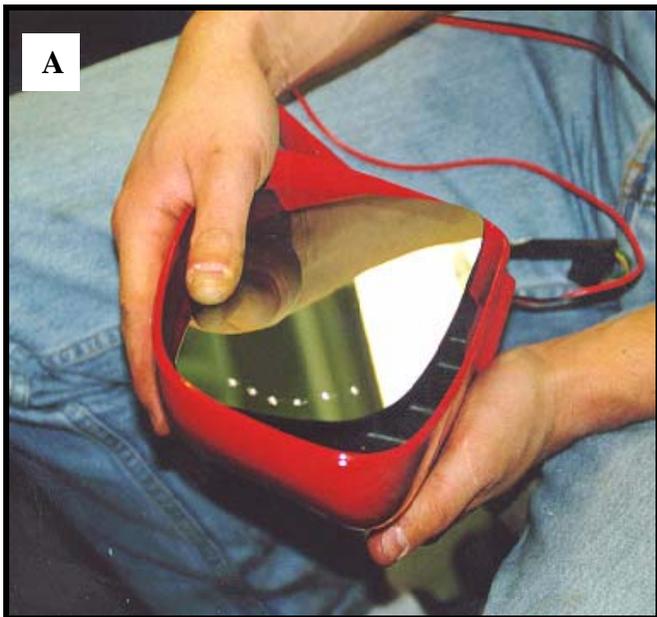


20. Connect the *Signal*<sup>®</sup> mirror leads to the wire harness. (A)

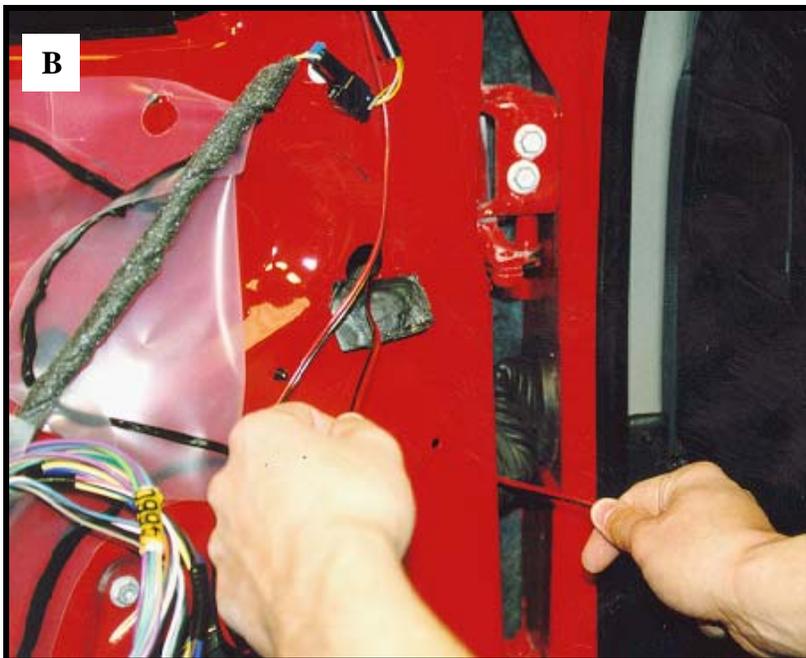
21. Place the *Signal*<sup>®</sup> mirror over the mirror housing. Position the wire harness along the back of the mirror housing and remove any excess slack. Align the *Signal*<sup>®</sup> mirror over the drive pins and center hub. (B)

22. Use the entire palm of your hand and firmly press the *Signal*<sup>®</sup> mirror into the mirror housing until it is fully seated on the center hub. (C)





23. Press down on all sides of the *Signal*<sup>®</sup> mirror to ensure it is fully seated in the mirror housing. **(A)**
24. Guide the new wire harness along side the existing wire and remove any slack. **(B)**
25. Guide the wire harness through the door and position the mirror housing assembly on the mirror mount. **(C)**

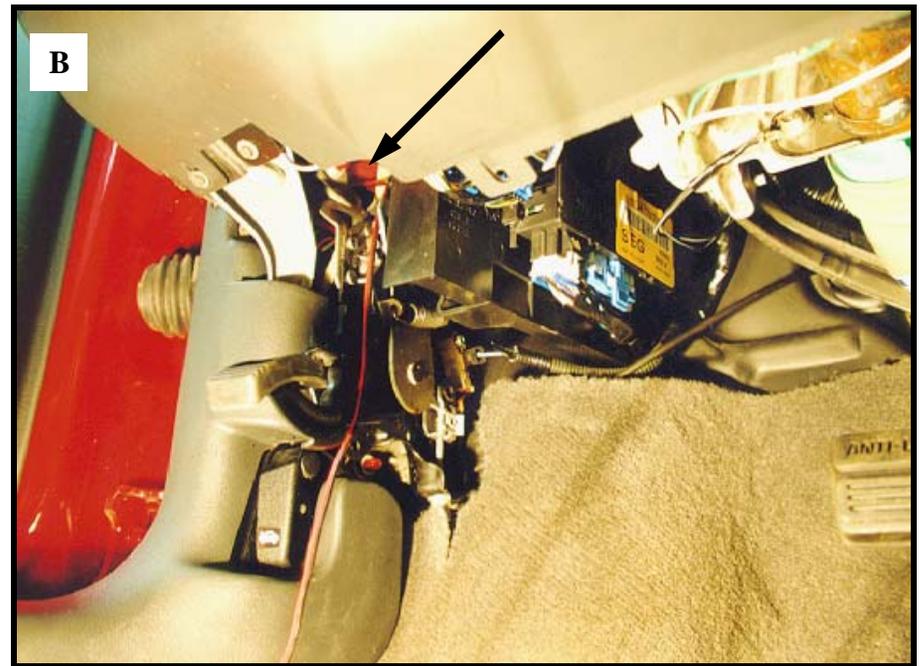


26. Bolt the mirror in place using the three original mirror mounting nuts. (A)

WARNING! Do not over tighten the mirror mounting nuts.

27. Pull back a portion of the door insulation. Pull the rubber boot out between the door and door frame. Guide the wire harness down to and through the small opening in the door. Pull the wire through the door and out the opening vacated by the rubber boot. Remove any slack. Reconnect the original mirror wires. (B)

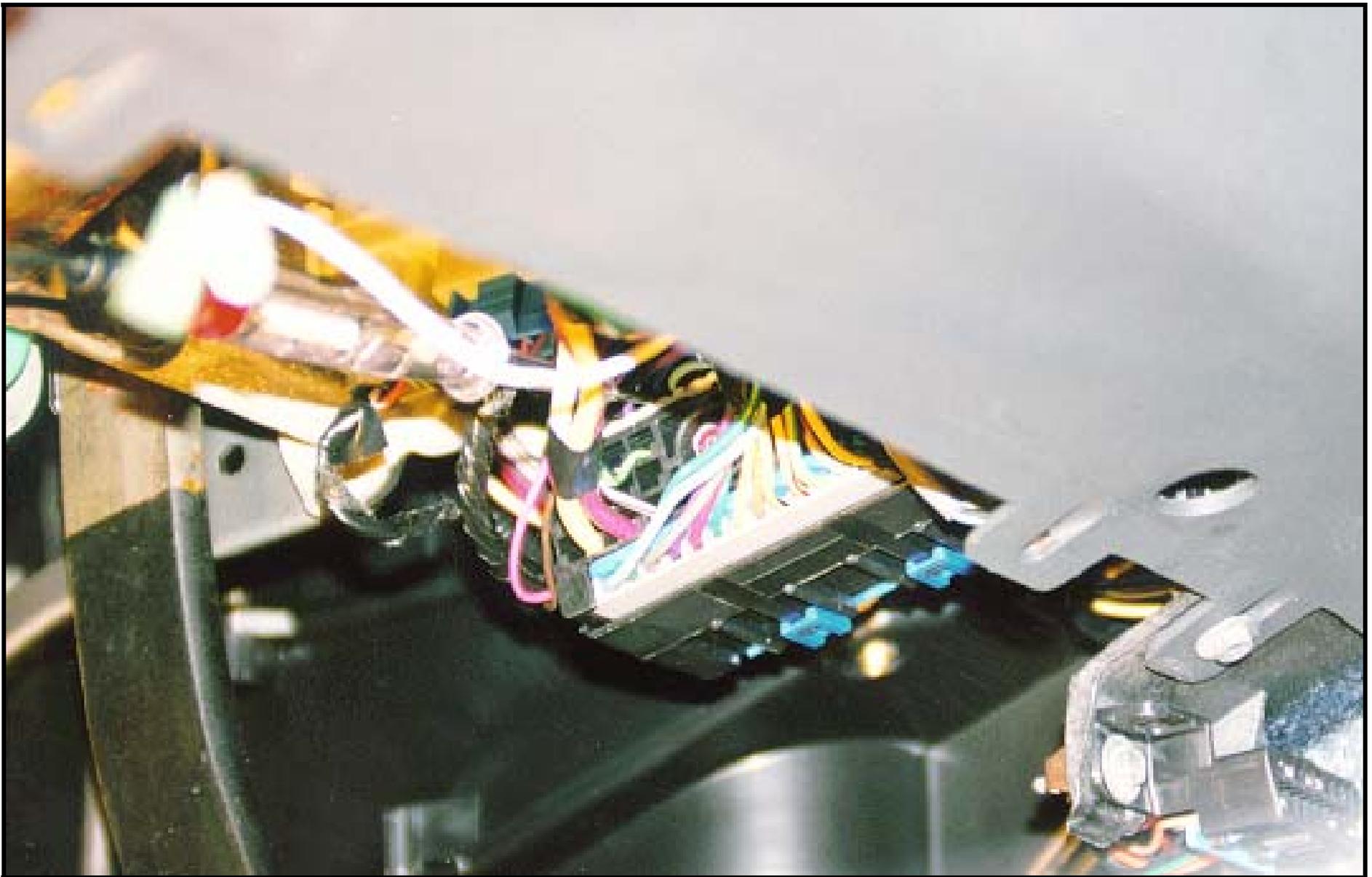
28. Replace the door insulation and foam insulation in the mirror mount. (C)



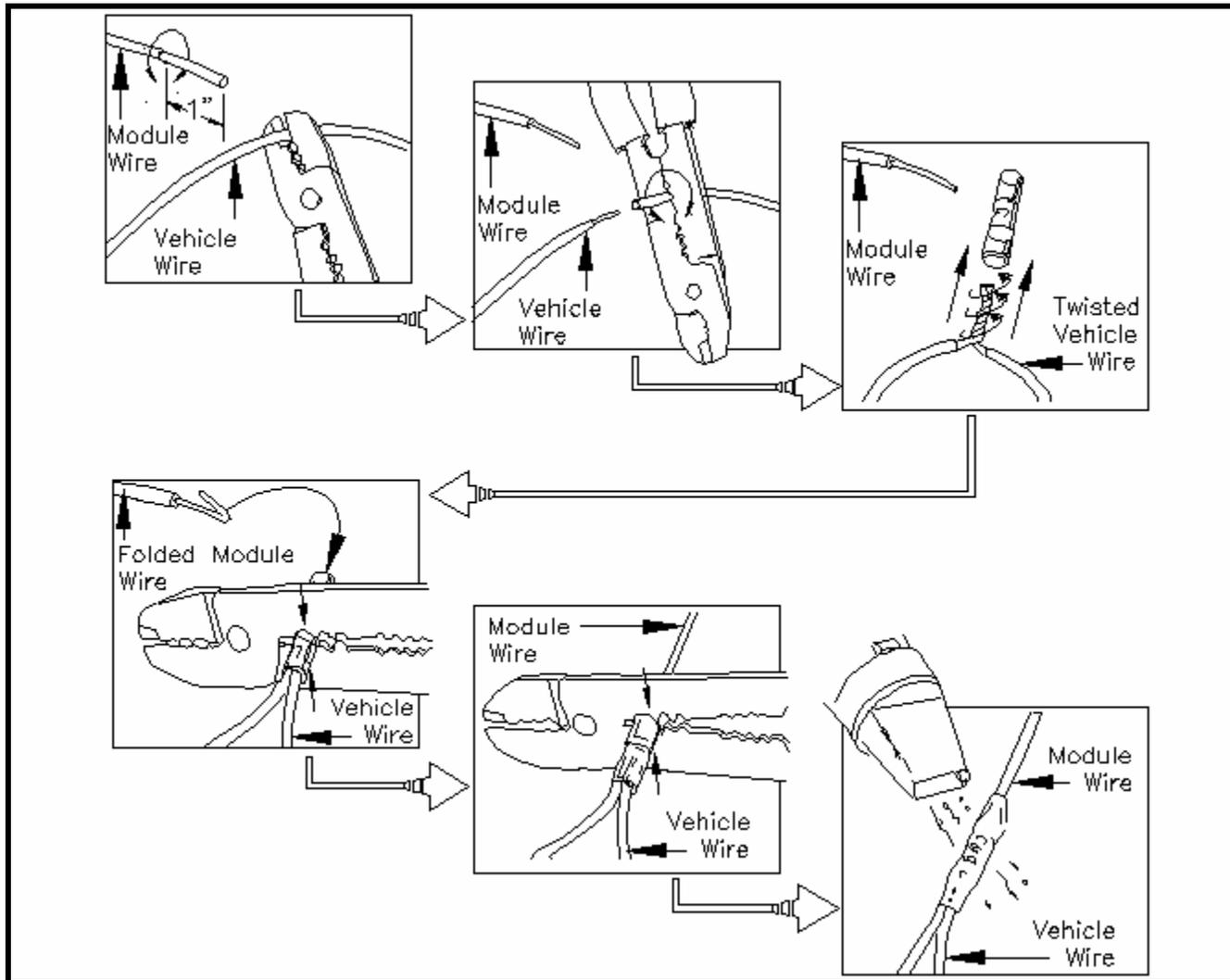
29. Reassemble the door panel and all accessories. Pass the wire harness through the rubber boot between the door and the door frame. **(A)**

30. Guide the wire harness through the door frame and into the vehicle. Remove the lower dash panel below the steering column to gain access to the bundle of wires. **(B)**

31. Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new Signal® mirror. Open the lower dash panel and guide the wire harness through the door frame and over the lower dash panel. **(C)**



32. Locate the solid LIGHT BLUE wire on the top of the wiring block. 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 solid DARK BLUE wire on the top of the wiring block. 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 DIAGRAM ABOVE TO SPLICE INTO THE TURN INDICATOR WIRES**

33. Make sure the harnesses are routed securely under the dash and enough slack is left for splicing.
34. Splice the RED wire from the driver side harness into the LIGHT BLUE wire previously labeled 'driver side turn'.
35. Splice the RED wire from the passenger side harness into the DARK BLUE wire previously labeled 'passenger side turn'.
36. 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.
37. Activate each turn indicator to verify that the *Signal*<sup>®</sup> mirrors are working. Replace all of the lower dash panels and door frame moldings.