

MUTH MIRrors SYSTEMS



Signal[®] Mirror Installation Instructions Toyota Land Cruiser 1998-2007, Lexus LX-470 1998-2007



THE safety
accessory of the
21st Century.™

P/N 210-0025-0

Rev B7 (8/12/08), BTV

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INCLUDED ITEMS:

- 1 left and 1 right *Signal*[®] mirror
- 1 left and 1 right wire harness
- 4 foam pads w/single side adhesive
- 4 blue T-taps
- 4 blue spade terminals
- 1 instruction manual
- 8 cable ties (Not Required)
- 1 dielectric grease (Not Required)

REQUIRED TOOLS:

- Ratchet with extension or ratcheting screwdriver
- 8mm socket
- 10mm socket
- Small slotted screwdriver
- Medium Philips screwdriver
- Small pry bar
- Needle nose pliers
- Wire crimper and stripper
- 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

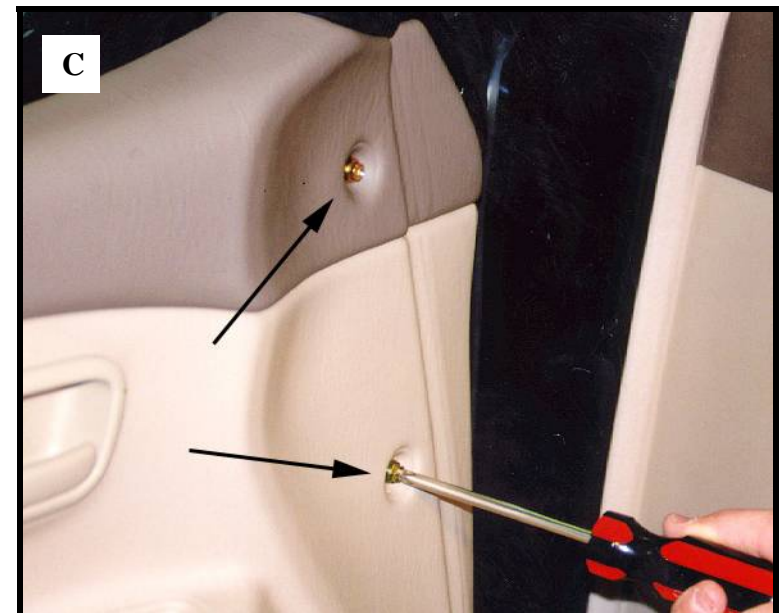
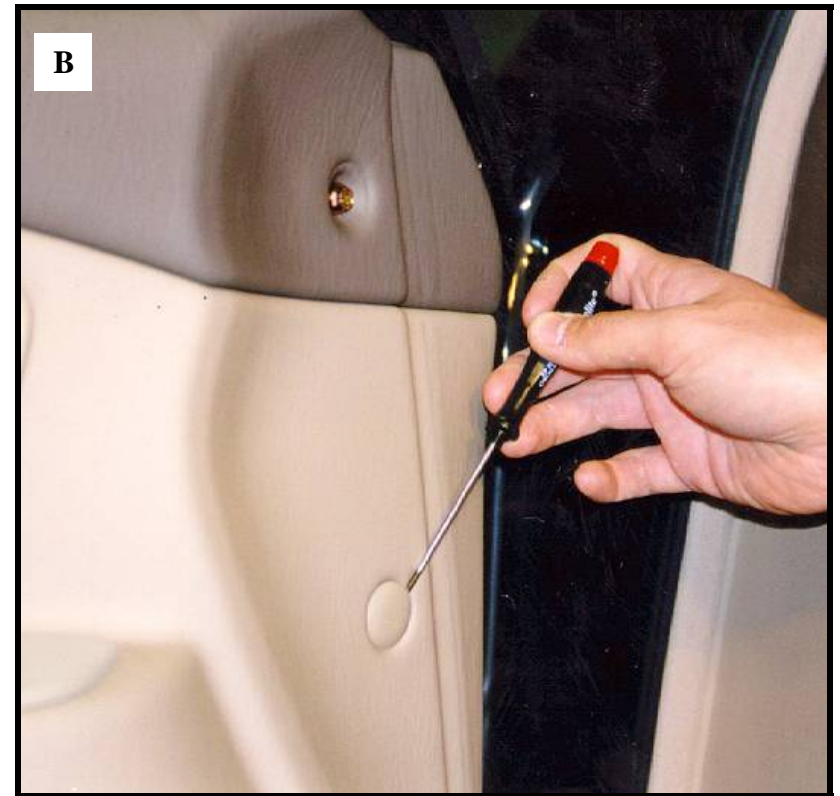
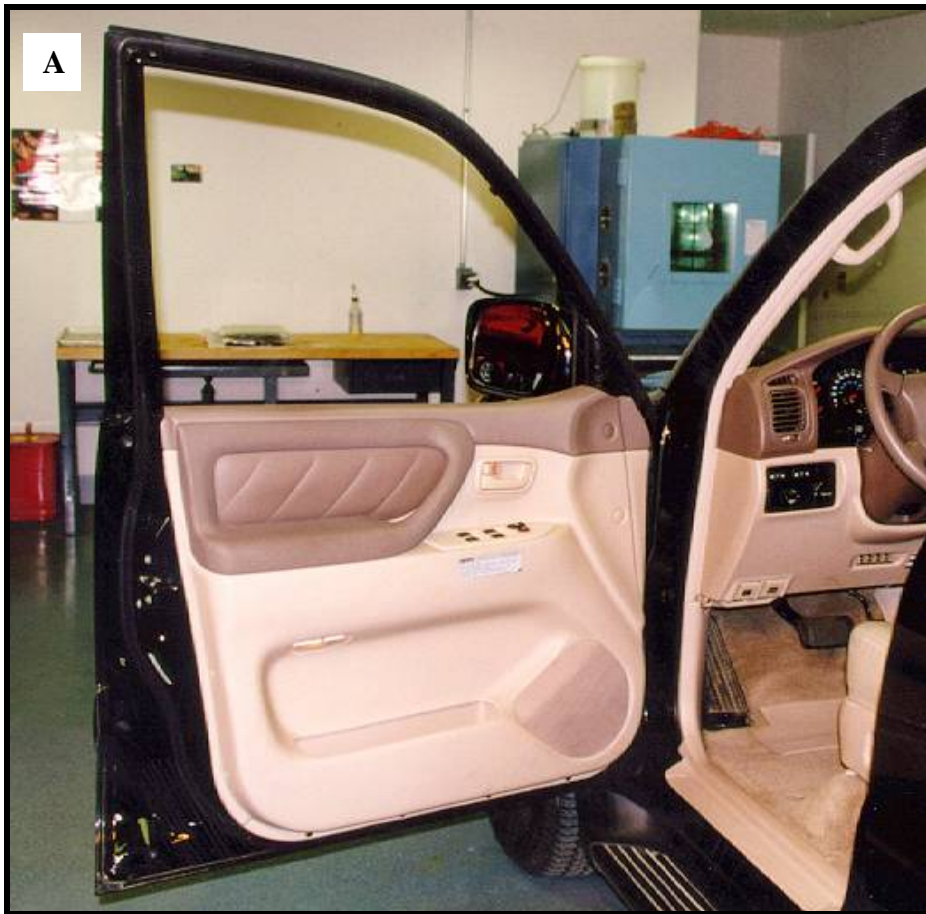
Or through the Muth web site:

www.muthco.com

Or via E-mail: techsupport@muthco.com

Note: Professional Installation Recommended

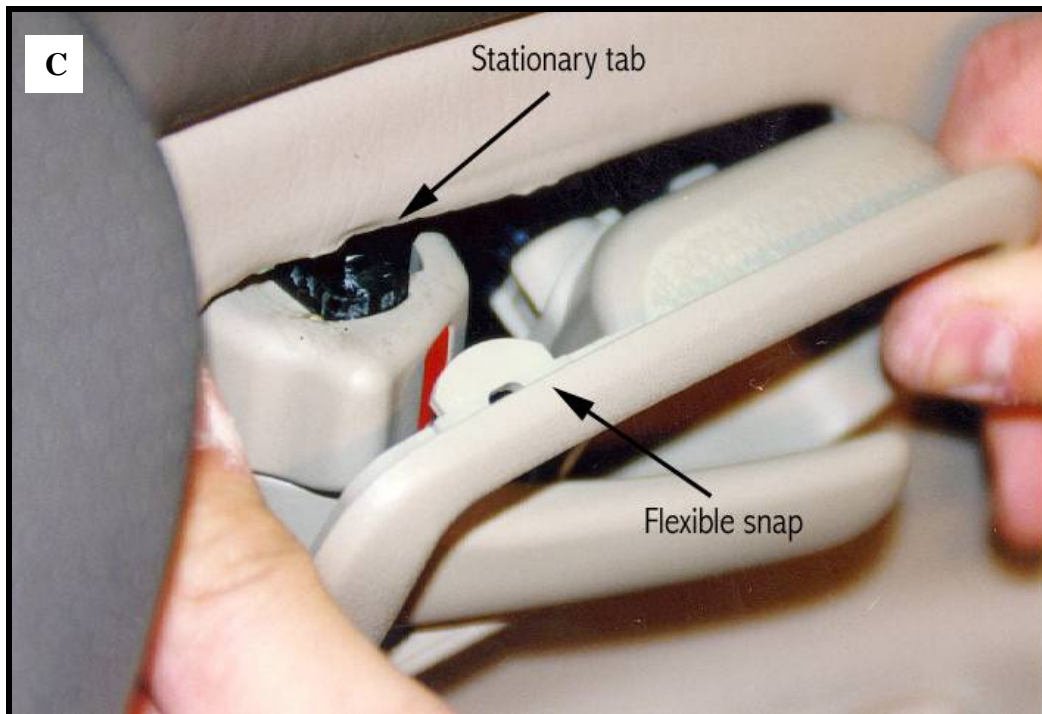
Warranty does not cover damage to the vehicle or mirror housing due to improper installation. The following installation instructions are to be considered as a guide only. Door removal procedures, indicator wire color and location may have changed since publication of these instructions. The installer is responsible for any damage that may occur during installation.



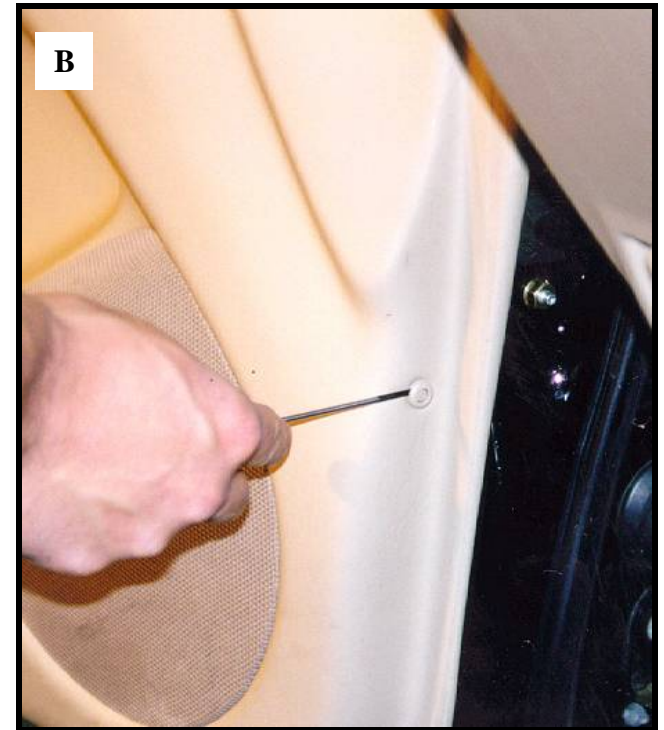
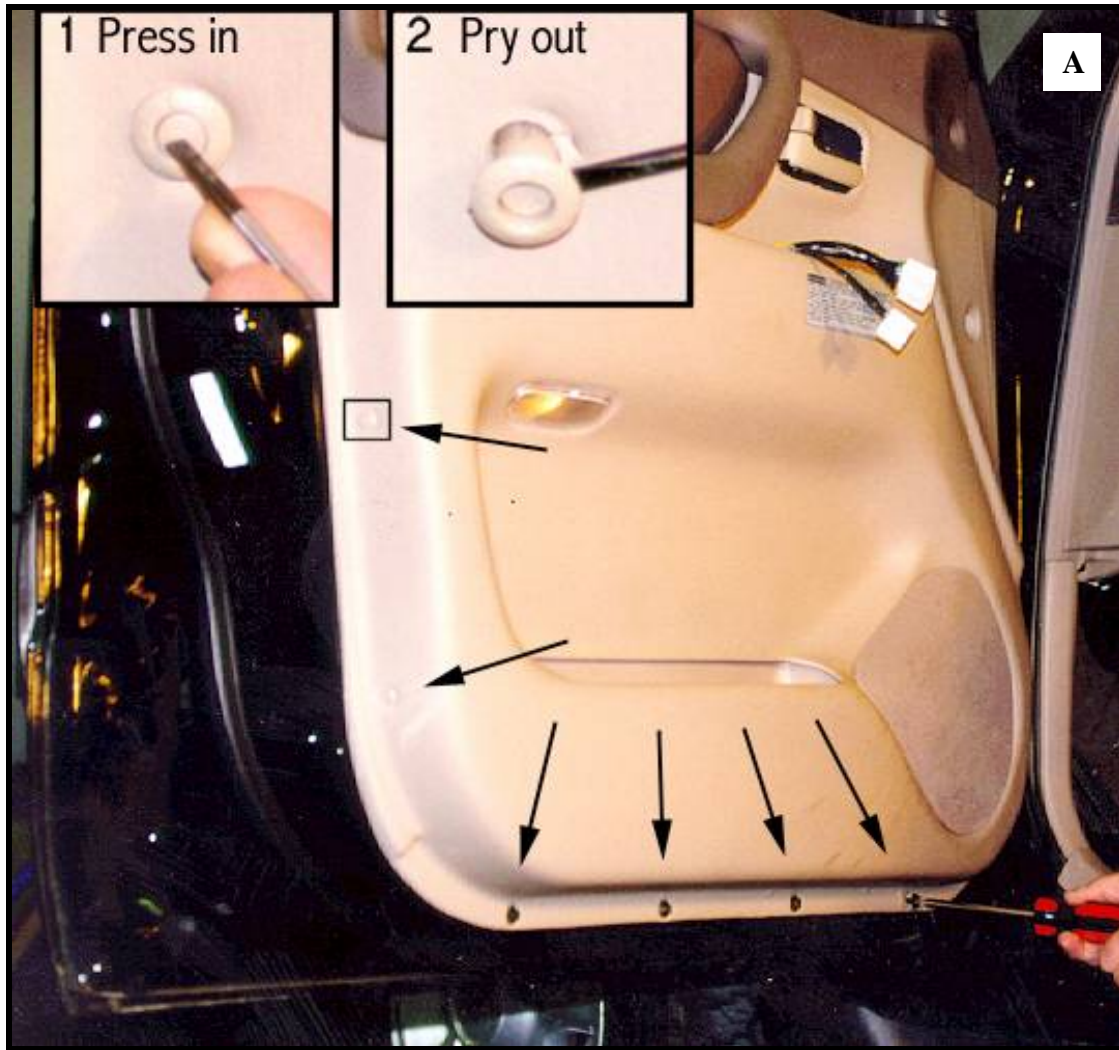
1. Start with the driver's side door and lower the window. (A)
2. Use a small slotted screwdriver to remove the plastic screw cover located on the inside section of the door. (B)
3. Remove the screw behind the screw cover and the screw located directly below the corner speaker. (C)



4. Starting at the top edge, use a small pry bar to lift the window control panel out of the door panel. (A)
5. Disconnect both sets of wires from the window control panel. (B)
6. Remove the screw in the opening from where the window control panel was removed. (C)



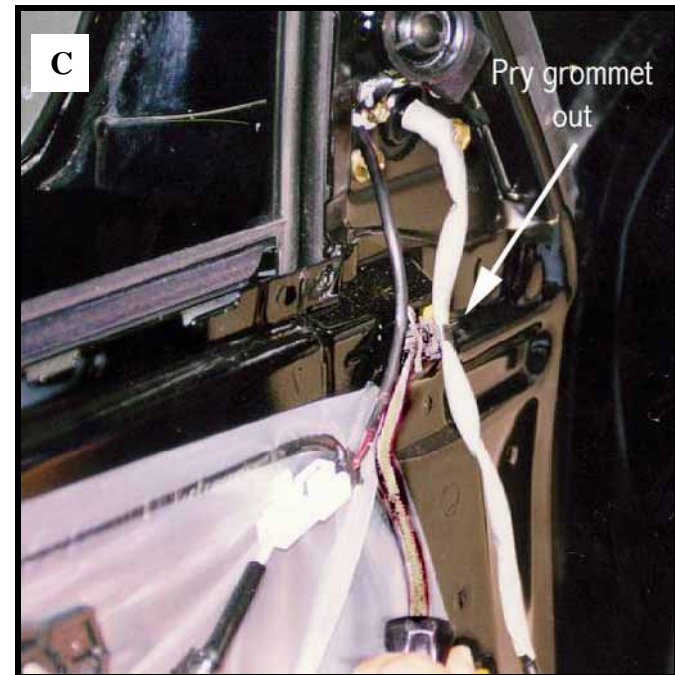
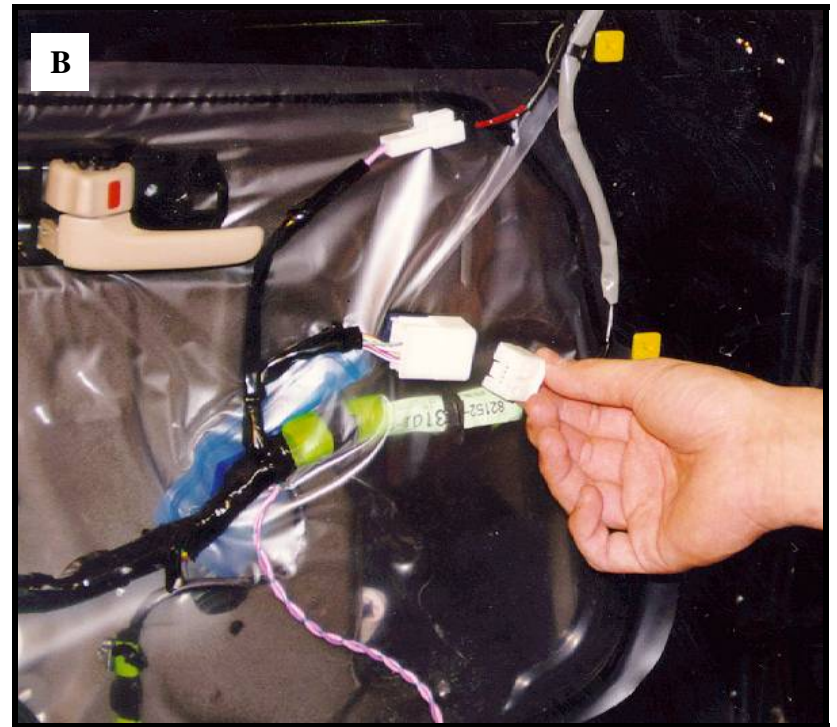
7. Starting from the left side, use a small slotted screwdriver to pry open the cover above the door handle. Remove the screw behind the cover. **(A)**
8. The cover around the door handle needs to be removed. There are two snaps at the top and bottom of the cover that hold it in place. Start at the top and slide a small slotted screwdriver in between the door lock lever and cover. While pulling back on the cover, gently pry down on the screwdriver to release the snap from the tab. When repeating this process on the bottom of the cover, pry up instead of down. **(B) & (C)**



9. Remove the four screws from the bottom of the door panel. Remove the two plastic grip plugs located on the outboard side of the door panel. Press in the center of the plug first and then pry the plug out as shown. (A)

10. Remove the plastic grip plug on the inboard side of the door panel. (B)

11. Pull the plastic speaker cover out from the corner of the door. (C)



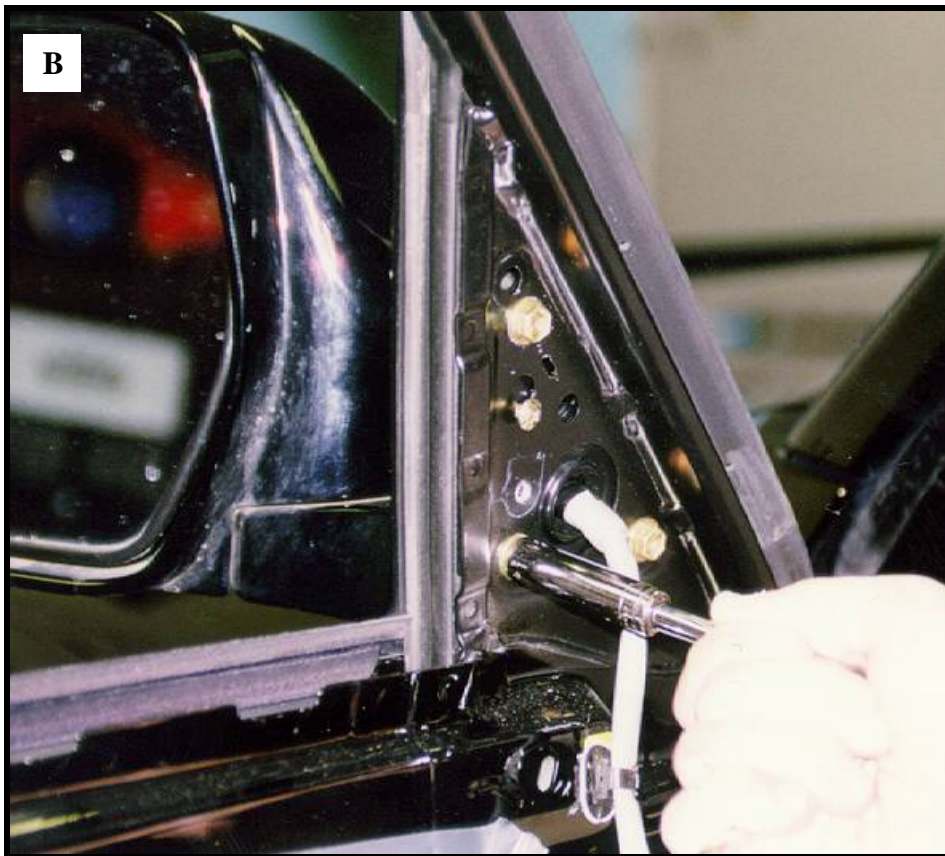
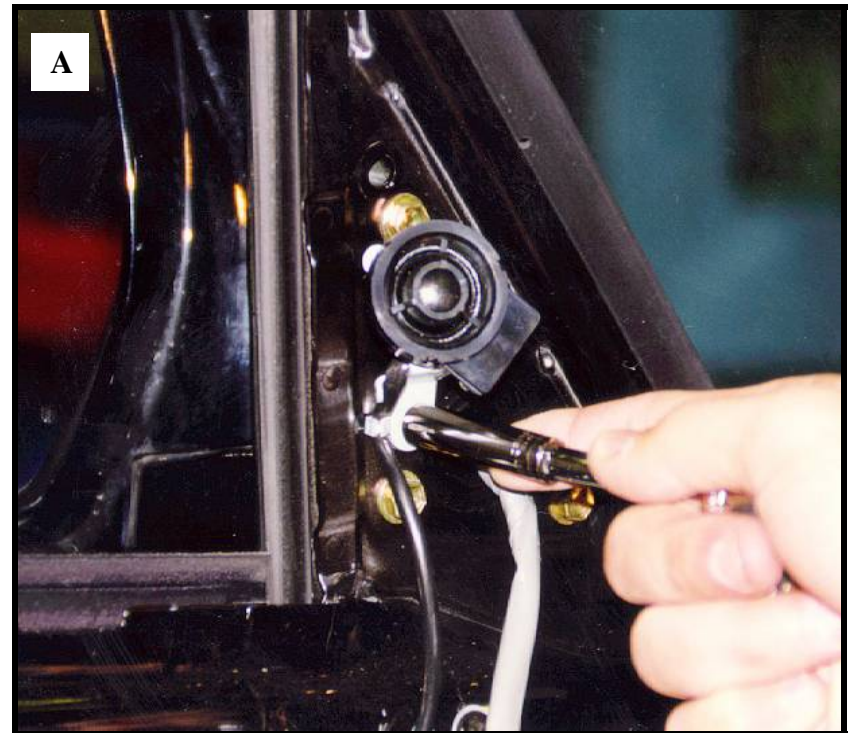
12. Lift the door panel up and off of the door. Hold the panel away from the door and disconnect the wire from behind the door reflector. **(A)**
13. Disconnect the mirror wire harness. **(B)**
14. The mirror wire harness is held in place with a plastic grommet. Dislodge the grommet to free the wire from the door. **(C)**

15. Remove the screw from the speaker bracket in the corner of the door. Dislodge the speaker bracket and let it hang down on the speaker wire. **(A)**

16. Secure the mirror housing with one hand and remove the three mirror mounting nuts from the corner of the door. **(B)**

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

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

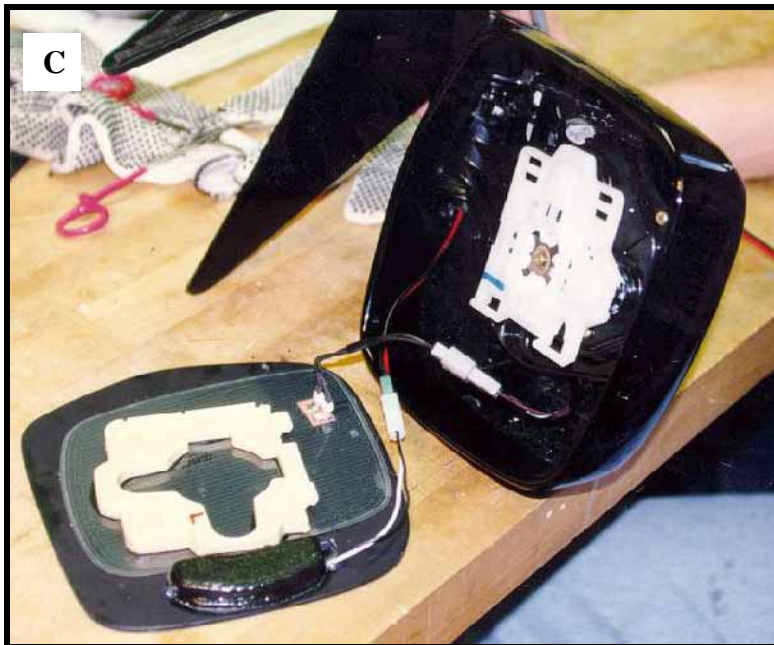
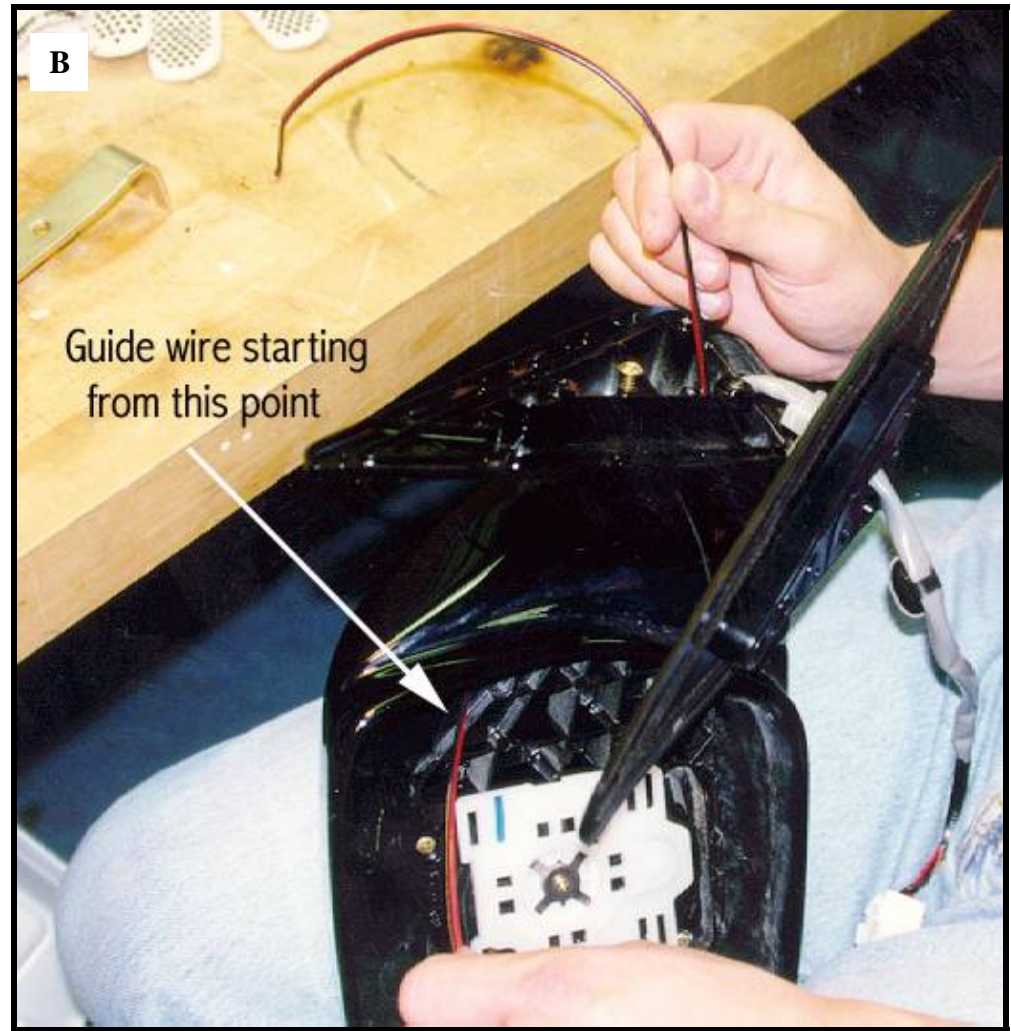
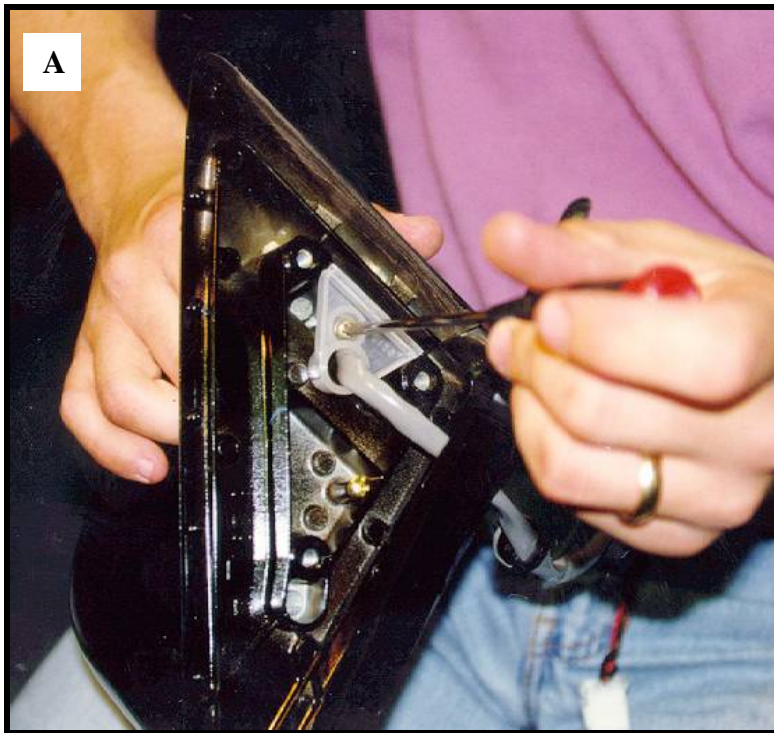




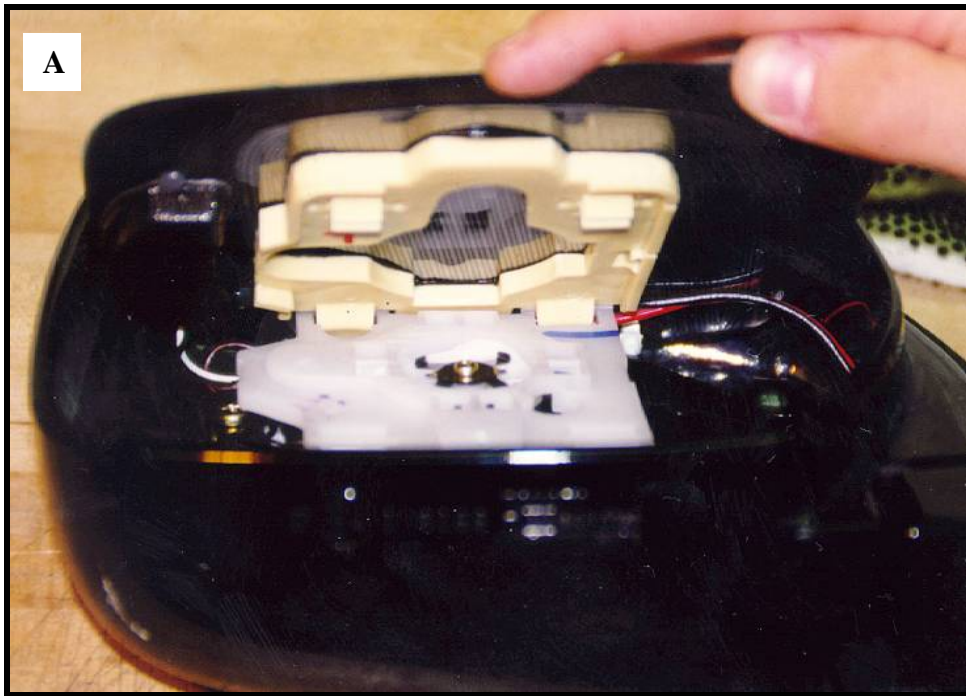
WARNING! Safety glasses and sturdy gloves are recommended for mirror glass replacement.

18. The mirror is held in the housing by two clips at the bottom of the mirror. Hold the mirror housing in your lap. Push on the top edge of the mirror to manually pivot the bottom fully outward. Insert a small pry bar underneath the bottom of the mirror. Apply steady pressure until the bottom of the mirror is dislodged from the mirror housing. **(A)**
19. Lift the mirror out of the mirror housing. **(B)**
20. If your mirror has the heater option, disconnect the wires at this time. **(C)**
21. Pull the foam insulation a few inches away from the base of the mirror housing. **(D)**



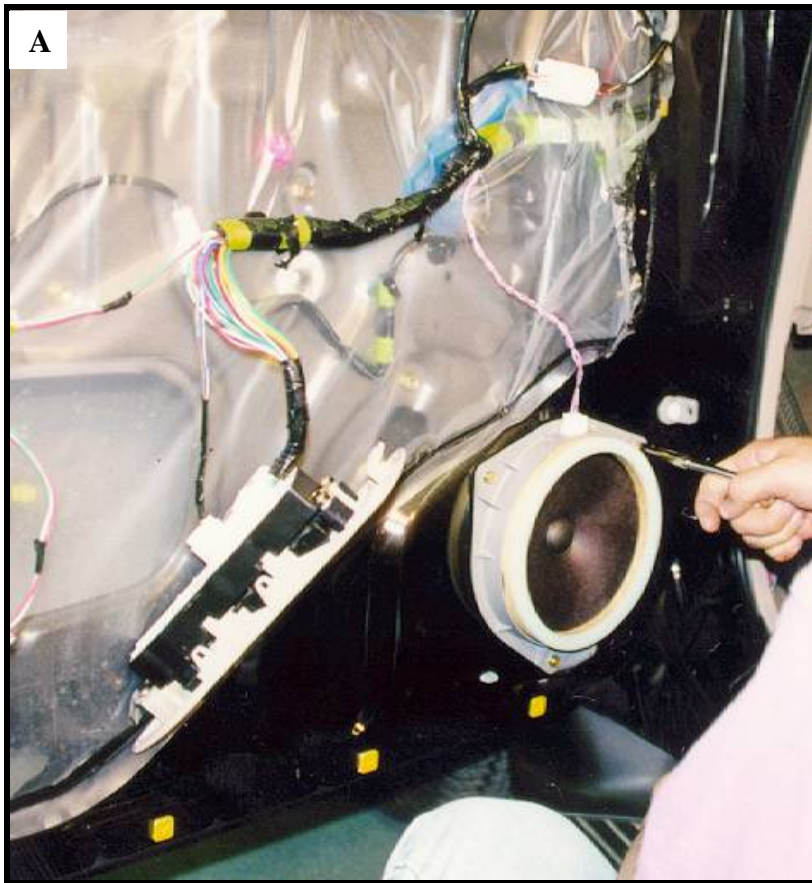


22. Remove the screw from the plastic wire guide on the mirror base. (A)
23. Using one of the two harnesses from the wiring kit, start on the inside of the mirror and guide the end without the mating connector into the mirror housing. Run the wire alongside the existing factory mirror harness. Leave about four inches of wire exposed in the mirror. (B)
24. Lay the *Signal*[®] mirror on a clean, flat surface. Connect the mating connector on the wire harness to the mating connector on the *Signal*[®] mirror. If your mirror has the heater option, connect the wires at this time. (C)



25. The *Signal*[®] mirror bezel has two hinges on the top and two snaps at the bottom. Place the *Signal*[®] mirror in the mirror housing and guide the hinges into position. Adjust the wires and tuck them down across the top of the mirror. Remove any slack in the wire harness. (A)
26. Lay the bottom of the *Signal*[®] mirror into the mirror housing. Using the entire palm of your hand, gently apply even pressure across the bottom of the *Signal*[®] mirror until it snaps in place. (B)
27. Guide the remainder of the wire harness through the plastic wire guide and through the foam insulation alongside the existing wire. Secure the plastic wire guide to the mirror base with the screw. Slide the foam insulation over the two harnesses and onto the mirror base. (C)

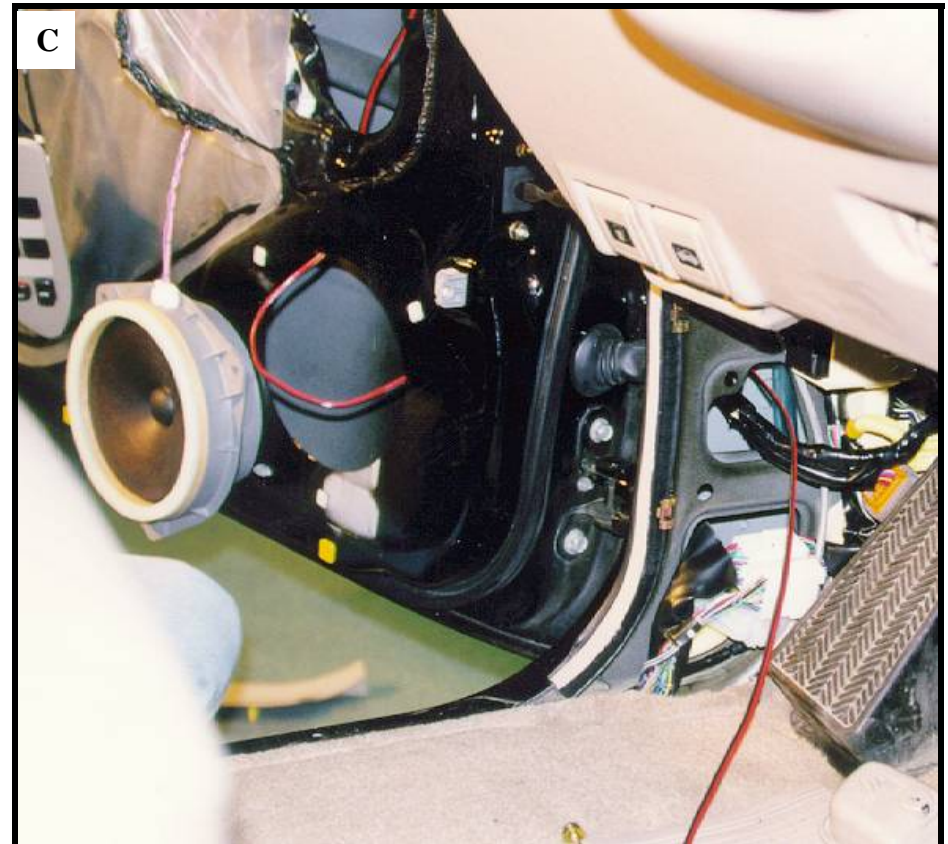


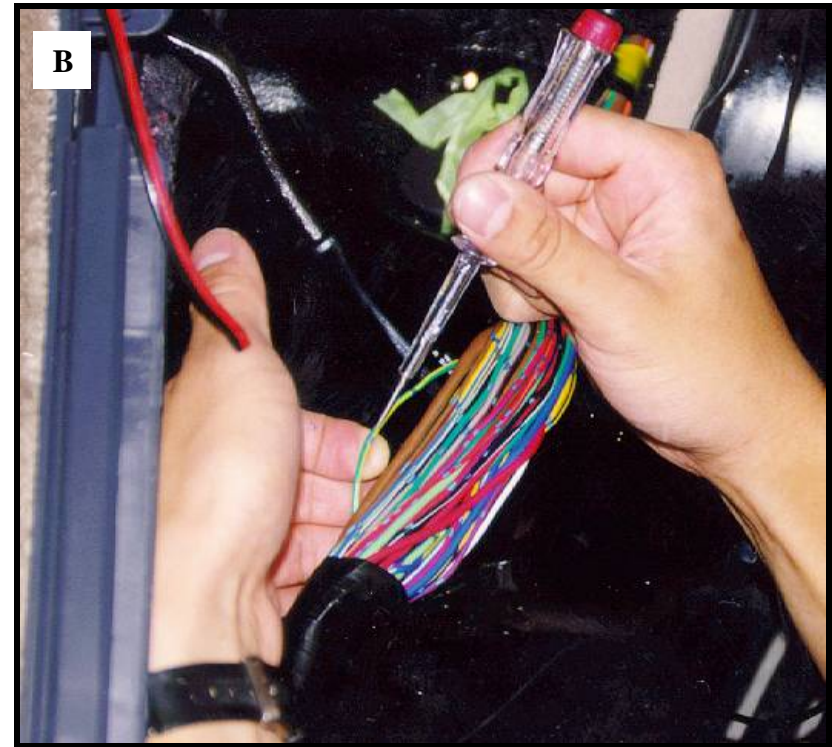


28. Remove the three screws from the lower door speaker and remove the speaker. **(A)**
29. Remove the plastic trim along the floor board and plastic trim in the corner of the door frame. **(B)**
30. Pull back part of the plastic insulation on the door. Position the mirror housing assembly on the mirror mount. Bolt the mirror in place using the three original mirror mounting nuts.

WARNING! Do not over tighten the mirror mounting nuts.

Guide the *Signal*[®] mirror wire harness down into the opening where the plastic door insulation covered. Reach through the speaker hole and pass the wire harness into the car by going through the rubber boot between the door and door frame. Remove any slack. **(C)**





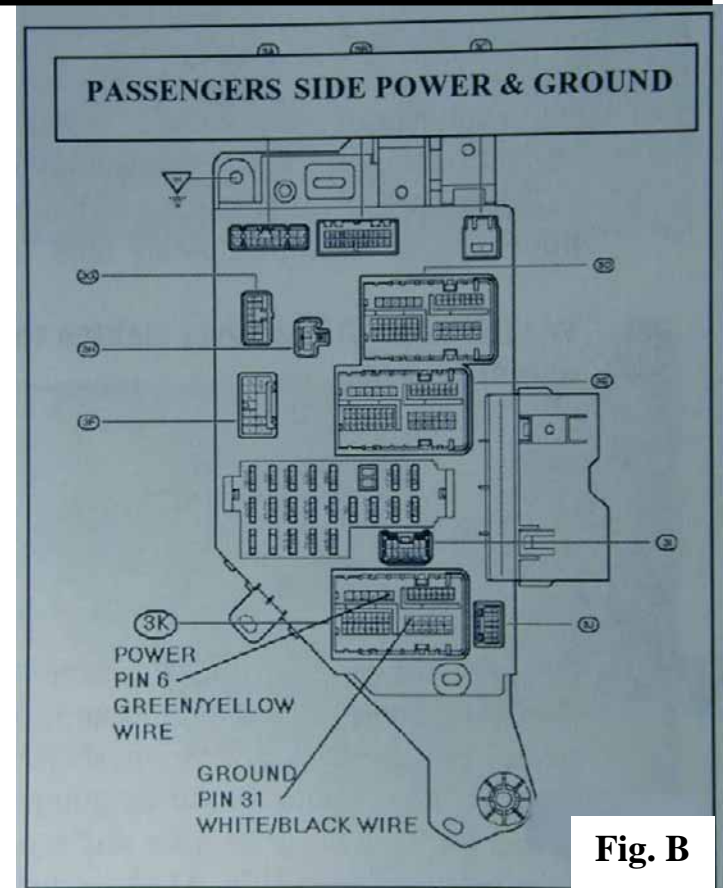
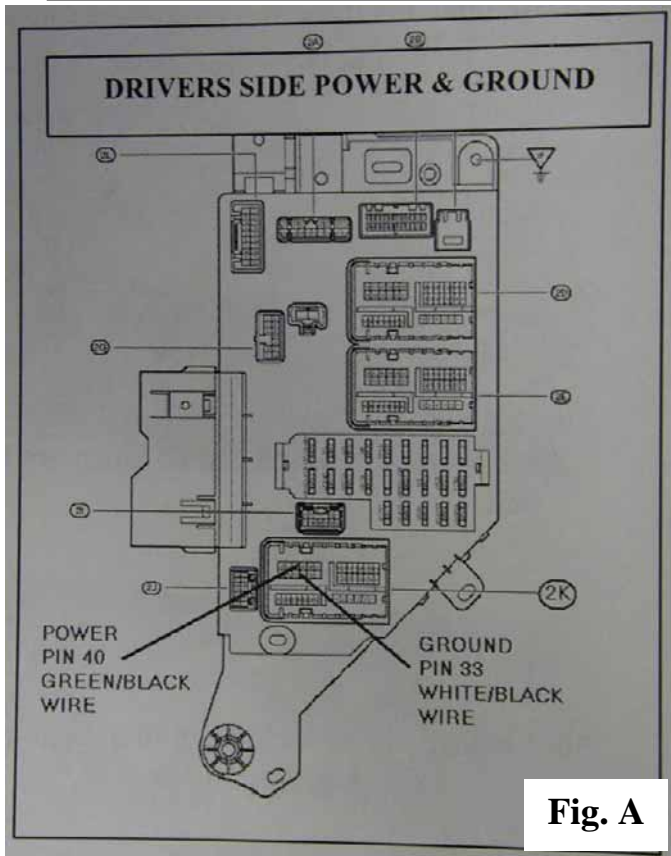
31. Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new *Signal*[®] mirror.

NOTE: The car's electrical wiring for the driver side mirror is located along the bottom edge of the driver side door frame and the electrical wiring for the passenger side mirror is located along the bottom edge of the passenger side door frame.

32. Pull back a portion of the carpeting on the driver side to expose the wire bundle. Guide the *Signal*[®] mirror wire harness from the driver side door down to the wire bundle. Locate the GREEN WITH BLACK STRIPE and GRAY RINGED wire coming from connector 2B pin 11 in 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'. (A)

33. Pull back a portion of the carpeting on the passenger side to expose the wire bundle. Guide the *Signal*[®] mirror wire harness from the passenger side door down to the wire bundle. Locate the GREEN WITH YELLOW STRIPE and GRAY RINGED wire coming from connector 3A pin 9 in 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'. (B)

Wiring for Toyota Land Cruiser 2003 - 2007

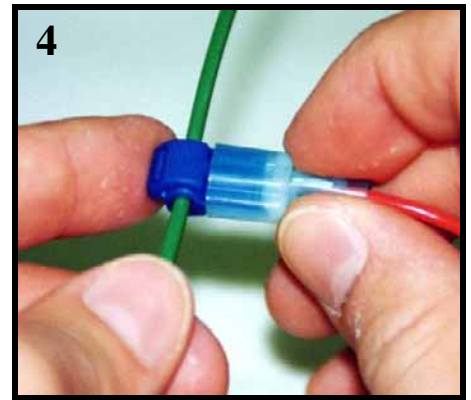
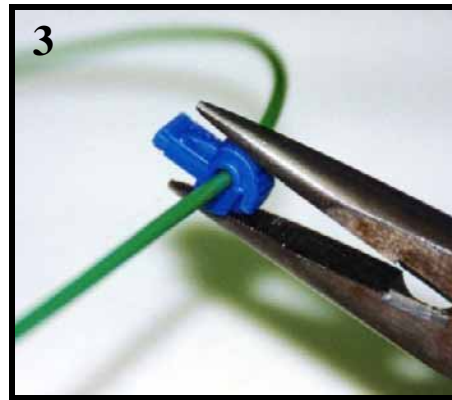
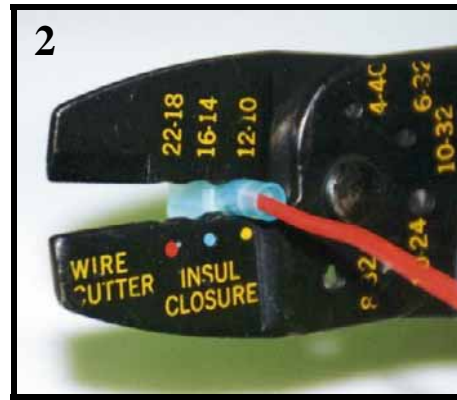
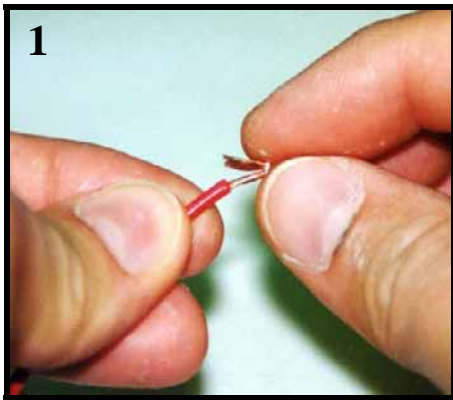


31A. Repeat all of the previous steps to replace the factory mirror on the passenger side door with the new *Signal*[®] mirror.

NOTE: The car's electrical wiring for the driver side mirror is located along the bottom edge of the driver side door frame (kick panel) and the electrical wiring for the passenger side mirror is located along the bottom edge of the passenger side door frame (kick panel).

32A. Pull back a portion of the carpeting on the driver side to expose the wire bundle. Guide the *Signal*[®] mirror wire harness from the driver side door down to the wire bundle. Locate the GREEN WITH BLACK STRIPE wire from connector 2K pin 40 and the white/black wire pin 33 in the wire bundle. (**Fig. A**)

33A. Pull back a portion of the carpeting on the passenger side to expose the wire bundle. Guide the *Signal*[®] mirror wire harness from the passenger side door down to the wire bundle. Locate the GREEN WITH YELLOW STRIPE wire from connector 3K pin 6 and the white/black wire pin 31 in the wire bundle. (**Fig. B**)



USE THE INCLUDED BLUE T-TAPS AND FOLLOW THE 4 STEPS ABOVE TO SPLICE INTO THE TURN INDICATOR AND GROUND WIRES

34. Tap the RED wire from the driver side harness into the GREEN WITH BLACK STRIPE and GRAY RINGED wire previously labeled 'driver side turn'. Tap the BLACK wire into the WHITE WITH BLACK STRIPE wire for ground.
35. Tap the RED wire from the passenger side harness into the GREEN WITH YELLOW STRIPE and GRAY RINGED wire previously labeled 'passenger side turn'. Tap the BLACK wire into the WHITE WITH BLACK STRIPE wire for ground.
36. Secure each wire connection to the frame of the vehicle using the included foam pads.
37. Activate each turn indicator to verify that the *Signal*[®] mirrors are working properly. Put the carpeting back in place. Replace the plastic door frame moldings, speakers, door panels, and all accessories.

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

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