



Signal[®] Mirror Installation Instructions

Ford F150/F250 XLT, Lariat Pickup, Light Duty 1997, Ford Expedition 1997-1999
Ford Expedition XLT 2000-2002



THE safety accessory of the 21st Century.™

P/N 210-0036-0

Rev E1 (6-28-04), GG

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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
- 7/32 socket (**F150 speaker**)
- 6mm socket (**Expedition speaker**)
- 8mm socket (**door handle**)
- 11mm socket (**mirror nuts**)
- 10mm box wrench (**mirror friction pins**)
- Small slotted screwdriver
- Medium Philips screwdriver
- Needle nose pliers (**Expedition mirror**)
- Small pry bar
- Gopher wire (**Expedition mirror**)
- Electrical tape (**F150 mirror**)
- Wire crimper and stripper
- Needle nose pliers
- 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:

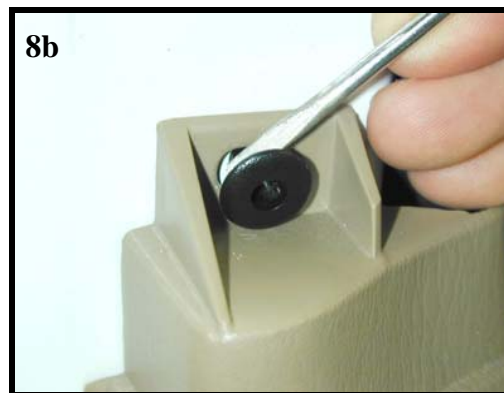
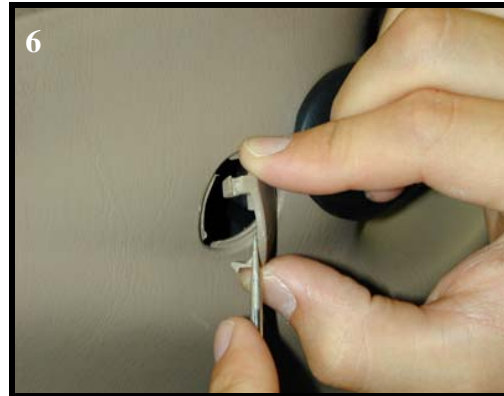
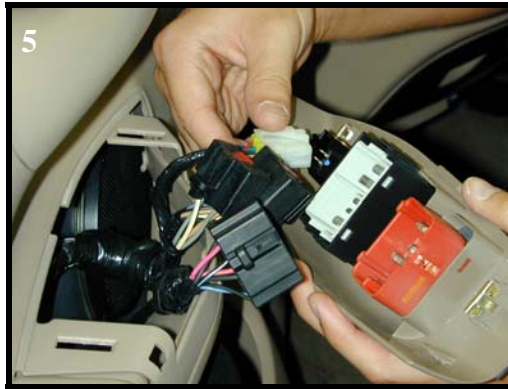
www.muthco.com

Or via E-mail: techsupport@muthco.com

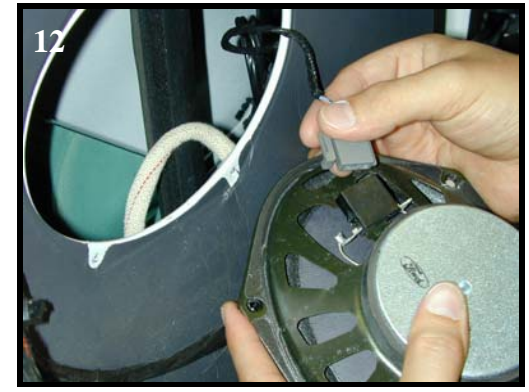
1997 Ford F150/F250 door panel removal page



1. Open door and lower window.
2. Remove plastic corner trim piece.
3. Remove plastic outside trim piece.
4. Lift out window control panel.
5. Disconnect wiring from window control panel.
6. Remove plastic cover next to door handle.
7. Remove door handle bolt and door handle.
8. Remove plastic lock rivets from both sides of the door.



Note: Repeat steps 8a and 8b on opposite side of door.

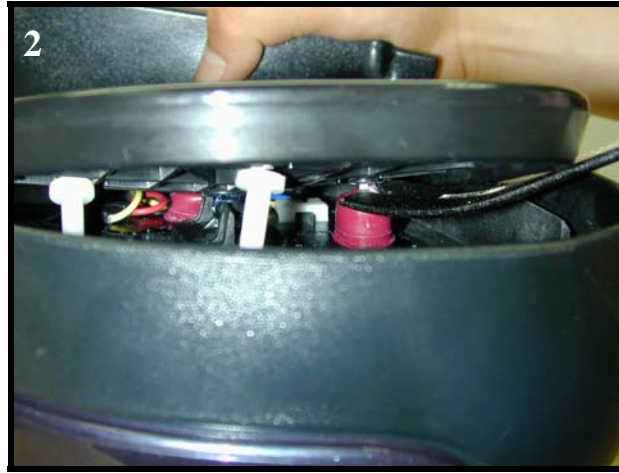


9. Lift door panel up off of door.
10. Twist and pull out light on inside of door panel.
11. Remove screws around speaker.
12. Remove speaker from door and disconnect wire.
13. Pull back door insulation and disconnect mirror wire.
14. Press plastic grip plug through door to release mirror harness.
15. Remove insulation from corner of door.
16. Remove three mirror mounting nuts.
17. Remove mirror assembly from door.

1997 Ford F150/F250 mirror replacement page



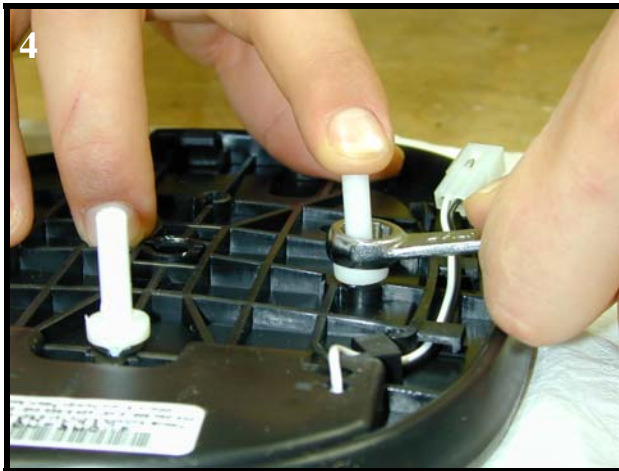
1 Use a small pry bar and pry up on the outside edge of the mirror to dislodge it from the center hub. Be careful not to lift up the mirror too high or the drive pins may unseat from the mirror motor pack.



2 Use a small pry bar and dislodge the heads of the bottom and inside drive pins from the back of the mirror.



3 Set the factory mirror on a clean, flat surface. Use a small pry bar and remove both friction pins from the back of the factory mirror.



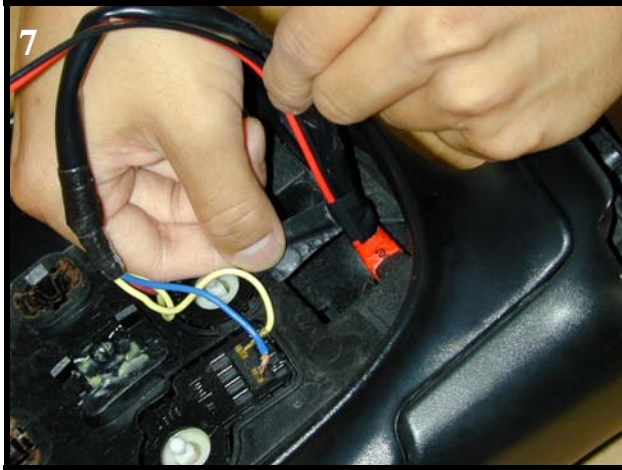
4 Use the closed end of a 10mm box wrench and seat the friction pins in the top and outside holes on the back of the new *Signal*® mirror.



5 Carefully remove the foam insulation at the base of the mirror.



6 Use a small slotted screwdriver and lift out the plastic wire retainer surrounding the mirror wire harness.



7
Pull six inches of the factory wire harness back through the mirror housing. Using the shorter of the two wire harnesses from the kit, tape the end without the mating connector to the factory wire harness.



8
Pull the factory wire harness back to its original position. Remove the tape from the end of the new wire harness and pull enough slack through the mirror housing so that seven inches remain exposed.



9
Align the nubs on the top of the drive pins so that they point to the center of the mirror hub. Connect the *Signal*® mirror mating connector to the *Signal*® mirror wire harness.



10
Guide the two friction pins into their sockets. Align the center hub of the *Signal*® mirror over the mirror mount.

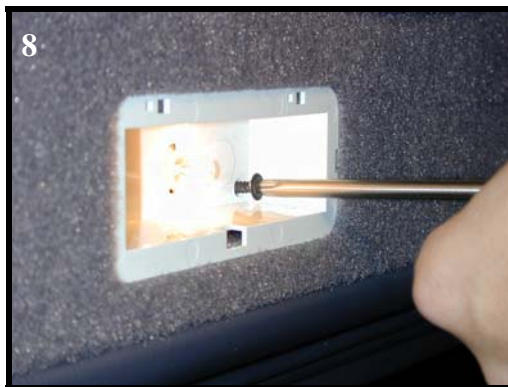
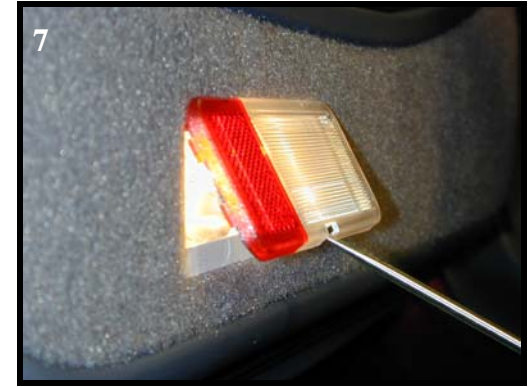


11
Apply steady pressure to the center of the mirror until it snaps into position.



12
Firmly press down on the inboard and bottom edges of the *Signal*® mirror to seat the drive pins into the back of the *Signal*® mirror.

1997-1999 Ford Expedition door panel removal page



1. Open door and lower window.
2. Remove plastic corner trim piece.
3. Lift out window control panel.
4. Disconnect wires from window control panel.
5. Remove screw from center of door.
6. Remove screw from corner of door.
7. Pry off the door light reflector cover.
8. Remove screw from door light housing.
9. Dislodge plastic trim around door handle.
10. Remove door handle bolt and door handle.

11. Lift the door panel off of the door.
Disconnect wire from mirror control panel.

12. Twist and pull out light from inside of door panel.

13. Remove screws around speaker.

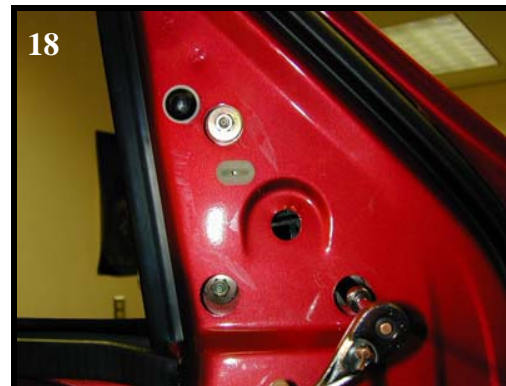
14. Remove speaker from door and disconnect wire.

15. Pull back door insulation and disconnect mirror wire.

16. Press plastic grip plug through door to release mirror harness.

17. Remove insulation from corner of door.

18. Remove three mirror mounting nuts, but DO NOT remove the mirror assembly from the door. A plastic trim piece will break if you do.



1997-1999 Ford Expedition mirror replacement page



1
Fold the mirror out so the back of the mirror housing is towards the vehicle. Use a small pry bar and dislodge the heads of the bottom and inside drive pins from the back of the mirror.



2
While using sturdy gloves, position your fingers behind the mirror.



3
Pull back on the mirror to dislodge it from the center hub and remove the mirror from the housing. If your vehicle has heated mirrors, disconnect the heater wires and set the mirror aside.



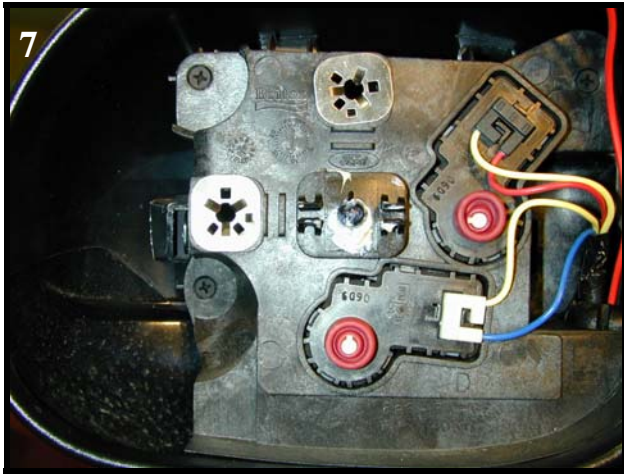
4
Using the shorter of the two wire harnesses from the kit, guide the end without any connector down into the mirror housing alongside the existing wire harness. You may need to use gopher wire for this.



5
Hold the mirror housing sail away from the door and pull enough slack through the mirror housing so that seven inches remain exposed. Loop the wire end back up underneath the mirror sail towards its center.



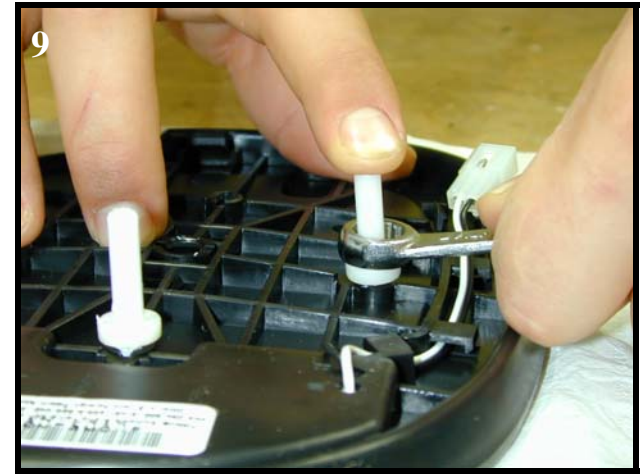
6
From the inside of the door, use a needle nose pliers and grab the end of the wire. You will need to poke through the mirror's foam insulation. Pull the wire through the hole and back down into the door.



Bolt the mirror back in place. Push the white drive pins down until they bottom out in the mirror mount. Align the nubs on the top of the drive pins so that they point to the center of the mirror hub.



Set the factory mirror on a clean, flat surface. Use a small pry bar and remove both friction pins from the back of the factory mirror.



Use the closed end of a 10mm box wrench and seat the friction pins in the top and outside holes on the back of the new *Signal*® mirror.



Connect the *Signal*® mirror mating connector to the *Signal*® mirror wire harness. Also connect the heater wires at this time if your vehicle has this option.



Guide the two friction pins into their sockets. Align the center hub of the *Signal*® mirror over the mirror mount. Apply pressure to the center of the mirror until it snaps into position.

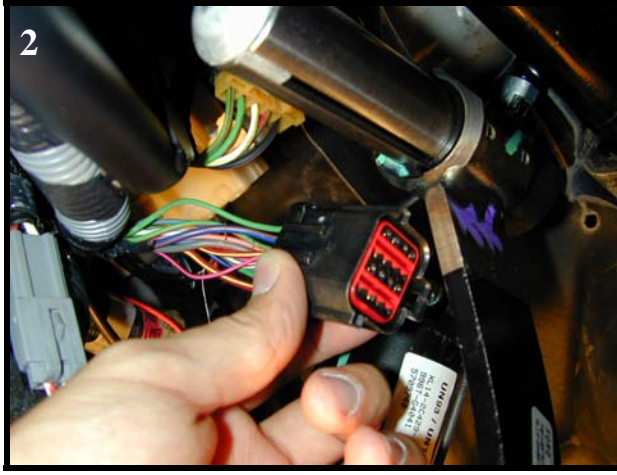


Firmly press down on the inboard and bottom edges of the *Signal*® mirror to seat the drive pins into the back of the *Signal*® mirror.

F150/F250 wiring



Bolt the mirror on the vehicle. Pull the rubber boot out between the door and door frame. Pass the wire harness into the vehicle by going down into the door and through the opening vacated by the rubber boot.

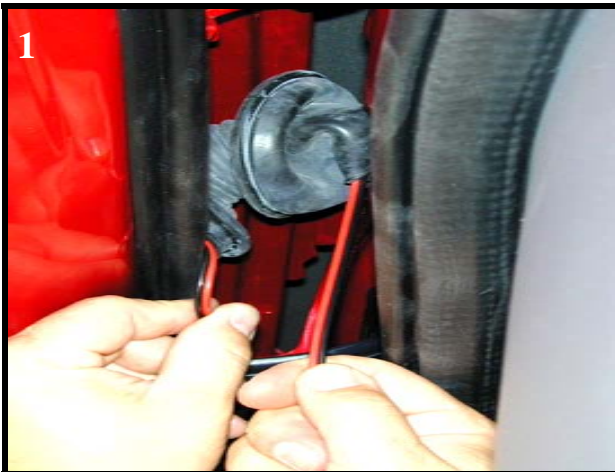


The electrical wiring for turn indicators is located under the dash just below and left of the steering column. Probe the wires first using the instructions below before disconnecting the wire harness for

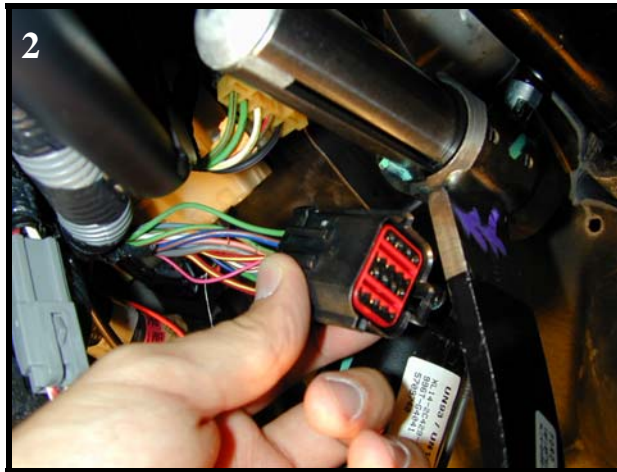


A good ground location is located on the bare metal plate behind the hood release lever.

Expedition wiring



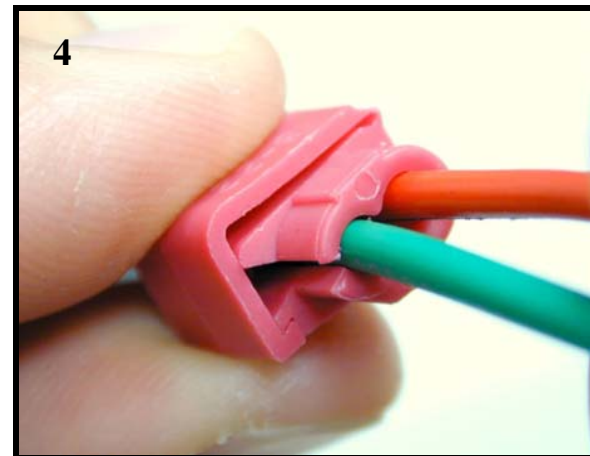
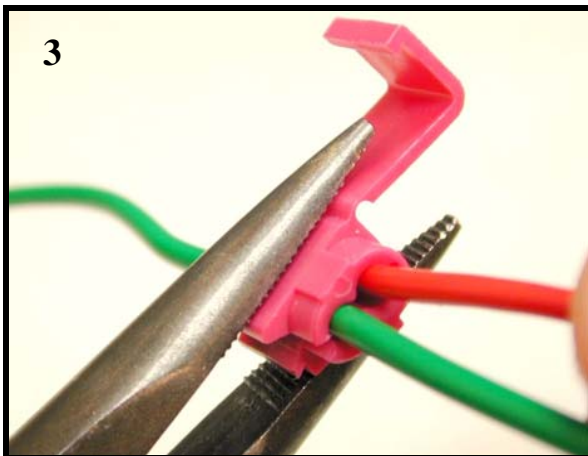
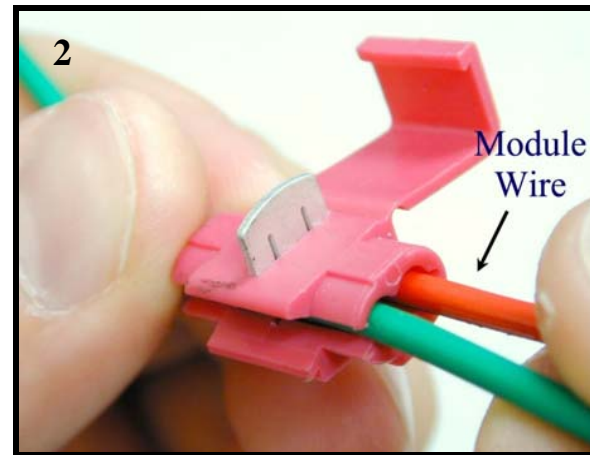
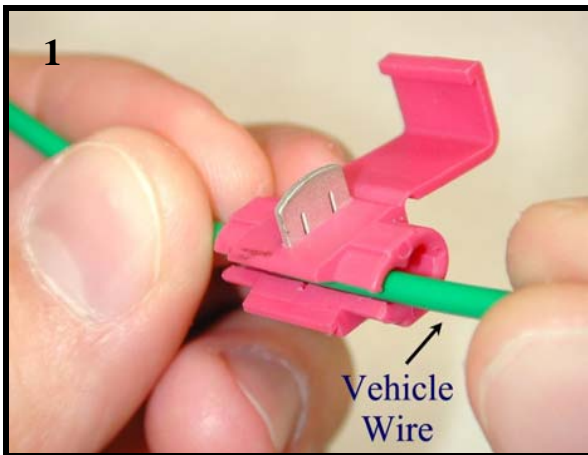
Pull the rubber boot out between the door and door frame. Pass the wire harness into the vehicle by going through the opening vacated by the rubber boot.



The electrical wiring for turn indicators is located under the dash just below and left of the steering column. Probe the wires first using the instructions below before disconnecting the wire harness for



A good ground location is located on the bare metal plate behind the hood release lever.



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

1. 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'.
2. 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'.
3. Make sure the harnesses are routed securely under the dash and enough slack is left for splicing.
4. Splice the RED wire from the driver side harness into the green with white stripe wire previously labeled 'driver side turn'.
5. Splice the RED wire from the passenger side harness into the white with blue stripe wire previously labeled 'passenger side turn'.
6. 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.
7. Activate each turn indicator to verify that the *Signal*[®] mirrors are working.
8. Replace any door accessories, door panels, plastic moldings, and trim pieces.