

Installing Power Folding Mirrors on a 2005 F150

Overview: The installation instructions below cover the install of power folding mirrors on a 2005 F150 Lariat SuperCrew. If you have power mirrors on your truck the following install should work on 2004/2005 F150 trucks. I do not know if this will work for trucks without power mirrors.

Time needed to install: Plan 5 hours

Technical Skill Required: If you're a do-it-yourselfer and don't mind twisting around like a yoga instructor then this install is for you. On a scale form 1-10 I'd give this project a 5.

Parts Needed:

Qty	Description	Cost	Mnfg.	Part No.	Comments
1	Drivers Side Mirror	\$169	Ford	5L3Z 17683-AAA	
1	Passenger Side Mirror	\$95	Ford	5L3Z 17682-AAA	
1	Wiring Pigtail Kit	\$13	Ford	3U2Z-14S411-AJA	You will sabotage the pigtail for the wires that will plug into the mirrors.
1	Mini Add-A-Circuit	\$5	LittelFuse	FHM200BP OFHM0200ZP	Used to tap into existing fuse box. Purchased at AutoZone
2	Relays	\$4ea.	?	DF005 20-3529-8	12 Volt – 30 AMP Purchased at AutoZone. Stocked in the fog-light section – odd? I noticed RadioShack carries relays – look similar - Catalog #: 275-226
1	DPDT Momentary Switch (Double Pole, Double Throw) Switch Rckr DPDT MOM/OFF/MOM	\$2.12	Digi-Key	GRS-4023C-1300	Purchased at Digi-Key. (http://www.digikey.com/) Note: This switch uses .187 Quick Connects. This is a mini-switch. There are plenty of switches to choose form – lighted, large, small, etc.
??	Wire/Miscellaneous Supplies	\$25	NA	NA	I used 16ga wire. Can't remember how much I used but buy 6 different colors to keep your sanity in wiring the relays!
DO NOT PURCHASE (unless you like useless parts around the garage)					
1	Power Folding Mirror Relay	NA	Ford	5L3Z 17L684-AA	DO NOT BUY – DOES NOT WORK. Another installer could not get to work as well. I believe this relay was not the correct part number.
1	Mirror Control Switch	NA	Ford	5L3T 17B676-AA3JA6	DO NOT BUY – Do not buy this switch as it will not work. I could not verify if there is indeed a special switch for the King Ranch that would work.
1	Wiring Pigtail Kit	NA	Ford	3U2Z-14S411-ASAA	DO NOT BUY – For relay switch.

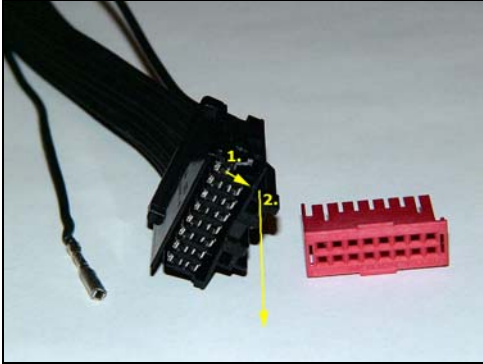
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Installation

1. **READ THIS DOCUMENT**: Read this entire document before beginning the install. **Especially APPENDIX B**. Make a mental note of where you will be running the wires so you don't have to revisit adding additional wires at a later time. Good luck.
2. **Door Panel Removal**: Remove door panels to both the driver's side and passenger side doors. This will give you access to the bolts holding on the power folding mirrors. **See APPENDIX A for Door Panel Removal**.
3. **Drivers Side Mirror Replacement**: Peel back plastic covering back side of mirror. Unplug wiring harness. Remove 4 nuts holding on mirror. Pull mirror away from car and put new power folding mirror in its place. Do the same for the passenger side mirror.
4. **Remove Wires From Pigtail Kit**: Remove wires from Ford Wiring Pigtail Kit - 3U2Z-14S411-AJA. Pull off plastic top of plug (red part) and then push each wire away from center of plug (1.) and then pull out of the housing (2.).

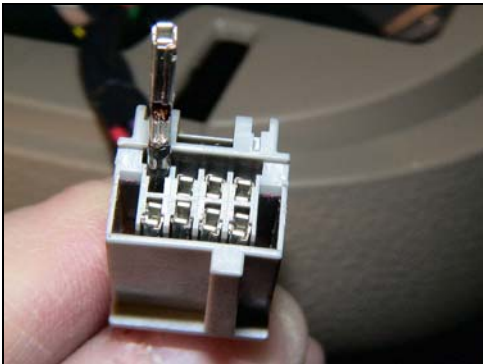
Pigtail kit with red top removed and wire pulled out.



5. **Place New Wires in Mirror Plug**: Take the wire with a terminal you received from the pigtail in the step above and place it into the mirror plug. Be careful removing the red top on the mirror plug. Once the top is removed; slide the non-terminal end in first into slots **7** and **16**. Do the same for the passenger side mirror.

NOTE: It is critical that you place the new wire in the correct hole. If you look closely at the plug you will see numbers in the corner letting you know which way the wires are numbered. Be sure the wires go into slots **7** and **16**.

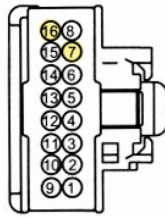
Example: Note this is just an example picture. This is not the actual Mirror plug. This is actually a picture of the Ford Switch on the door which turned out not to work.



C521 (BK)

14A005/14631

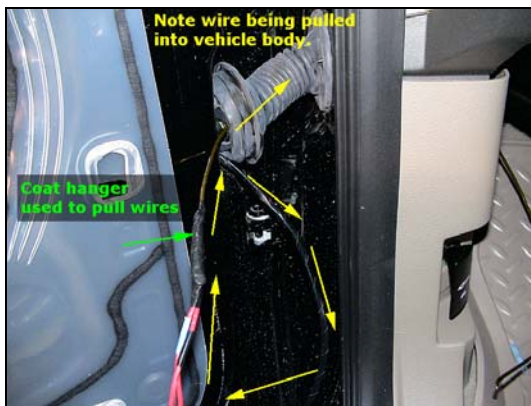
EXTERIOR REAR VIEW MIRROR,
DRIVER SIDE (17682)



Pin	Circuit	Gauge	Circuit Function	Qualifier
1	59 (DG-VT)	20	Rear window defrost relay output	
2	57 (BK)	20	Grounds	
3	541 (DB)	20	Up-Down mirror movement, motor +/-	
4	542 (YE)	20	Right-Left mirror movement, motor +/-	
5	540 (RD)	20	Right-Left mirror movement, motor +/-	
6	540 (RD)	20	Right-Left mirror movement, motor +/-	
7	1037 (VT-LG)	20	Power fold mirror in	
8	53 (BK-LB)	20	Interior lamps switched power	
9	57 (BK)	20	Grounds	
10	3 (LG-WH)	18	Left front turn lamps signal feed	
11	57 (BK)	20	Grounds	
12	-	-	Not Used	
13	-	-	Not Used	
14	-	-	Not Used	
15	-	-	Not Used	
16	1038 (VT-YE)	20	Power fold mirror out	

Note: Same wiring holes for passenger side mirror.

6. **Connect wire to new leads off mirror:** Connect two new wires to the leads of the mirror. Place heat shrink tubing over lead, connect wires and solder.
7. **Run wires to underside of instrument panel:**
 - a. **Drivers Side:** This is the tough part! Fish the wires from the driver's side mirror, down to the rubber connection exiting the driver's side door. To get the wires to the vehicle body you will use a flexible metal coat hanger (the cheap white/blue ones you get from the dry cleaners) from the vehicle fish the wire down to the door through the rubber housing. It's tough because the emergency brake is in the way but there is room to do it. Once the coat hanger is at the other end, attach the mirror wires and pull through the rubber boot into the vehicle cabin. A little tough but not impossible.



- b. **Passenger Side:** This is just as tough. Remove the fuse box trim cover and the trim directly to the right of the fuse box. Both pieces are held by clips, just give a little pull. You will need the room to get the wire from the passenger door. Now with the trim removed, fish a coat hanger from the vehicle compartment, down the rubber housing to the passenger door. With one hand on the fish wire and the other on the rubber connection between the doors you should be able to massage the wire down. It's a little tricky because the fuse box is in the way. Just don't force the wire down the rubber tube or you could have a short on your hands.
8. **Pick location for relays and switch:** Pick whatever location you want for relays. There is a lot of room under the dash. I placed relays behind the radio cover but they could easily have been installed under the steering column. As for the switch to activate the mirrors I placed mine below the light switch.

Possible switch locations

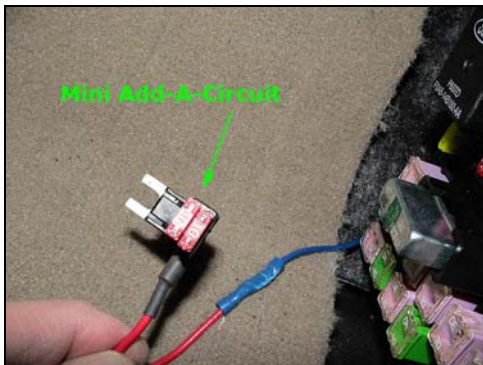


Note area shaded in yellow. There are 4 plastic pins that hold the light switch panel to the dash. There appears to be two alignment/support pins on this mini panel. I would prefer to place my switch to the left of the switch but was concerned about messing with the support pin. It probably could be done and the pin probably doesn't do much but on the side of caution I moved the switch to the lower panel below the interior light dimmer switch.

Photo property of Bob Chapman on <http://www.f150online.com>.

- 9. Add a Hot Wire - Tap into Fuse Box:** Use the Mini Add-A-Circuit and place it in F4 – the location where your fuse would have gone if you had purchased a King Ranch with the power folding mirrors. There may already be a 10 Amp mini fuse in its place. Remove the mini fuse and place it in the Add-A-Circuit. Only add a 10 Amp fuse as that is what is called for by Ford. I suppose you could tap in behind the box but that was a little risky so I simply added a fuse. Run the new hot lead to the relays.

NOTE: KEEP THIS CIRCUIT UNPLUGGED UNTIL ALL WIRING IS COMPLETE. This will save you from blowing a fuse, etc.



- 10. Add a ground wire – Tap into existing vehicle ground:** You can tap into an existing ground almost anywhere. I ran one from the passenger side near the fuse box. In Step 6b you removed two pieces of trim. Behind the trim closest to the passenger side door you will notice a green screw. Tap into this ground as it is easily accessible.
- 11. Gain access behind center dash:** To gain access to relay location open ashtray and begin pulling up on bottom trim of dash cover. A couple photos are shown below but if you want greater detail visit <http://www.f150online.com/forums/showthread.php?s=&threadid=133164>.



Photos property of ScottFcasni on <http://www.f150online.com>.

- 12. Run all wires to center console:** Wires from driver's side mirror can be passed directly to the center console through the space under the dash. Wires from the passenger side can be passed to the center console through the space behind the glove box. To get to the space behind the glove box, open glove box, press upper right hand corner in and pull forward. Glove box will pull forward giving complete access to space.



- 13. Connect the wires:** Rather than explain how your wiring should look I drafted up a wiring diagram of how the wires should connect. There may be a better way but this is the way that ended up working for me. I did all the line on the diagram in color so you can print it out in color and have it by your side during the install. **APPENDIX B.**
- 14. Connect Power to Fuse Box:** Now that everything is wired you can go back to Step 9 where you tapped into the fuse box. Place a fuse in the circuit and plug the Mini Add-A-Circuit into the fuse box.
- 15. Test Mirrors:** If all is wired correctly the mirrors should fold and unfold depending on which way you move the switch. If nothing happens, check the fuse. If the fuse is blown something was wired incorrectly.

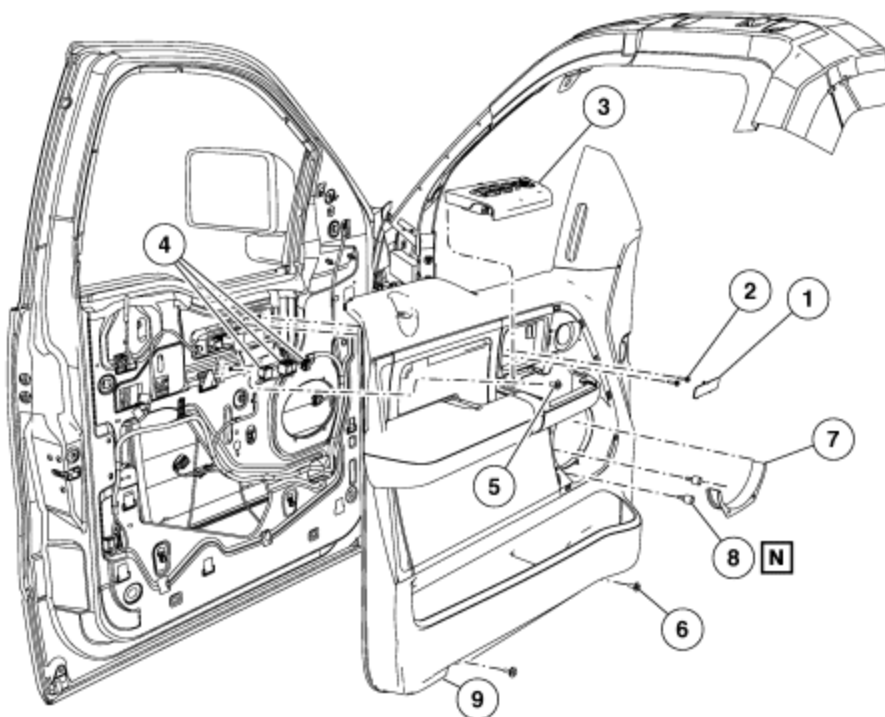
Finished!

APPENDIX A

Front Door Trim Panel Removal and Installation

NOTE: LH side is shown. RH side is similar.

1. Remove the front door speaker. Refer to [Section 415-00](#) .
2. Remove the components in the order indicated in the following table.



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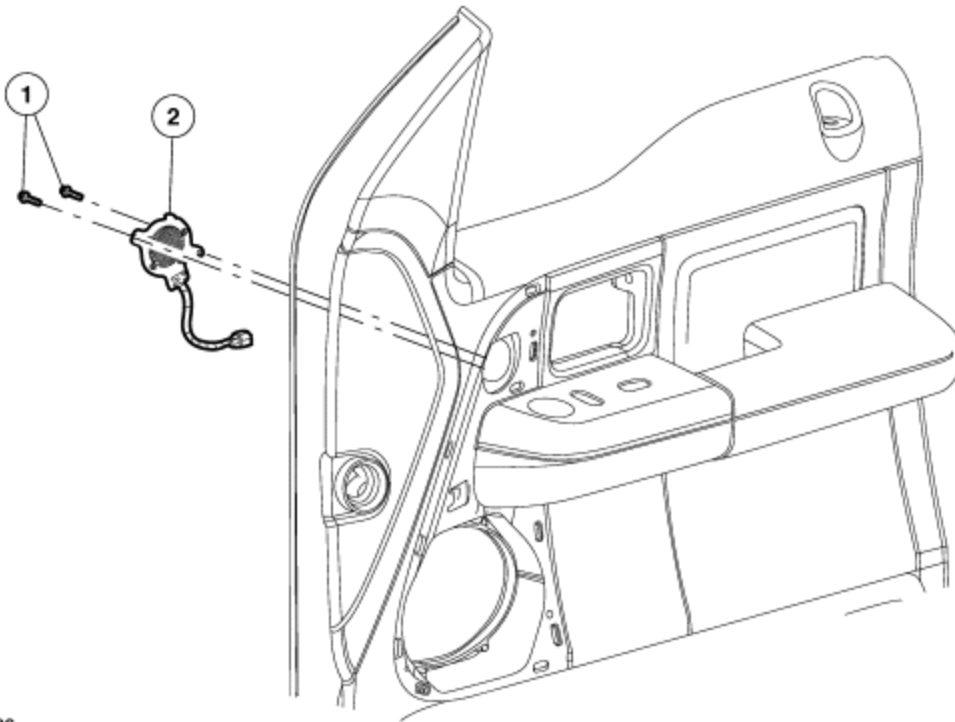
Item	Part Number	Description
1	224A60	Cover plate
2	N602704-S301	Screws (2 req'd)
3	14B132A (RH) / 14B133B (LH)	Window control switch
4	14630 (RH) / 14631 (LH)	Window control switch electrical connectors
5	W505424-S301	Bolt
6	W701930-S424	Bolts (2 req'd)
7	19A034	Water shield
8	W709132-S300 (High series trim) / W709133-S300 (Low series trim)	Speaker standoff (2 req'd)
9	23942 (RH) / 23943 (LH)	Front door trim panel

3. To install, reverse the removal procedure.

Subject: Speaker removal

Front Door Tweeter

1. Remove the front door trim panel. For additional information, refer to [Section 501-01](#) .
2. Remove the parts in the order indicated in the following illustration and table.

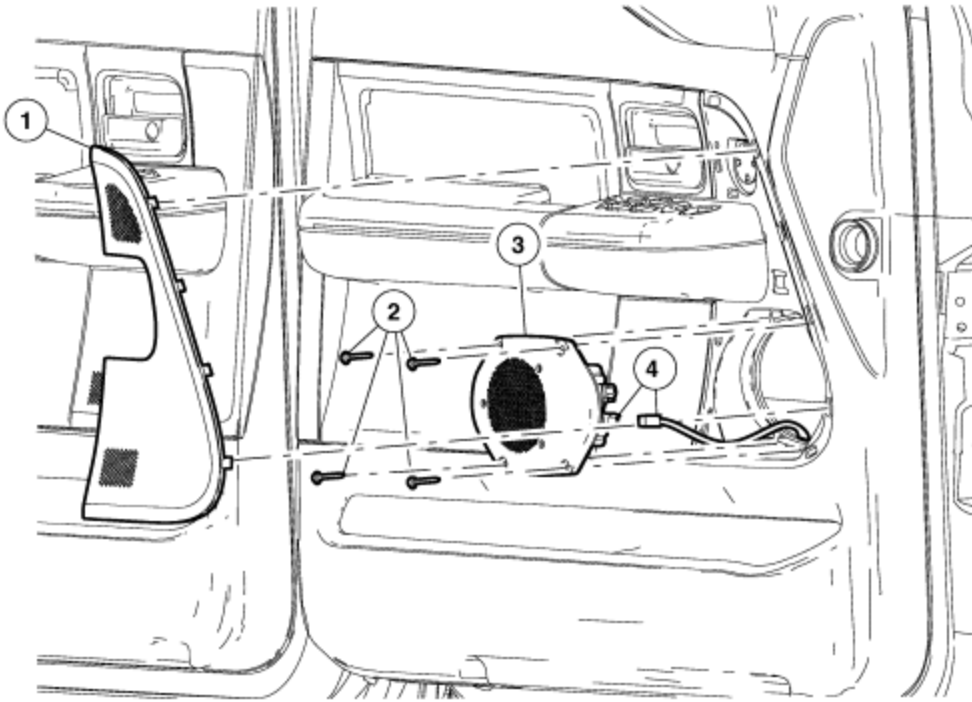


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Item	Part Number	Description
1	W701678	Screws
2	19B170	Tweeter speaker (RH)
2	19B171	Tweeter speaker (LH)

Front Door

3. Remove the parts in the order indicated in the following illustration and table.



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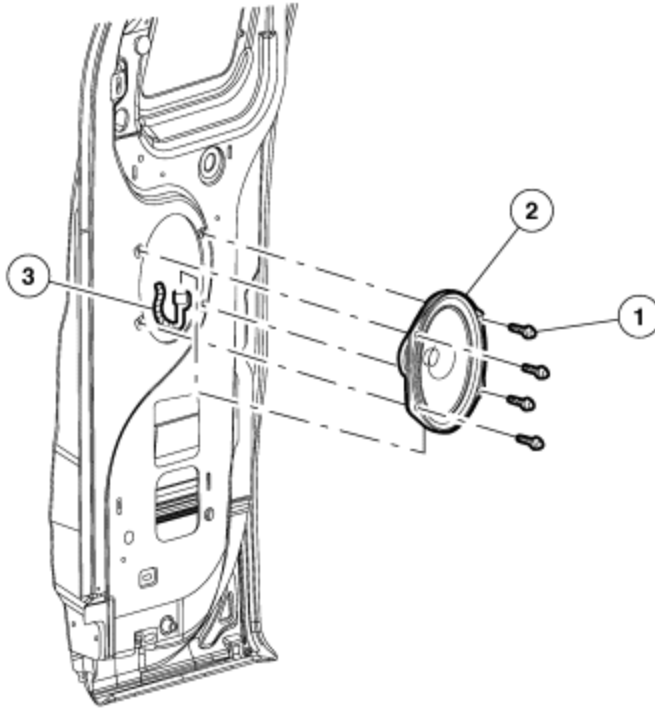
Item	Part Number	Description
1	1501848	Front door speaker trim panel
2	56916	Screws
3	18808	Speaker
4	180103	Electrical connector

Rear Door

4. Remove the rear door trim panel. For additional information, refer to [Section 501-01](#) .

5. NOTE: Regular Cab is shown, others are similar.

Remove the parts in the order indicated in the following illustration and table.



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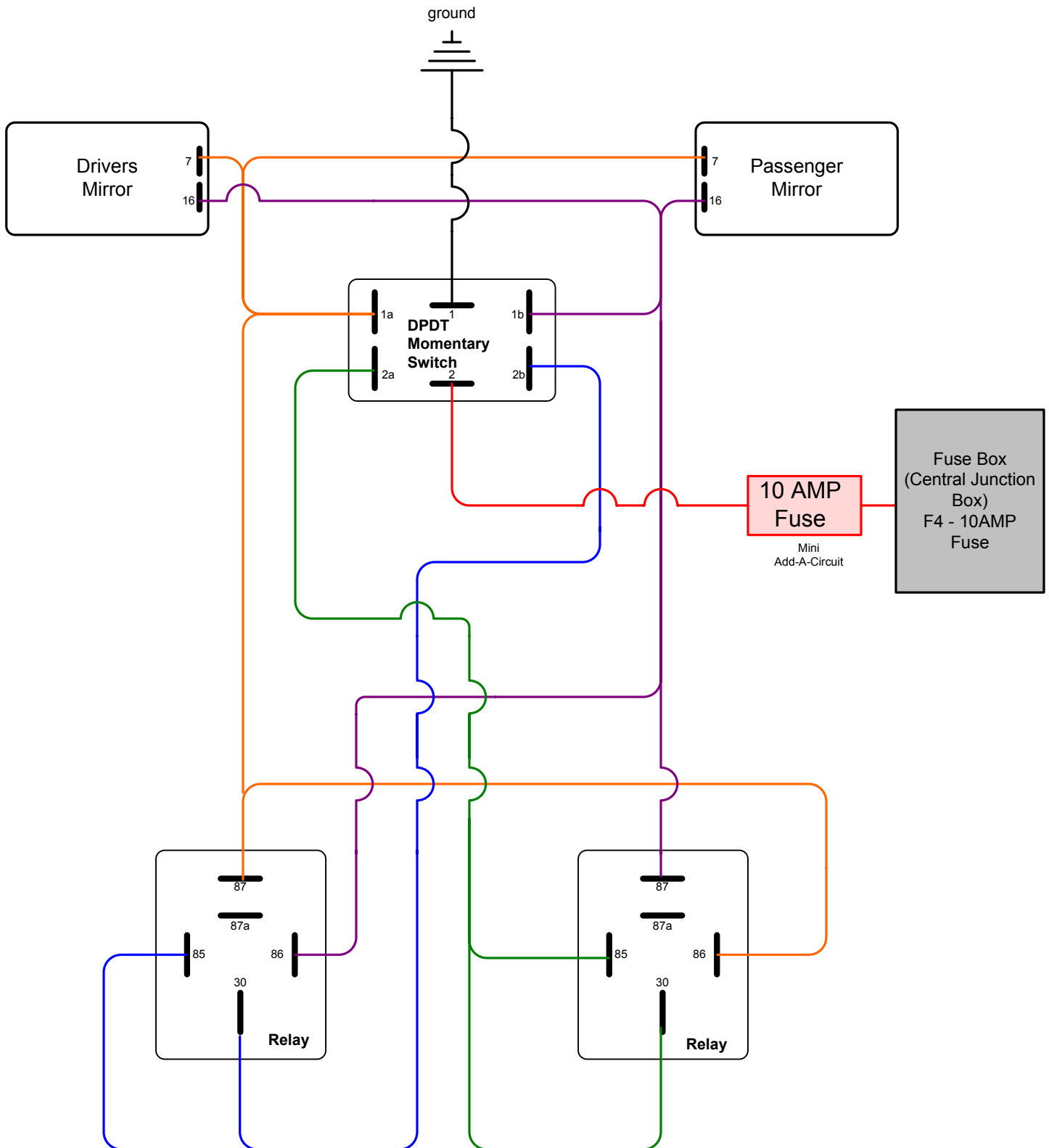
Item	Part Number	Description
1	W706766	Screws
2	18808	Speaker
3	180103	Electrical connector

All

6. To install, reverse the removal procedure.

APPENDIX B

2005 F150 - Wiring Diagram for Power Folding Mirrors



Note: Numbers indicated on parts could vary depending on vendor.