

## Rear Vision System – Mirror Display 2013-Current Ram (Kit part number 1009-9518)

**NOTE 1:** The mirror in this kit has no provision for 911 or concierge button functions and is not compatible with Exterior Auto Dimming Mirrors or Auto High Beam Control. Installation will result in the loss of these functions.

**NOTE 2:** If your vehicle is equipped with a uConnect mirror, an aftermarket Microphone (available separately as Brandmotion kit 5000-PESMVR) must be installed to maintain voice operation.

**Please read thoroughly before starting installation  
and check that kit contents are complete.**

### **Items Included in the Kit:**

- Rear Vision Display Mirror
- Mirror Harness
- Chassis Harness
- Tailgate Handle with Camera
- 1 bag containing:
  - 17 Wire Ties
  - Z-tec Corrosion Inhibitor (in a white bottle)
- 1 bag containing:
  - These instructions
  - Template
- 1 bag containing:
  - Relay set (male & female connectors)

### **Tools Required:**

- Socket Wrench with 8mm & 10mm Sockets
- T20 & T30 Torx Bits
- Flat Blade Screwdriver
- Power Drill
- 1/8" Drill Bit
- 1" Hole Cutter
- Center Punch
- Pushpin Removal Tool
- Plastic Trim Removal Tool
- Round File or Deburring Tool
- Wire Stripper
- Soldering Iron & Solder
- Masking Tape

**We strive to provide accurate and up-to-date installation instructions.  
For the latest full color instructions, please visit [www.brandmotion.com](http://www.brandmotion.com)**

### **Install Tailgate Handle Camera**

1. Set up a work area on which to set the tailgate after removal. This area should be well protected to avoid damage to tailgate.
2. Use your fingers to remove the black plastic filler panel at rear of pickup bed adjacent to the license plate. Press on the end tab and lift outward. Next, slide the red tab from the locked position and unplug the tailgate power lock harness connector.



3. Unhook both tailgate support straps by inserting a Flat Blade Screwdriver between the locking tab and strap mount. Lift the locking tab away from the strap mount with the screwdriver while sliding the tailgate strap upwards. The tailgate strap hanger can now be removed from the mount.



4. Open tailgate about ten degrees and lift right side of the tailgate off the pin. Next, slide tailgate to the right to remove taking care not to damage the paint. **NOTE:** Tailgate removal and installation requires two people.

## INSTALLATION INSTRUCTIONS

- Remove the handle access panel inside the tailgate using a T30 Torx driver. (NOTE: If vehicle is equipped with a bed liner, the tailgate portion of the liner must be removed prior to this step.)



- Remove nuts attaching handle to tailgate using an 8mm Socket, then remove handle from tailgate.
- Remove the lock cylinder from existing handle.
- Remount the lock cylinder in the supplied Tailgate Camera Handle using an 8mm Socket.
- Route gray Camera Harness connector through tailgate and use an 8mm Socket to install supplied Tailgate Camera Handle using the existing hardware.



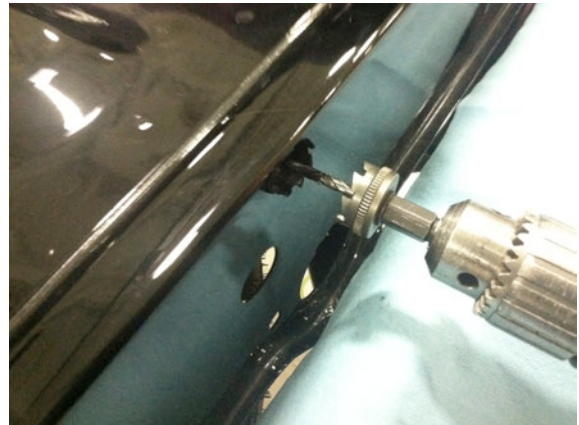
- Reinstall handle bolts.
- Route supplied Camera Harness through the pass-through hole in the inner brace of the tailgate.



- Route Camera Harness through the rectangular hole in the bottom of the tailgate.
- Use Masking Tape to affix supplied Template B above the oval spare tire access slot (located just right of center on the pickup bed rear edge) and mark the hole center using a Center Punch.



- Check the area behind the hole you marked for wiring. If any wiring is present, secure it away from the area to be drilled.
- Use a 1" Hole Saw to make the Camera Harness pass through hole.



- Use a Cotton Swab or small brush to apply supplied Z-tec Corrosion Inhibitor to exposed metal edges.





17. Taking care not to damage the Camera Harness, reinstall tailgate by lifting it into place, rotating it down about ten degrees, and sliding it to the left.
18. Reinstall both tailgate straps by placing the large opening of the tailgate strap hangers over the tailgate strap mounts and pulling down.
19. Seat the Camera Harness grommet in the pass through hole you drilled in the end of the pickup bed using your fingers.
20. Plug in the tailgate power lock harness connector (removed in Step 2) and slide the red tab to the locked position. Reinstall the black plastic filler panel at rear of pickup bed adjacent to the license plate.

**Install Chassis Harness**

21. Remove front driver's side kick panel/sill plate by lifting it at the rear and working your way forward with your hands.



22. Remove rear driver's side sill plate by lifting it at front and working your way back with your hands.



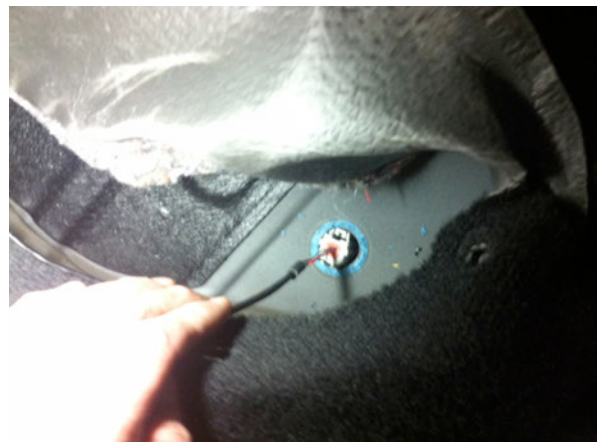
23. Lift driver's side rear seat to expose the under seat storage compartment. Pull three pushpins out of the driver's side rear seat storage compartment using a pushpin removal tool.



24. Pull back carpeting and remove the body floor plug.



25. Insert the large gray connector end of the supplied Chassis Harness into the body floor plug hole.



26. Seat grommet affixed to the supplied Chassis Harness in the body floor plug hole by firmly pressing it with your fingers.



27. Route the Chassis Harness 6-pin mirror connector through the seat riser reinforcement hole.



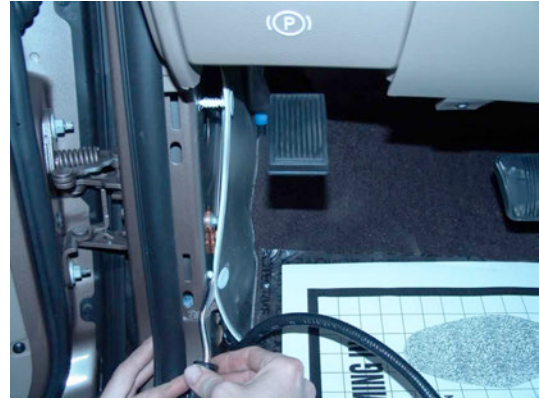
28. Reinstall carpet and reinstall the three pushpins removed earlier.  
29. Route Chassis Harness around B-pillar trim by lifting up on the trim and feeding harness through to front.



30. Continue to route Chassis Harness along the driver's side front door opening sill area. NOTE: This will be a tight fit, following the existing wiring harness.



31. Reinstall rear sill plate by pressing it back into place with your hands.  
32. Remove driver's side kick panel insulation pad retainers using a Pushpin Removal Tool. Route the supplied Chassis Harness behind the insulation (between insulation and metal frame) then reinstall the insulation).



33. Route Chassis Harness behind rear cab mount. RECOMMENDED: Use a wire tie to secure Chassis Harness between the cab and bed mount.



34. Continue to route supplied Chassis Harness next to the existing wiring harness along the inside edge of the frame rail. RECOMMENDED: Secure supplied Chassis Harness to the existing wiring harness with wire ties.  
35. Once the Chassis Harness has been routed to the rear of the truck bed, coil and secure any excess length on the harness and tuck above the spare tire. Secure with Wire Ties (recommended).  
36. Plug Camera Harness connector into the Chassis Harness connector at the rear of the vehicle.





**Mirror Removal & Installation**

- 37. Remove the existing vehicle mirror by twisting it approximately 30 degrees. Carefully unplug the existing mirror connector.
- 38. Remove the overhead console by releasing the retention clips on the back of the unit, then pulling it rearward.



- 39. Remove the driver's side sun visor anchor using a T20 Torx driver.



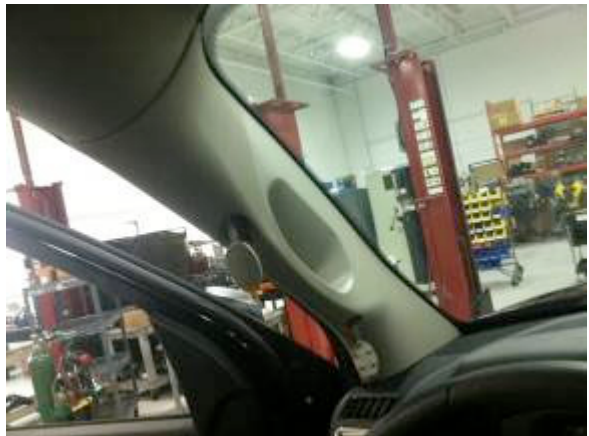
- 40. Remove the driver's side sun visor using a 8mm socket.



- 41. Remove both driver's side A-pillar bolt covers using a small Flat Blade Screwdriver. Insert screwdriver into the gap between the bolt cover and A-Pillar cover. Gently pry the bolt cover away from the A-pillar cover while being careful not to damage trim.



- 42. Remove A-pillar bolts with a 10mm socket, and then remove the A-Pillar cover by shifting it away from the A-pillar with your hands.



- 43. Remove the driver's side end of dash cover by gently prying it away from the dashboard using a Plastic Trim Tool. Be careful not to damage the trim.



**INSTALLATION INSTRUCTIONS**

44. Carefully twist on the supplied Mirror approximately 30 degrees until it clicks into place.
45. Tuck existing mirror wiring under headliner and route supplied Mirror Harness down driver's A-pillar.

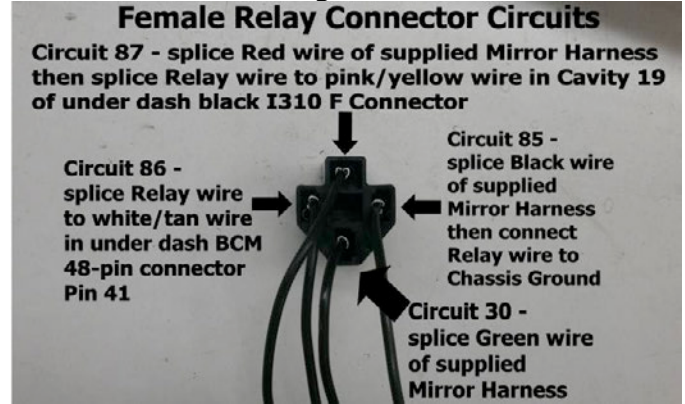


46. Using the supplied female Relay connector (Figure 1), splice the leads of the supplied Mirror Harness into the wires of each numbered circuit as follows (Recommended: Solder and cover with Heat Shrink Tubing.):

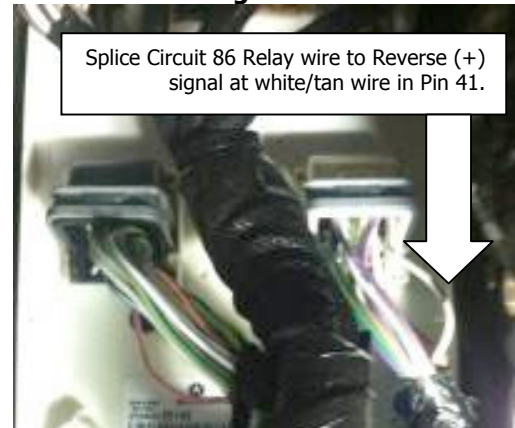
**Mirror Harness & Relay Connections**

Circuit	Function/ Polarity	Connection
86	Reverse (+)	Splice Relay wire to white/tan wire in under dash BCM white 48-pin connector Pin 41 (Figure 2)
87	Ignition (12v +)	Splice Red (Ignition) Mirror Harness lead to Relay wire. Then splice Relay wire to pink/yellow wire in Cavity 19 of under dash black I310 F Connector adjacent to parking brake cable grommet (Figures 3 & 4)
85	Ground (-)	Splice Black (Ground) Mirror Harness lead to Relay. Then splice Relay wire to Chassis ground – attach Eyelet to an existing ground bolt or use a nut to secure to an existing stud.
30	Reverse (+)	Splice Green (Reverse) wire of supplied Mirror Harness to Relay wire.

**Figure 1**



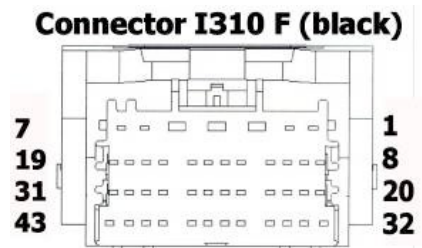
**Figure 2**



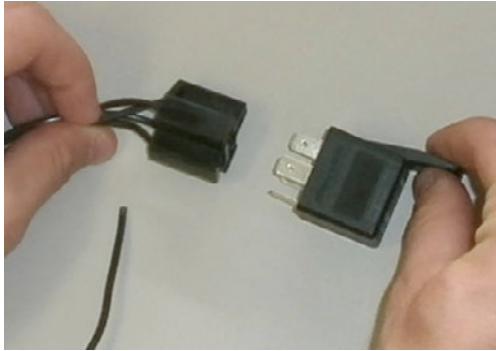
**Figure 3**



**Figure 4**



47. Plug the supplied male Relay connector into the female Relay connector and secure to existing vehicle wiring using a supplied Wire Tie.



48. Connect supplied Mirror Harness 6-pin connector to supplied Chassis Harness.

49. **If your vehicle is equipped with a uConnect mirror,** an aftermarket Microphone (available separately as Brandmotion kit 5000-PESMVR) must be installed to maintain voice operation. If your vehicle is NOT equipped with a uConnect mirror, proceed to Step 50.

A. Five wires are supplied in the microphone kit:

- (1) Yellow - Microphone +
- (1) Blue - 12V +
- (3) Black - Ground. All three black wires are identical and are joined together inside the harness. Additionally, the third black Ground wire will NOT be used in this application.

B. Make the following connections based upon whether the vehicle has a 7-pin, 10-pin, or 14-pin Mirror Connector:

**14 pin mirror connector**

Pin #	Mic Wire Color	Polarity	Function
7	Blue	+	Ignition 12 volts
11	Yellow	+	Microphone Positive
12	Black	-	Microphone Negative
14	Black	-	Ground

**10 pin mirror connector**

Pin #	Mic Wire Color	Polarity	Function
5	Blue	+	Ignition 12 volts
8	Yellow	+	Microphone Positive
9	Black	-	Microphone Negative
4	Black	-	Ground

**INSTALLATION INSTRUCTIONS**

**7 pin mirror connector**

Pin #	Mic Wire Color	Polarity	Function
1	Blue	+	Ignition 12 volts
4	Yellow	+	Microphone Positive
3	Black	-	Microphone Negative
2	Black	-	Ground

C. Microphone Wire Connection techniques:

Brandmotion recommends that you DO NOT cut any wires. Instead, either use the "strip and splice" method or use T-tap connectors to make your connections. When making your connections particularly with T-taps, be certain to test fit any trim pieces, which will need to be reinstalled on the vehicle.

Strip and Splice: This method requires the following steps and is recommended for best results.

- Strip back a small portion of the insulation from the wire.
- Using a small wire pick, separate the exposed wire into two groups.
- Insert the corresponding wire from the kit through the center as if you were threading a needle.
- Twist excess wire around the exposed area tightly and cover with heat shrink tubing or wrap with electrical tape.
- Use a Tie Wrap/ Zip Tie to secure your connection by placing it over the taped portion of the wire where the junction was made.

Using T-tap connectors: Use red T-tap connectors as all the wires that you will be attaching to are of small gauge and larger T-taps will create false contacts which will not allow the system to function properly.

D. Using adhesive tape supplied in the microphone kit, mount the microphone in the desired position.

E. Route the cable attached to the microphone to the location where you made your connections and plug in the connector.

F. Prior to vehicle reassembly, test microphone for function with uConnect according to uConnect operating instructions contained in vehicle owner's manual.

50. Start vehicle and shift into Reverse in order to check that all connections were made properly. If all of the connections are correct you will see a video image displayed on your aftermarket display.

51. Reassemble vehicle.