



Power Folding Mirror Installation

Classification	Parts and Accessories Bulletin	Section/Group	12 - Exterior Fittings	Country/Region	All
Year	All	Model	Model S	Version	All

Bulletin Classification: *This bulletin provides instructions and guidelines for a vehicle procedure that is not the result of a defect. This bulletin might not be VIN-specific. These instructions assume knowledge of motor vehicle and high voltage electricity repairs, and should only be executed by trained professionals. Tesla Motors assumes no liability for injury or property damage due to a failure to properly follow these instructions or repairs attempted by unqualified individuals.*

This Service Bulletin supersedes SB-14-12-001, dated 8-Jan-14. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

This bulletin contains instructions for aftermarket installation of optional power folding mirrors. Power folding mirrors can be remotely folded flush to the body for easier parking in narrow spaces.

Required Part(s):	Part Number	Description	Quantity
	1028641-00-A	SWITCH, WINDOW, POWER FOLD, DRIVER LH	1
	1025657-00-A	MIRROR, PREMIUM, POWERFOLD, RH (for North America)	1
	1025658-00-A	MIRROR, PREMIUM, POWERFOLD, LH (for North America)	1
	1025657-02-A	MIRROR, EXPORT, PREM, PWRFLD, RH (for Europe)	1
	1025658-02-A	MIRROR, EXPORT, PREMIUM, PWRFLD, LH (for Europe)	1

If necessary:

1004419-00-H	ASY,HRN,WGRMT,DOOR,FR,LT,MDLS,LHD,TECH	1
1004424-00-H	ASY,HRN,WGRMT,DOOR,FR,RH,MDLS,LHD,TECH	1
1004425-00-H	ASY,HRN,WGRMT,DOOR,RR,LT,MDLS,BASE	1
1004426-00-H	ASY,HRN,WGRMT,DOOR,RR,RT,MDLS,BASE	1
1014951-00-A	ANTENNA PASSIVE ENTRY	2
1026519-00-A	SHIM, NYLON, ADHESIVE BACKED	4

Shop supplies:

Felt tape (if necessary)

These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Manual.

Correction Description	Correction	Time
Install Power Folding Mirrors	S011412001	1.2
Install Power Folding Mirrors, Front Door Harnesses, and Rear Door Harnesses	S021412001	4.7
Install Power Folding Mirrors, Front Door Harnesses, Rear Door Harnesses, and Instrument Panel Passive Entry Antennas	S031412001	4.8

Inspection

NOTE: This procedure refers to the LH mirror. Follow the procedure for both mirrors.

1. Remove the front door trim panel (refer to Service Manual procedure 15130201).
2. Check the color of the door harness electrical connector near the mirror. If the connector is black, the front and rear door harnesses need to be replaced (Figure 1). Continue to the Door Harness Replacement section of this document. If the connector is gray, the door harnesses do not need to be replaced (Figure 2). Skip to the Mirror Installation section of this document.

NOTE: Vehicles built in late May 2013 and later include the updated (gray) door harnesses.



Figure 1 (Early door harness)



Figure 2 (Late door harness)

Door Harness Replacement

Front Door Harness Removal

NOTE: This procedure refers to the LH harness. Follow the procedure for both harnesses.

1. Raise the front window.
2. Remove the front door plate (Figure 3).



Figure 3

3. Remove the LH instrument panel side cover (refer to Service Manual procedure 14054102).
4. Remove the LH sill trim panel (refer to Service Manual procedure 15180102).
5. Unclip the harness edge clip from the lower A-pillar (Figure 4).



Figure 4

6. Release the harness boot from the A-pillar and the door.
7. Push the harness boot into the door.
8. Pull 1 wire bundle out and disconnect the electrical connector. Continue to pull out wire bundles and disconnect them one at a time.
9. Remove the mounting clips from the door.
10. Remove the harness.

Passive Entry Antenna Installation

1. Check the passive entry antennas, located at the sides of the instrument panel. If the vehicle is equipped with round passive entry antennas, replace the LH and RH instrument panel antennas with the rectangular versions (Figures 5 and 6).

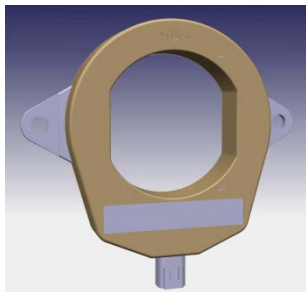


Figure 5 (Round passive entry antenna)

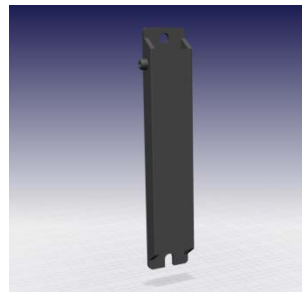


Figure 6 (Rectangular passive entry antenna)

Front Door Harness Installation

1. Place the new harness through the large opening in the inner panel. Route the trim panel section of the harness through the lower hole in the inner panel (Figure 7).
2. Install the 9 retainer clips into the door (Figure 7). The red circles show clips that are inserted from inside the door shell; the yellow circles show clips that are inserted from outside the door shell.

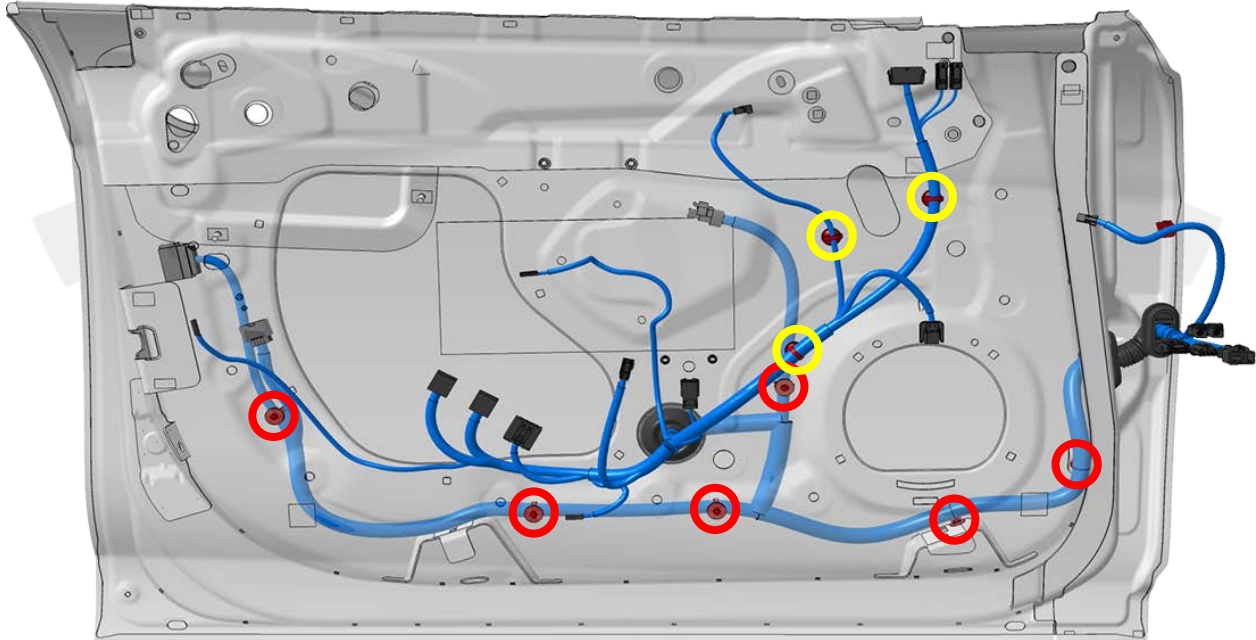


Figure 7 (LH shown)

3. Connect the wire bundles at the body, one at a time. Push any excess wire through the hole in the body.

NOTE: The harness contains compatible male and female connectors of the same type, which makes it possible to plug the harness into itself. Ensure that each connector on the harness is connected to its respective component in the door.

4. Make sure that the arrow on the harness boot is facing up. Attach the harness boot to the body and the door.

NOTE: Silicone lubricant can be applied to the boots to help installation.

⚠ CAUTION: To avoid water ingress, air leakage, and noise, make sure that both boots are completely seated. The boots should be smooth around the entire perimeter, with no wrinkles.

5. Install the front door plate.

NOTE: The front door plate must be installed before the next step. Installation of the plate changes the position of the door release cable and harnesses, possibly allowing them to contact the window. This might cause noise when the window is raised and lowered.

6. Temporarily connect the power window switch. Raise and lower the window several times, ensuring that there is no contact between the window and any part of the harness.

NOTE: Do not install the door trim panel yet.

Rear Door Harness Removal

NOTE: This procedure refers to the LH harness. Follow the procedure for both harnesses.

1. Raise the rear window.
2. Remove the door trim panel (refer to Service Manual procedure 15132001).
3. Remove the door speaker (refer to Service Manual procedure 21211002).
4. Remove the inner handle bracket (Figure 8).



Figure 8

5. Remove the forward drain plug (Figure 9).

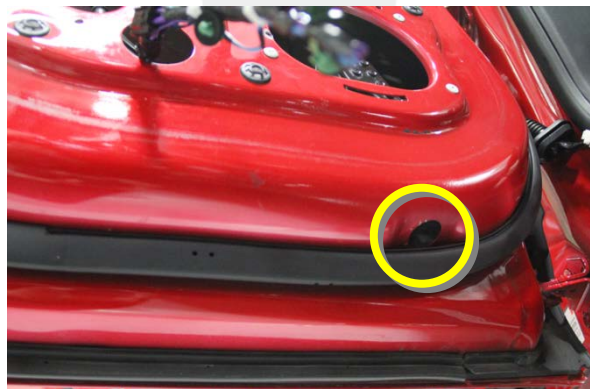


Figure 9

6. Disconnect the electrical connector from the power window motor.
7. Remove the 3 screws that secure the power window motor.

8. Mark the position of the forward window regulator channel on the door structure (Figure 10).



Figure 10 (Front door shown)

9. Loosen the mounting nuts at the top and bottom of the forward regulator channel.

NOTE: The window regulator and motor do not need to be removed from the door.

10. Release the harness boot from the body and the door.
11. Push the harness boot into the door.
12. Disconnect the 2 electrical connectors at the B-pillar.
13. Release the clips that attach the door harness to the door shell.
14. Remove the harness.

Rear Door Harness Installation

1. Place the harness in the door.
2. Attach the 2 forward clips to the vertical bracket on the forward edge of the door (Figure 11).

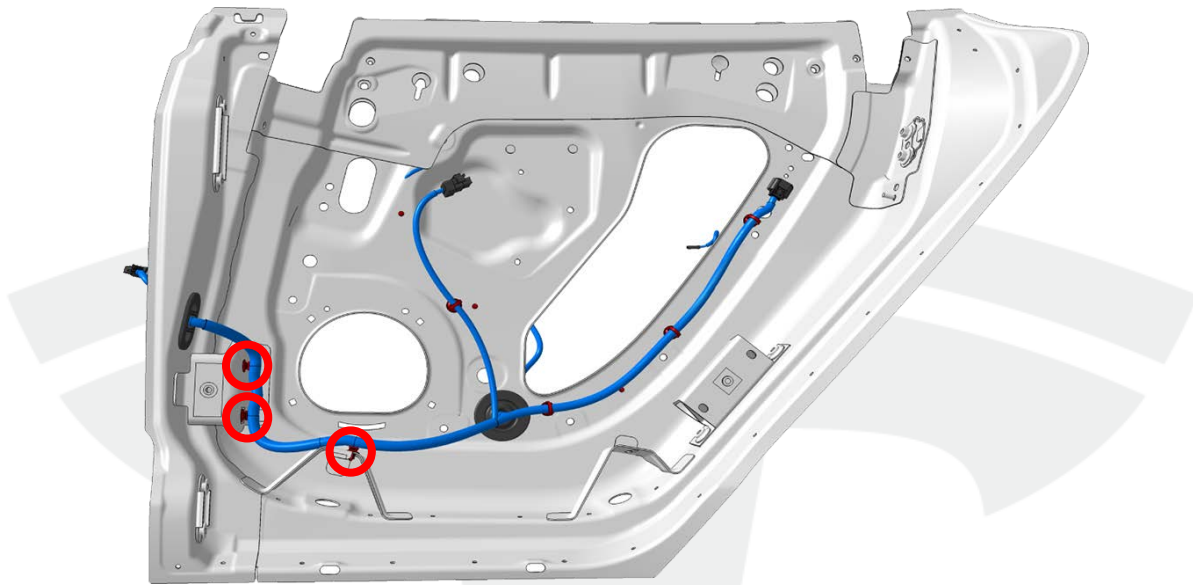


Figure 11 (LH shown from outside, with outer door skin removed)

3. Position the forward window regulator channel toward the inboard side of the door to allow access to the 3rd clip.
4. Install the 3rd clip on the horizontal bracket (Figure 11).
5. Connect the electrical connector to the window motor.

NOTE: The harness must be outboard of the window motor.

6. Install the 3 screws that retain the window motor to the door (torque 2.4 Nm).

7. Install the rest of the door harness clips (Figure 12). The red circles show clips that are inserted from inside the door shell; the yellow circles show clips that are inserted from outside the door shell.

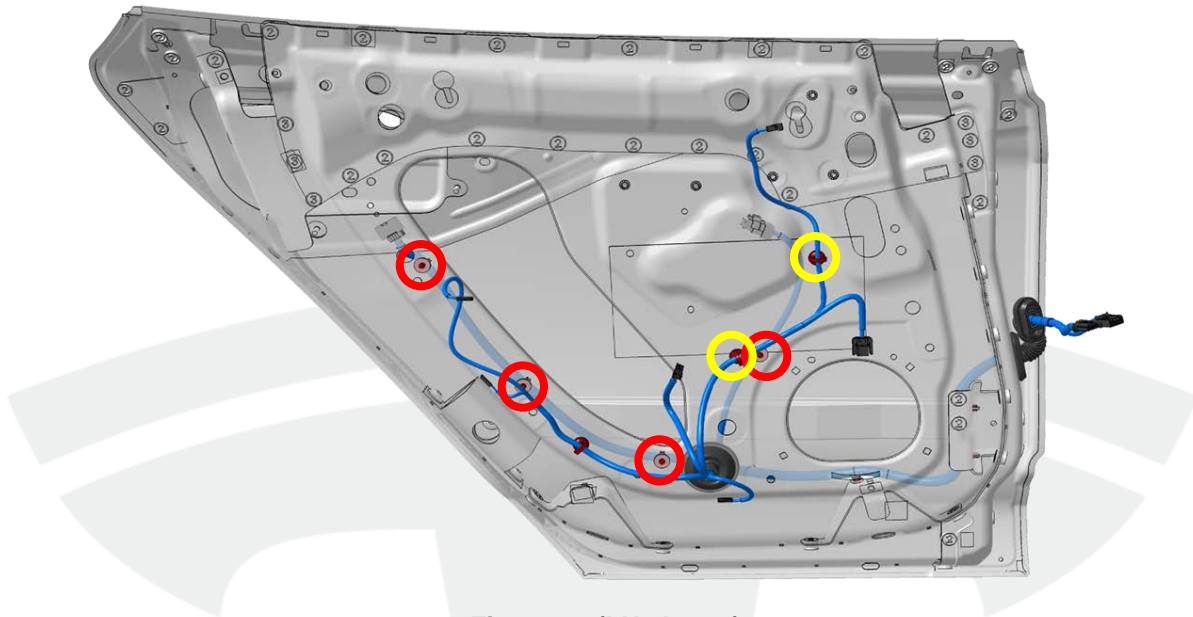


Figure 12 (LH shown)

8. Align the forward window regulator channel to the marks made before removal. Tighten all 3 nuts (torque 10 Nm).
9. Make sure that the arrow on the harness boot is facing up. Attach the harness boot to the body and the door.

NOTE: Silicone lubricant can be applied to the boots to help installation.

⚠ CAUTION: To avoid water ingress, air leakage, and noise, make sure that both boots are completely seated. The boots should be smooth around the entire perimeter, with no wrinkles.

10. Temporarily connect the power window switch. Raise and lower the window several times, ensuring that there is no contact between the window and any part of the harness.
11. Reinstall the forward drain plug (Figure 9).
12. Reinstall the other parts that were removed for access.

Mirror Installation

1. Use a non-marring pry tool to remove the painted “skull cap” mirror cover from the door mirror assembly. Do not discard the skull cap; it will be installed on the new mirror assembly later in the procedure.
2. Remove the mirror assembly (refer to Service Manual procedure 12090202).
3. Remove the fixed glass assembly from the old door mirror.
4. Transfer the fixed glass assembly to the new mirror. Install the bolts loosely.

5. Hold the glass guide rail against the mirror while tightening the bolts (torque 6 Nm) (Figure 13).

NOTE: Ensure that there is no gap between the guide rail and the mirror.

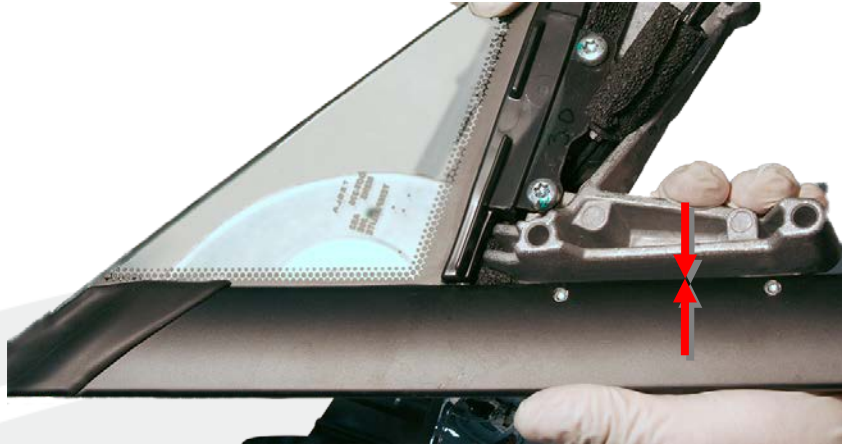


Figure 13

6. Apply felt tape to the mirror area of the door panel, if it is not already installed (Figure 14).

7. Add 2 shims to the mirror area of the door panel, if they are not already installed (Figure 14).

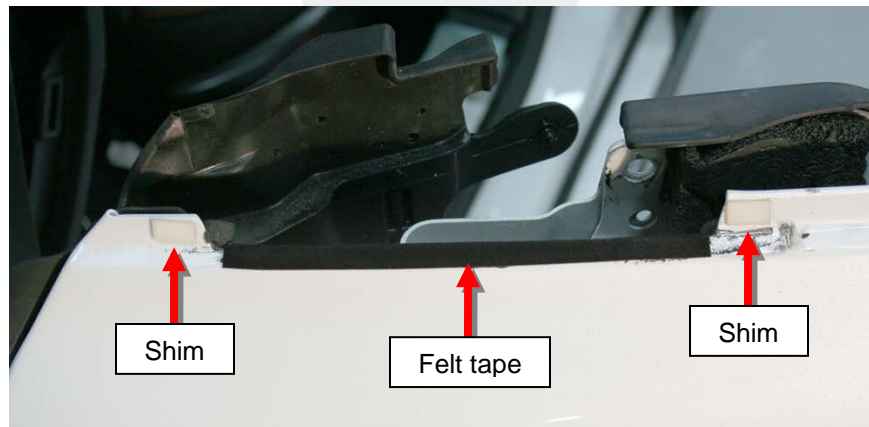


Figure 14

8. Position the mirror assembly on the door.

9. Push down on the mirror assembly while installing the 3 bolts loosely.

10. Continue to push down on the mirror assembly while fully tightening the bolts (torque 23 Nm).

11. Snap the skull cap mirror cover onto the new mirror.

12. Tape the mirror harness connector to the door (Figure 15).

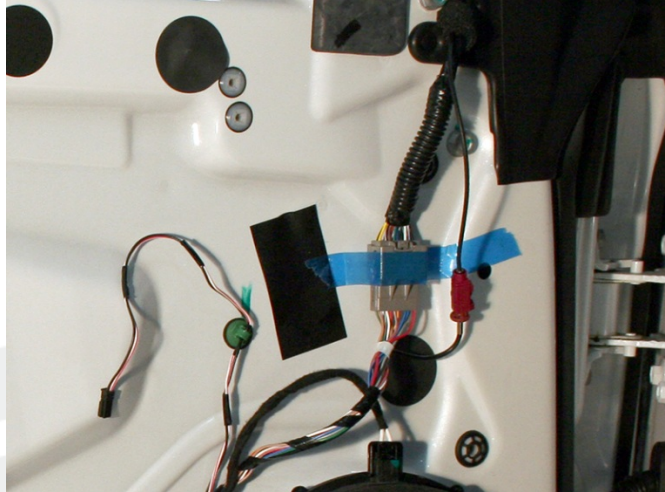


Figure 15

13. Install the new power window/power mirror switch on the driver's door trim panel.

14. Reinstall the door trim panel and the other parts removed for access.

15. Connect a laptop with Toolbox to the Ethernet port and CAN bus.

16. Update the vehicle firmware, if it is not already the current release.

17. Select Views > Vehicle Configuration > Vehicle Configuration Update.

18. Click the Power Folding Mirrors check box, then click the Write button.

19. Select Views > Firmware and ECU Programming > Body and Door Controller VIN Learn.

20. In the All Nodes dropdown menu, select BDY, then click the start/play button.

21. In the dropdown menu, select DDM, then click the start/play button.

22. In the dropdown menu, select PDM, then click the start/play button.

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