



## Wind Noise From Front Doors And Windows

|                       |                   |                      |                                   |                       |     |
|-----------------------|-------------------|----------------------|-----------------------------------|-----------------------|-----|
| <b>Classification</b> | Campaign Bulletin | <b>Section/Group</b> | 45 - Noise, Vibration & Harshness | <b>Country/Region</b> | All |
| <b>Year</b>           | 2016              | <b>Model</b>         | Model X                           | <b>Version</b>        | All |

**Bulletin Classification:** This campaign bulletin addresses a known non-safety-related condition and provides recommended technical diagnosis and repair procedures. Apply this procedure to all vehicles in the affected VIN range listed. These instructions assume knowledge of motor vehicle and high voltage electrical component 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-16-45-001, dated 3-Jun-16. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

### Condition

Some Model X vehicles might be susceptible to wind noise that seems to come from the front doors and windows. The wind noise does not affect use of the front doors and windows.

### Correction

Adjust the window glass. Replace the outer belt seal. Install defrost seal adhesive foam and butyl rope.

| Correction Description                                               | Correction | Time |
|----------------------------------------------------------------------|------------|------|
| SB-16-45-001 Not Applicable                                          | S011645001 | 0.0  |
| Vehicle Inspection Only; Glass Adjustment and Belt Seal Not Required | S021645001 | 0.1  |
| Adjust Front Door Glass And Belt Seal To Reduce Wind Noise           | S031645001 | 1.8  |

| Required Part(s): | Part Number  | Description                                      | Quantity |
|-------------------|--------------|--------------------------------------------------|----------|
|                   | 1007167-00-B | SEAL MESH DEFROST                                | 1        |
|                   | 1012717-00-B | SEAL, ADHESIVE BACKED                            | 1        |
|                   | 1032165-97-D | OUTER BELT SEAL ASS'Y,LH FR                      | 1        |
|                   | 1032166-97-D | OUTER BELT SEAL ASS'Y,RH FR                      | 1        |
|                   | 1092019-00-A | SPECIAL T INSTANT ADH 2 OZ                       | 1        |
|                   | 1091999-00-A | 3M 06382 AUTOMOTIVE ACRYLIC PLUS ATTACHMENT TAPE | 1        |
|                   | 1091996-00-A | PRES SENSITIVE ACRYLIC TAPE .045" THK            | 1        |
|                   | 1016456-00-A | WSHR,6.4X18X1.6MM WITH ADHESIVE                  | 2        |

**Shop supplies:**

Alcohol wipes (1054788-00-A or equivalent)

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

|                         |              |                     |
|-------------------------|--------------|---------------------|
| <b>Special Tool(s):</b> | 1053604-00-A | Caliper/depth probe |
|                         | 1054190-00-A | 5 mm feeler gauge   |
|                         | 1052632-00-A | Dead blow hammer    |

## Procedure

**NOTE:** Perform each step on both sides of the vehicle.

1. Remove the LH front door outer belt seal (refer to Service Manual procedure 11703002).
2. Remove the LH front door trim panel (refer to Service Manual procedure 15130201).
3. Release the inner belt seal from the rear of the door to the front edge of the fixed glass, but leave the seal attached to the front of the door (Figure 1).



**Figure 1 (Inner belt seal highlighted)**

4. Remove all adhesive from the inner belt seal. Use alcohol wipes to clean the affected areas. Wipe the alcohol with a clean, dry towel immediately after application. Do not let the alcohol air dry.

5. Inspect the exterior of the door at the base of the fixed glass. If there is a rubber spacer (Figure 2), remove and discard it.



**Figure 2 (Rubber spacer highlighted)**

6. Cut a 65 mm length of defrost seal.
7. With the adhesive side of the seal facing inboard, install the seal at the base of the fixed glass and mirror (Figure 3). Ensure that the hole at the base of the fixed glass is completely sealed.



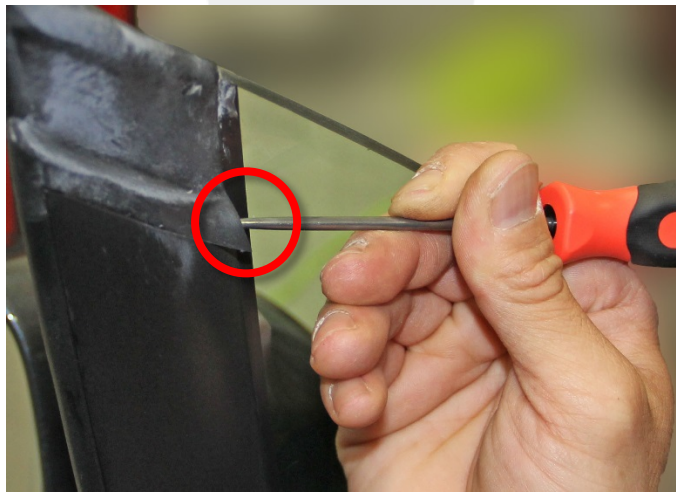
**Figure 3 (Seal highlighted)**

8. Gently push on the top outboard section of the division bar seal. If the seal does not stay adhered to the top of the fixed glass (Figure 4), clean the seal with alcohol wipes, then apply Special T cyanoacrylate adhesive and resecure it to the fixed glass. Hold the seal in place for at least 30 seconds before continuing this procedure.



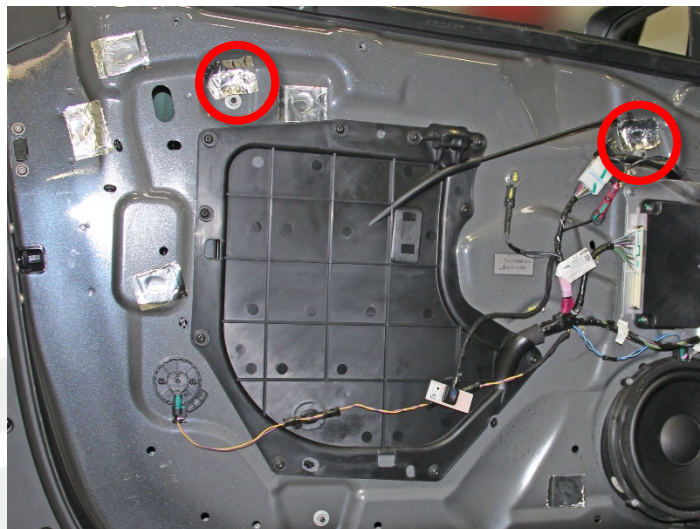
**Figure 4**

9. Use a pick to gently pull on the inboard section of the division bar seal. If the seal does not stay adhered to the top of the fixed glass (Figure 5), clean the seal with alcohol wipes, then apply Special T cyanoacrylate adhesive and resecure it to the fixed glass. Hold the seal in place for at least 30 seconds before continuing this procedure.



**Figure 5**

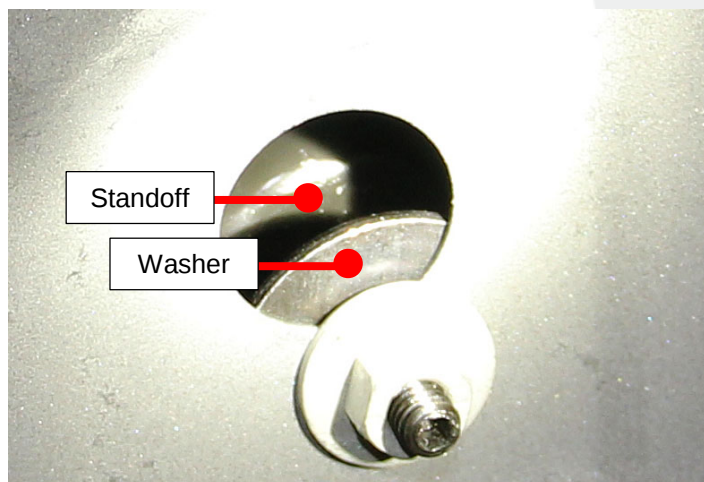
10. Remove the 2 butyl patches shown (Figure 6).



**Figure 6**

11. Remove the front door closeout panel (refer to Service Manual procedure 11701001).

12. Use a depth probe to measure the length of the rear upper jack screw between the standoff on the regulator and the washer (Figures 7 and 8).



**Figure 7**

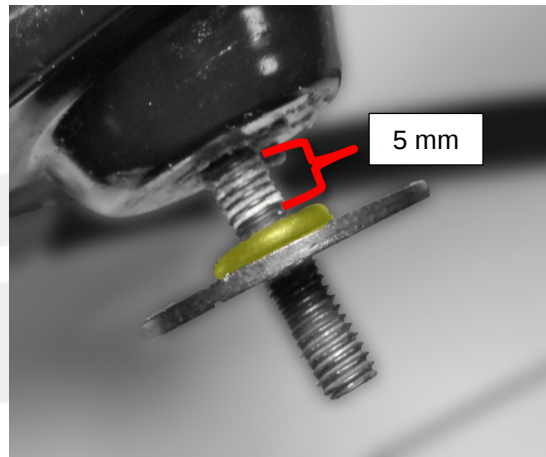


**Figure 8 (Components removed for clarity)**

- 13. Adjust the rear upper jack screw so that the distance between the standoff on the regulator and the washer is 12 mm:
  - a. Loosen the nut that secures the regulator to the door.
  - b. Use a 3 mm hex tool to adjust the jack screw.
  - c. Hand-tighten the nut that secures the regulator to the door.
  - d. Measure the distance between the standoff and washer.
  - e. Repeat substeps a-d until the distance equals 12 mm.
  - f. Fully torque the nut that secures the regulator to the door (torque 10 Nm).

14. Repeat steps 12-13 for the front upper jack screw, but set the distance to 10 mm.
15. Use a feeler gauge to measure the length of the rear lower jack screw between the standoff and the inner washer (Figure 9).

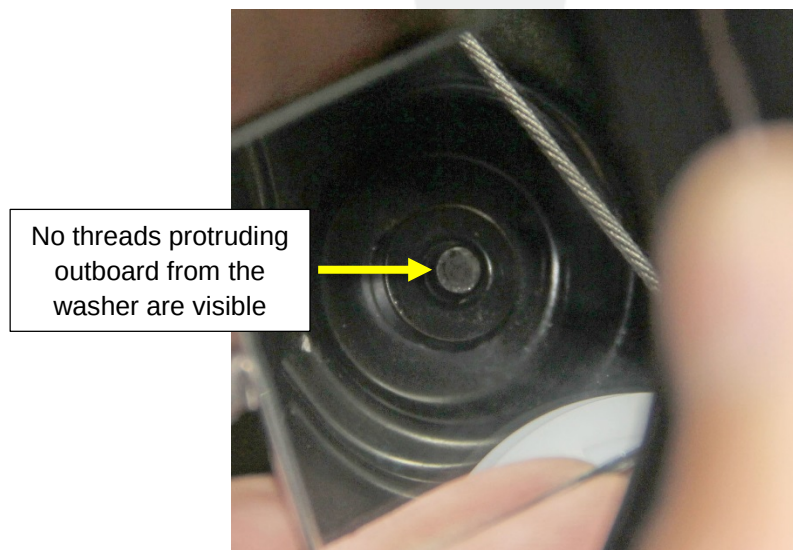
**NOTE:** Measure against the smaller inner washer.



**Figure 9 (Inner washer highlighted)**

16. Adjust the rear lower jack screw so that the distance between the standoff on the regulator and the inner washer is 5 mm.
17. Remove the front door speaker (refer to Service Manual procedure 21210102).
18. Use a mirror to examine the section of the front lower jack screw that is outboard of the regulator (Figure 10). Adjust the jack screw so that no threads of the jack screw protrude outboard from the regulator.

**TIP:** If the jack screw is difficult to see, reach into the door cavity and feel the tip of the jack screw; adjust the jack screw so that no threads can be felt.



**Figure 10**

19. Cut a 32 mm length of defrost seal.

20. Install the seal into the interior door handle cable channel on the closeout panel (Figure 11).



**Figure 11 (Seal highlighted)**

21. Cut a 43 mm length of defrost seal.

22. Install the seal along the bottom front of the interior of the closeout panel as shown (Figure 12).



**Figure 12 (Seal highlighted)**

23. Cut a 56 mm length of defrost seal.

24. Install the seal into the channel for the door harness on the bottom front of the interior of the closeout panel (Figure 13).



**Figure 13 (Seal highlighted)**

25. Cut a 15 mm length of defrost seal.
26. Install the seal at the lower edge of the channel for the door harness (Figure 14).



**Figure 14 (Seal highlighted)**

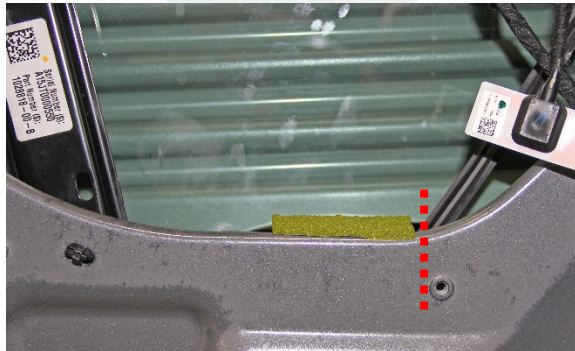
27. Cut a 60 mm length of defrost seal.

28. Install the seal on the door so that the top of the seal is aligned with the 2<sup>nd</sup> rear bolt hole from the top of the closeout opening (Figure 15).



**Figure 15 (Seal highlighted)**

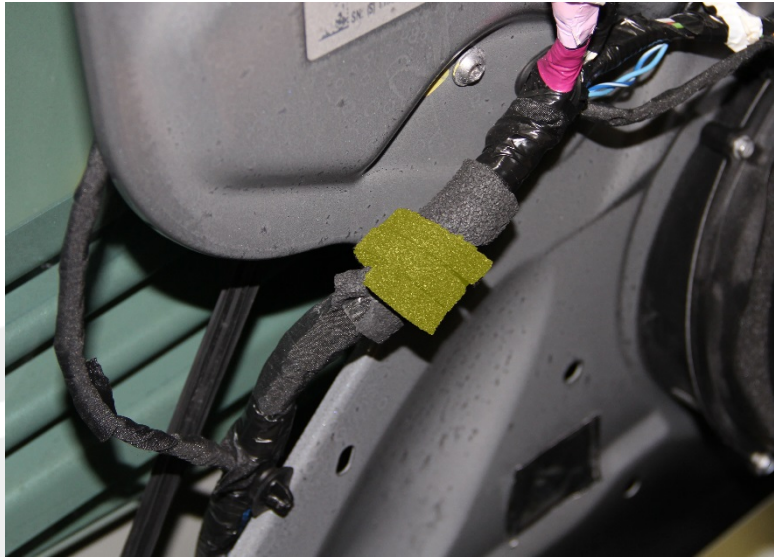
29. Cut a 60 mm length of defrost seal.
30. Install the seal so that the forward edge of the seal is aligned with the forward bolt hole at the bottom of the closeout opening (Figure 16).



**Figure 16 (Seal highlighted)**

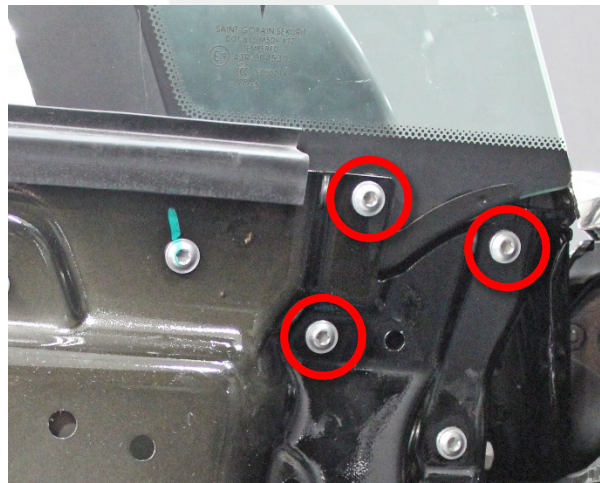
31. Cut a 200 mm length of defrost seal.

32. Wrap the seal around the existing seal on the primary door harness, near the front of the closeout opening (Figure 17).



**Figure 17 (Seal highlighted)**

33. Loosen the forward 3 bolts that secure the fixed glass to the door (Figure 18), but do not fully remove them.



**Figure 18**

34. Fully remove the rear bolt that secures the fixed glass (Figure 19).

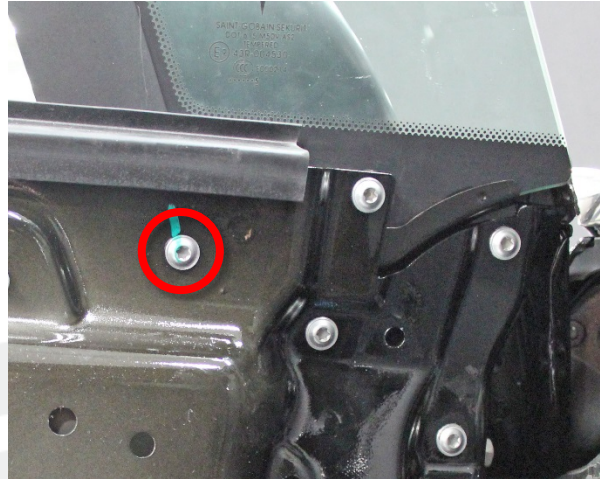


Figure 19

**⚠ CAUTION:** Do not drop the washer into the door.

35. Install a plastic washer between the fixed glass and the body, then reinstall the bolt. Fully torque all 4 bolts to 4.5 Nm.

36. Gently lift up the base of the B-Pillar applique seal to expose the 2 screws (Figure 20).



Figure 20

37. Loosen the rear screw, but do not fully remove it.

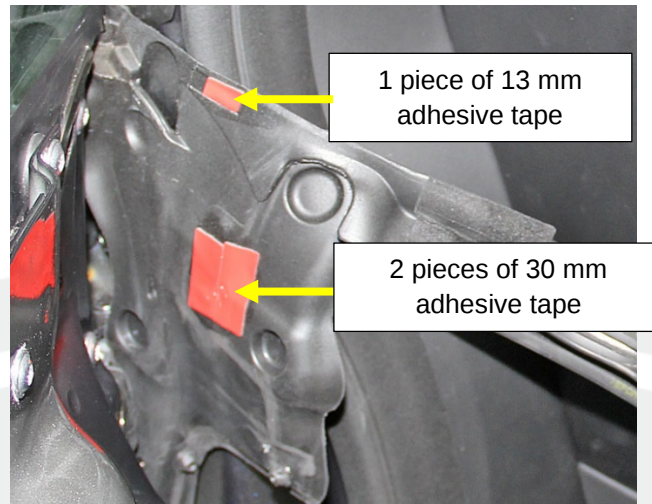
38. Remove the front screw and discard any washers.

39. Reinstall the front screw and fully tighten both screws (torque 3 Nm).

40. Reinstall the B-Pillar applique seal.

41. Cut 2 30 mm and 1 13 mm pieces of double-sided adhesive tape.

42. Install the double-sided adhesive tape on the inner belt seal as shown (Figure 21), but do not remove the adhesive backing at this time.



**Figure 21**

43. Cut a 125 mm length of defrost seal.

44. Install the seal into the channel of the inner belt seat, so that the seal is 100 mm from the front edge of the belt seat (Figure 22).

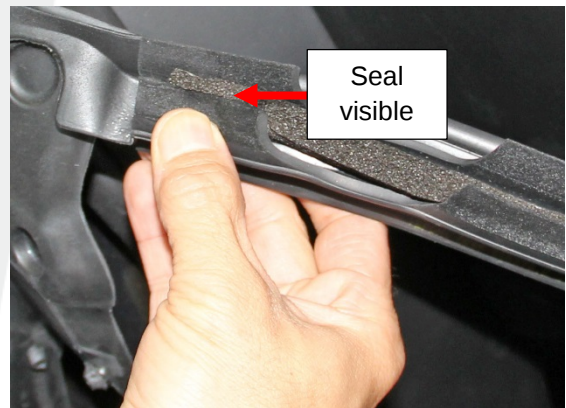


**Figure 22 (Seal highlighted)**

**NOTE:** Ensure that the seal is as low as possible in the channel. When pressing in on the outboard side of the groove, the seal should not be visible (Figures 23 and 24).



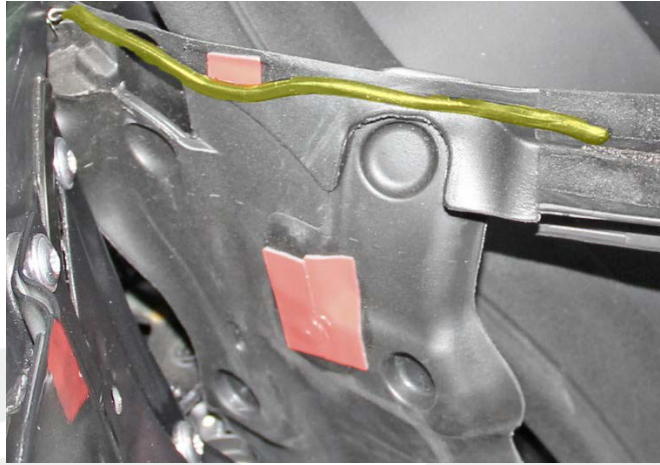
✓ **Figure 23 (Correct)**



✗ **Figure 24 (Incorrect)**

45. Cut a 125 mm length of butyl rope.

46. Affix the butyl rope to the top of the inner belt seal as shown (Figure 25).



**Figure 25 (Butyl highlighted)**

47. Remove the adhesive backing from the 3 pieces of double-sided adhesive.

48. Reinstall the inner belt seal.

**NOTE:** Ensure that the inner belt seal presses tightly against the division bar (Figure 26).



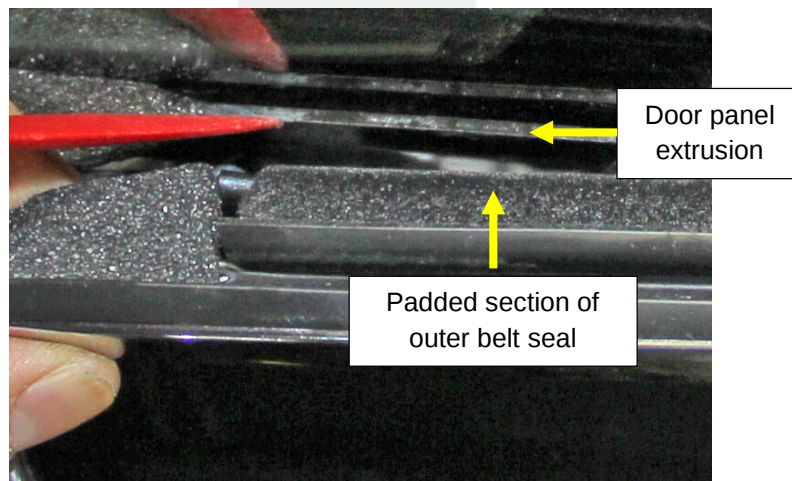
**Figure 26**

49. Use a pick or similar tool to push down on the butyl to ensure that it fully seals the gap between the seal and the fixed glass (Figure 27).



**Figure 27**

50. Reinstall the butyl patches on the door.
51. Install a new outer belt seal. Ensure that the padded front section of the seal is tucked outboard of the extrusion at the base of the fixed glass (Figure 28).



**Figure 28**

52. Ensure that the rear of the seal is flush with the rear of the door panel. If necessary, tap the rear of the seal with a dead blow hammer to move the seal forward.

**NOTE:** The next step requires an assistant.

53. Adjust the front window so that the entire rear edge of the window has 8 mm of clearance to the B-Pillar applique (refer to “Fore/Aft Adjustment” in Service Manual procedure 11500100).
54. Reinstall all components that were removed for access.

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**Affected VIN(s)** Affected Model X vehicles built before March 1, 2016.

**NOTE:** This is a simplified summary of the affected VIN list. Refer to the VIN/Bulletin Tracker or Customer/Vehicle profile to determine applicability of this bulletin for a particular vehicle.

For feedback on the accuracy of this document, email [ServiceBulletinFeedback@teslamotors.com](mailto:ServiceBulletinFeedback@teslamotors.com).

