Tesla Motors, Inc.
Service Bulletin

Replace Prototype 12V Fuse Box Bracket

Classification	Campaign Bulletin	**Section/Group**	17 - Electrical	**Country/Region**	United States
Year	2014	**Model**	Model S	**Version**	Dual Motor

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.*

Condition

Some early dual motor vehicles were manufactured with a prototype 12V fuse box bracket.

Correction

Replace the prototype 12V fuse box bracket with the production-level part.

Required Part(s):

Part Number	Description	Quantity
1031595-00-D	BRACKET, 12V BATTERY FUSEBOX, DUAL MOTOR	1
1054163-00-A	BRACKET, 12V FUSEBOX SUPPORT, LOWER	1
2007207	NUT HF M6-1.00[8]ZnAl	2
1005805-00-A	BLT HEX FL M8-1.25X25 8.8 -M-ZnAl	2
1009420-00-A	BLT HF M6-1.00x20[8.8]ZnAlW	2
1015209-00-A	HT 156-00071	1
1053847-00-A	TAPE,PET CLOTH,ACRYLIC,19MM W,150C,BK	As required
	If necessary:	
1015197-00-A	6.7MM CABLE TIE CLIP	1 or 2
1032246-00-A	BUTYL FOIL, 40x40, 1 MM THICK	1

Shop supplies:
Alcohol wipes

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
SB-15-17-002 Not Applicable	S011517002	0.00
Replace Prototype 12V Fuse Box Bracket Secured By Push Pin Or 2 Bolts	S021517002	0.50
Replace Prototype 12V Fuse Box Bracket Secured By Screw Through Bulkhead	S031517002	0.80

Procedure

1. Disconnect 12V power (refer to Service Manual procedure 17010200).

2. Remove the pollen filter rear housing:

   a. Release the 2 barrel clips that secure the HV harness to the bulkhead.

   b. Loosen the top RH nut that secures the pollen filter rear housing to the bulkhead (torque 6 Nm) (Figure 1).

   NOTE: It is not necessary to completely remove the nut; the tab on the housing is notched.

Figure 1

   c. Remove the remaining 3 nuts that secure the pollen filter rear housing to the bulkhead (torque 6 Nm) (Figure 2).

   NOTE: The 2 lower nuts also secure the HVAC intake drain diverter.

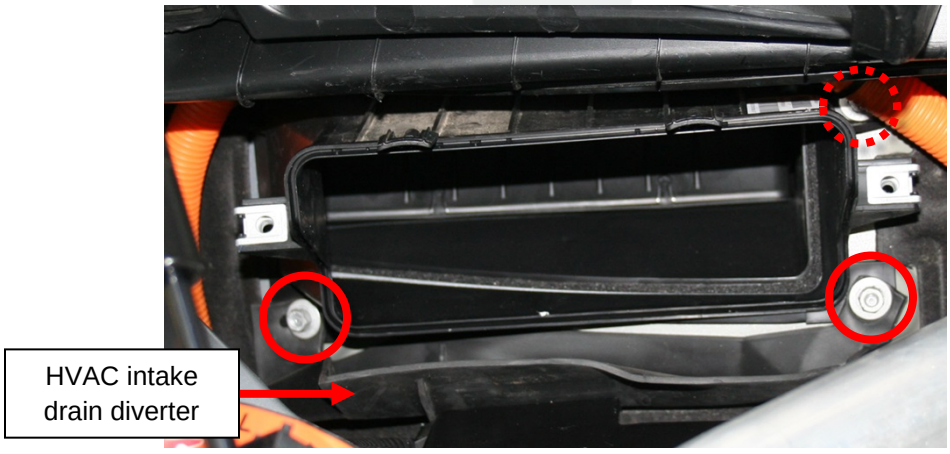

Figure 2

   d. Remove the pollen filter rear housing and HVAC intake drain diverter.

3. Remove the 2 bolts that secure the fuse box cover (Figure 3). Remove the fuse box cover.

Figure 3

4. Remove the nut that secures the battery positive terminal to the rear of the fuse box (Figure 4).

Figure 4

5. Remove the nut that secures 12V power supply for the DCDC converter (Figure 5).

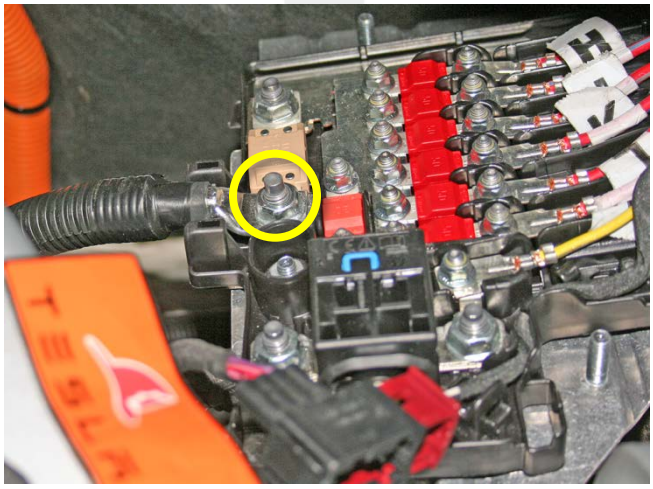

Figure 5

6. Remove the nut that secures the fuse box to the bracket (Figure 6).

Figure 6

7. Gently lift the fuse box up and remove the floating stud (Figure 7). Set the stud aside.

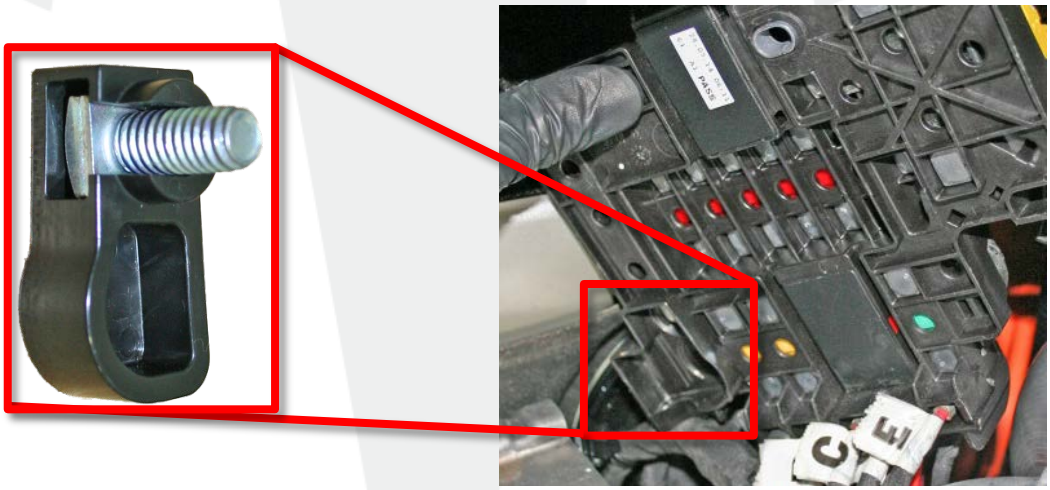

Figure 7

8. Remove and discard the 2 bolts that secure the front of the fuse box bracket to the shock tower (Figure 8).

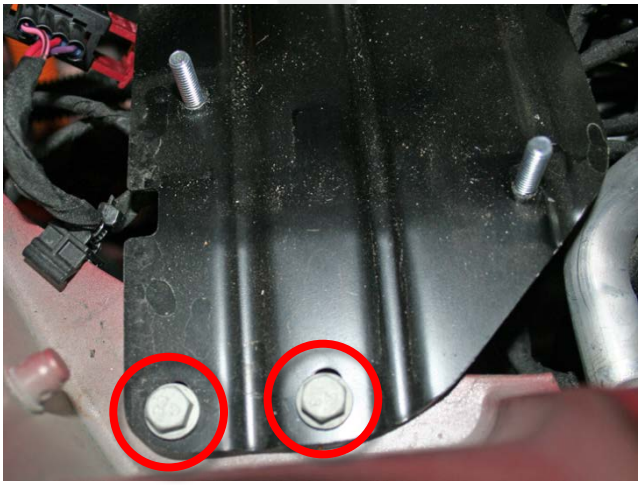

Figure 8

9. Bend the front of the bracket towards the bulkhead (Figure 9).

NOTE: It is okay to damage the bracket; it will be discarded later in the procedure.

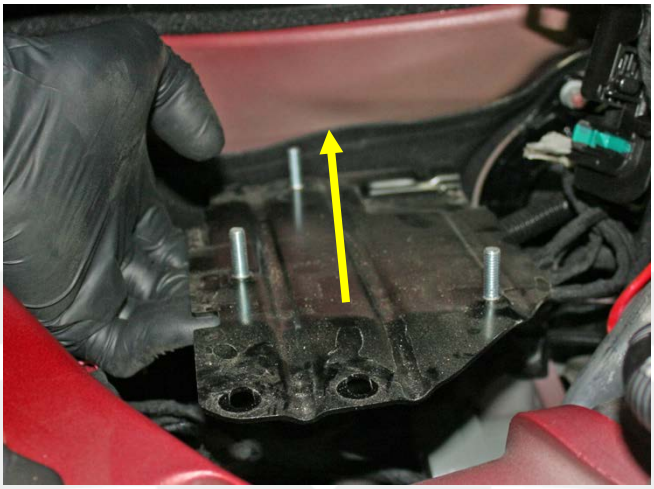

Figure 9

10. Remove the 2 fir tree clips that secure the 12V harnesses to the bracket (Figure 10).

NOTE: The 12V harnesses can be secured to the bracket in multiple ways. Figure 10 shows one example. Remove the fir tree clips as necessary.

Figure 10

11. Inspect how the bracket is secured to the vehicle.

- If the bracket is secured to the bulkhead by a push pin (Figure 11), remove and discard the push pin, remove and discard the bracket, and then skip to step 21.
- If the bracket is a 1-piece design and is secured to the vehicle by 2 vertical bolts (Figure 12), remove and discard the bolts, remove and discard the bracket, and then skip to step 21.
- If the bracket is secured to the bulkhead by a nut and a screw (Figure 13), continue to the next step in this procedure.

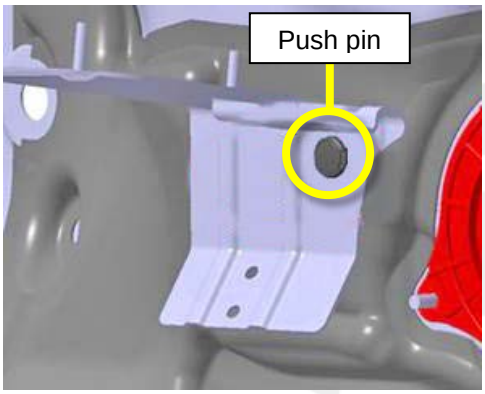

Figure 11

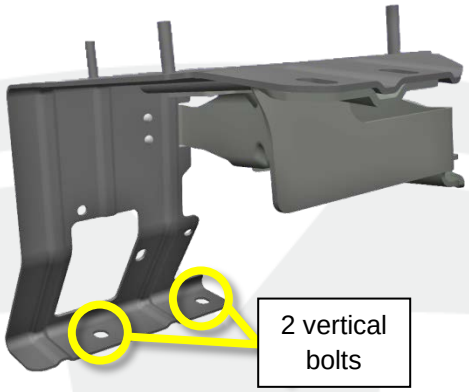

Figure 12

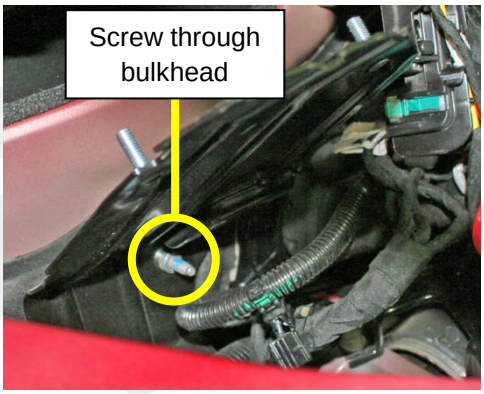

Figure 13

12. Using needle nose pliers, grip the unthreaded tip of the screw and rotate it clockwise until it is flush with the threaded nut on the bracket (Figure 14).

⚠ **CAUTION:** Do not grip the threads on the screw with the pliers. This could damage the threads on the screw, making it difficult to back out from the threaded nut on the bracket.

⚠ **CAUTION:** Rotate the screw clockwise.

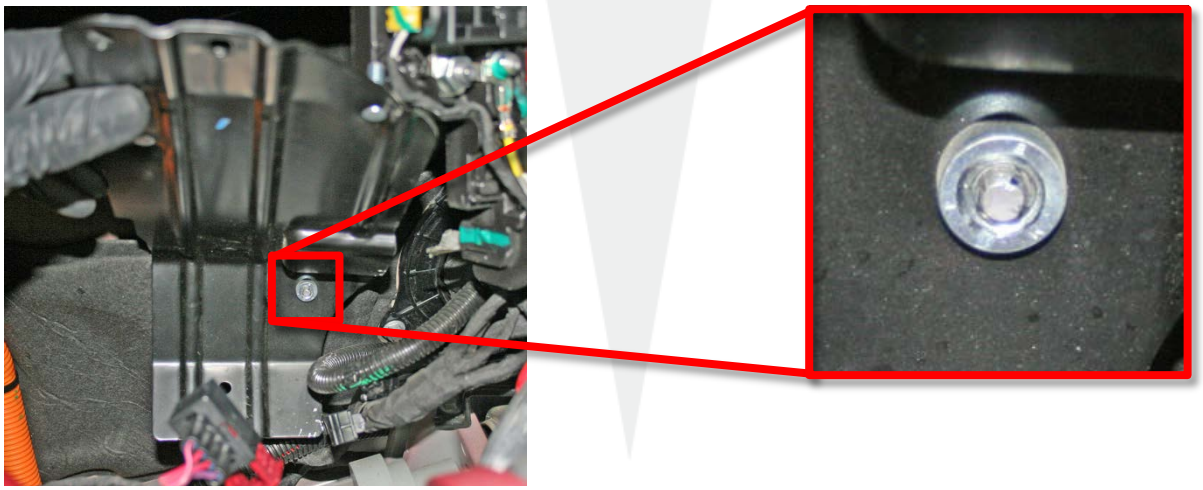

Figure 14

13. From behind the bracket, continue rotating the screw clockwise (Figure 15) until it the bracket is free. Remove and discard the bracket.

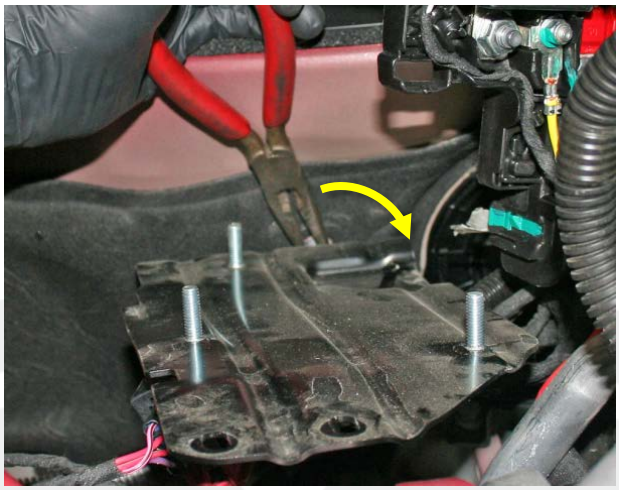

Figure 15

14. From inside the vehicle, remove the RH closeout extension (refer to Service Manual procedure 15191102).

15. Remove the RH footwell cover (refer to Service Manual procedure 14055402).

16. Fold the passenger footwell carpet away from the bulkhead.

17. Insert a magnetic pickup tool in front of the NVH padding to retrieve the screw from the bulkhead (Figure 16). Discard the screw.

TIP: It might be helpful to gently tap the tip of the screw towards the bulkhead from inside the frunk so that it is more accessible from inside the vehicle.

NOTE: If necessary, remove the nut that secures the bracket for the footwell stud.

⚠ **CAUTION:** Do not allow the screw to drop beneath the NVH material inside the vehicle.

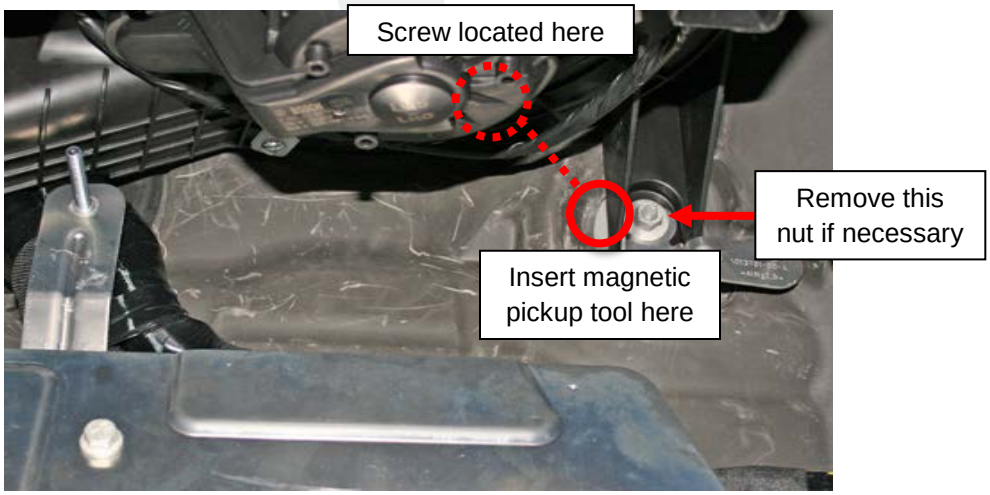

Figure 16

18. Reposition the passenger footwell carpet.

19. Reinstall the RH footwell cover.

20. Reinstall the RH closeout extension.

21. From inside the frunk, clean the area around the hole in the bulkhead with an alcohol wipe. Allow the alcohol to dry before continuing to the next step.

NOTE: Some vehicles that had a 1-piece fuse box bracket (Figure 12) might not have a hole through the bulkhead. If the vehicle does not have an exposed hole through the bulkhead, skip to step 23.

22. Apply a butyl foil patch over the hole in the bulkhead (Figure 17).

NOTE: Smooth out the entire surface of the butyl patch to ensure that it is fully adhered to the bulkhead and that all of the air bubbles have been removed.

Figure 17

23. Install the 2 bolts that secure the new lower bracket (torque 19 Nm) (Figure 18).

Figure 18

24. Install the 2 fir tree clips to the lower bracket (Figure 19).

NOTE: If either fir tree clip is damaged, replace with 1015197-00-A. Trim the excess portion of the cable ties.

Figure 19

25. Ensure that the harness for the forward junction box (FJB) branch is routed behind the motor mount.

26. Loosely install a nut on each of the 2 horizontal studs on the lower bracket.

27. Lower the new upper bracket onto the lower bracket so that the notches on the bottom of the upper bracket are lined up with the horizontal studs on the top of the lower bracket.

TIP: It might be helpful to remove the shock tower cover and press against the lower bracket with a pry bar to keep the lower bracket in place.

28. Tighten the 2 nuts that secure the upper bracket to the lower bracket (torque 6 Nm) (Figure 20).

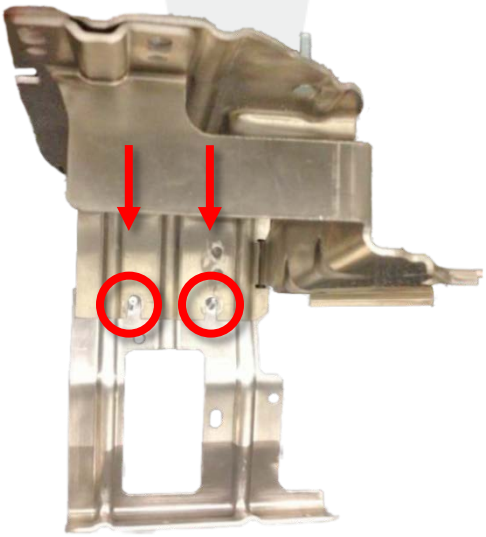

Figure 20 (Components removed for clarity)

29. Install the 2 bolts that secure the upper bracket to the shock tower (torque 6 Nm) (Figure 21).

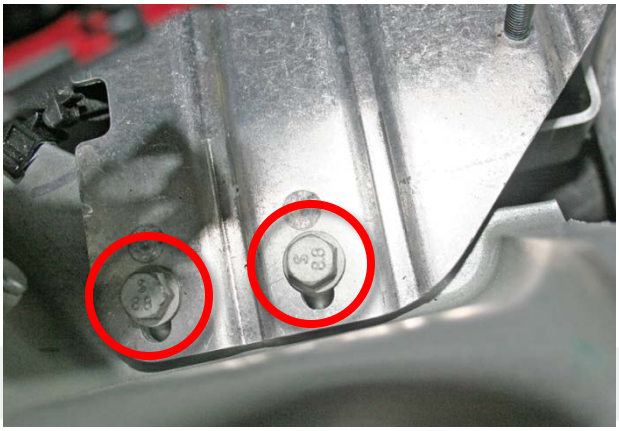

Figure 21

30. Inspect the 12V harness and ensure that there are no exposed or damaged wires. Wrap every part of the harness that could potentially rub against the fuse box bracket with the provided abrasion tape.

⚠ **CAUTION:** Failure to wrap the harness with the provided abrasion tape could result in damage to the harness.

31. Insert the cable tie clip (1015209-00-A) into the 9 mm hole on the upper bracket shelf as shown (Figure 22).

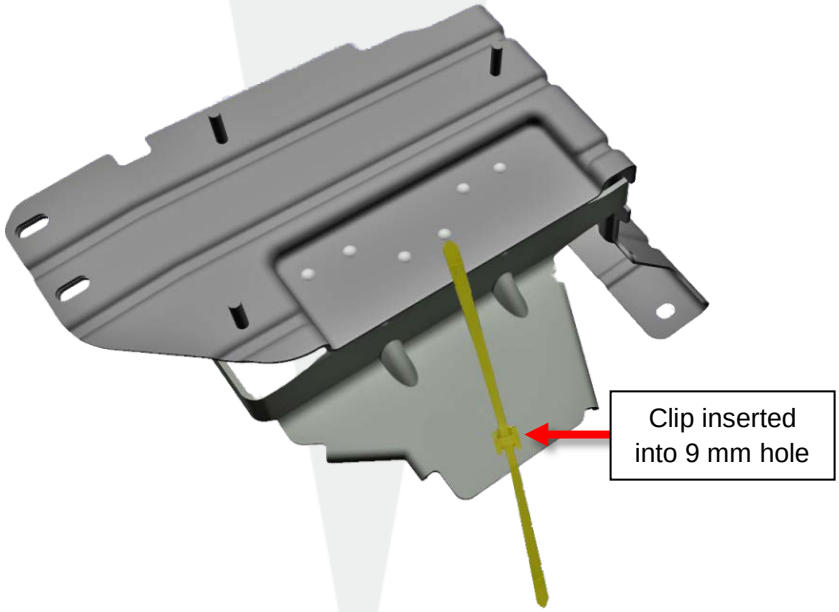

Figure 22 (Cable tie and clip highlighted)

32. Route the 12V harness over the shelf on the upper bracket and secure it with the cable tie (Figure 23).

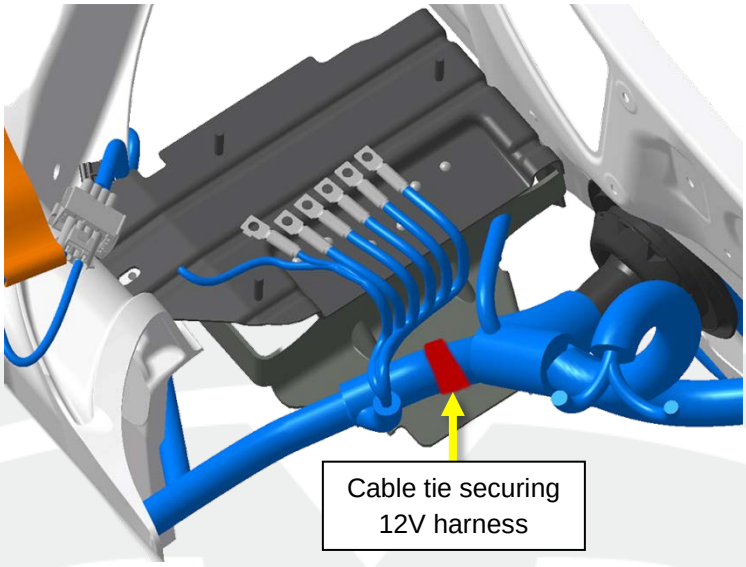

Figure 23

33. Ensure that the A/C lines do not rub against the upper bracket.

34. Insert the stud into the bottom of the fuse box (Figure 7) and set the fuse box on top of the upper bracket.

35. Reinstall the nut that secures the fuse box to the bracket (torque 6 Nm) (Figure 6).

36. Reinstall the nut that secures 12V power supply for the DCDC converter (torque 12.5 Nm) (Figure 5).

37. Reinstall the nut that secures the battery positive terminal to the rear of the fuse box (torque 12 Nm) (Figure 4).

38. Reinstall the 2 bolts that secure the fuse box cover (torque 3 Nm) (Figure 3).

39. Reinstall the pollen filter rear housing and HVAC intake drain diverter.

40. Connect 12V power (refer to Service Manual procedure 17010200).

Affected VIN(s) Affected dual motor Model S vehicles built between approximately November 7, 2014 and November 15, 2014.

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.

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