Tesla, Inc. Service Bulletin		# *Inspect Charge Port Busbar Safety Cap And Protective Earth Busbar*
SB-20-44-002 July 24, 2020		

Classification		Section/Group	Mobile Service
Campaign Bulletin		44 - High Voltage System	Can Perform (where permitted)
Model Year	**Model**	**Country/Region**	**Version**
2020	Model Y	North America	All

The model(s) and model year(s) listed are a general approximation 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.

Campaign Bulletin: 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 list.

Condition

Some Model Y vehicles were manufactured with a charge port busbar safety cap and/or PE (Protective Earth) busbar that might not meet internal specifications, resulting in intermittent vehicle charging capability.

Correction

Inspect the vehicle for symptoms related to the condition. If symptoms are present, rework or replace the charge port busbar safety cap and replace the charge port assembly.

Correction Description	Correction	Time
SB-20-44-002 Not Applicable	S012044002	0.00
Inspect Charge Port Busbar Safety Cap and PE Busbar; Retorque PE Busbar Screw	S022044002	0.40
Inspect Charge Port Busbar Safety Cap and PE Busbar; Rework or Replace Busbar Safety Cap and Retorque PE Busbar Screw	S032044002	0.45
Inspect Charge Port Busbar Safety Cap and PE Busbar; Replace Charge Port Assembly	S042044002	0.65
Inspect Charge Port Busbar Safety Cap and PE Busbar; Rework or Replace Busbar Safety Cap and Replace Charge Port Assembly	S052044002	0.65

	Part Number	Description	Quantity
If Necessary	1506911-00-D	SAFETY CAP, NA,CP,MY	1
	1490374-10-B	CHARGEPORT, NA,CP,MY	1
	These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Catalog.		
Special Tools	1053604-01-A	6" Digital Calipers	
	1076921-00-A	2-IN-1 Insulation Multimeter Fluke 1587 FC	
Shop Supplies	IPA Wipes		

Procedure

1. Remove the LH trunk side trim (refer to Service Manual procedure 15245002).
2. Release the clips (x6) and tab (x1) that attach the LH upper C-Pillar trim to the vehicle (Figure 1), and then set the trim aside.

   CAUTION: Carefully release the foremost part of the LH upper C-Pillar trim from the headliner.

   NOTE: The LH upper C-Pillar trim will remain attached to the rear seatbelt.

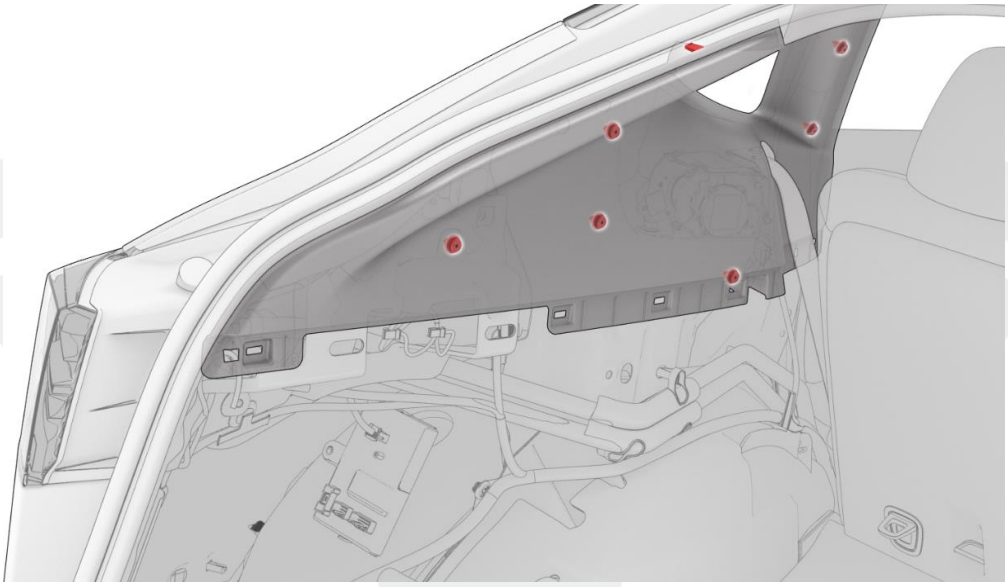

Figure 1

3. Remove the LH C-Pillar bracket (refer to Service Manual procedure 15186402).
4. Perform a torque check on the screw that attaches the PE busbar to the charge port carrier (torque 3.0 Nm) (Figure 2).

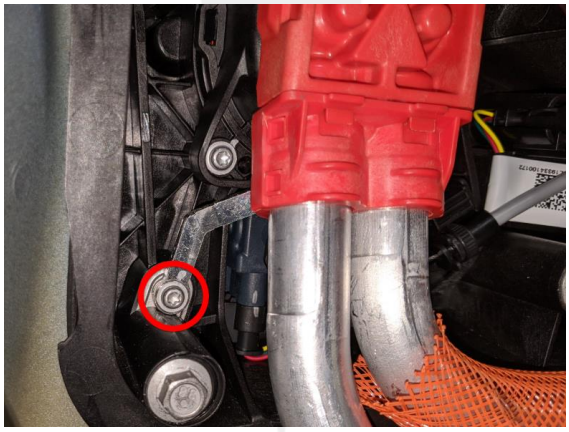

Figure 2

- If the screw cannot be properly torqued, or if there is damage to the PE busbar/charge port bolt threads:
  a. Replace the charge port (refer to Service Manual procedure 44011602), but return to this procedure after performing the resistance test between the charge port busbar lead and charge port busbar stud.
  b. Skip to step 11.
- If the screw can be properly torqued, and there is no damage to the PE busbar/charge port bolt threads, continue to step 5.

5. Connect the handle of a known working UMC (Universal Mobile Connector) with a NEMA adapter to the vehicle charge port. Do not plug the other end of the UMC into a wall outlet.

6. Set the multimeter to resistance measurement mode, and then using alligator clips, attach the multimeter to the UMC NEMA adapter ground pin (Figure 3) and charge port PE busbar (Figure 4).

Figure 3

Figure 4

7. While monitoring the resistance reading on the multimeter, wiggle the UMC handle horizontally for 10 seconds, and then vertically for 10 seconds, making sure not to touch the release button on the handle.

   - If while wiggling the UMC handle, the multimeter displays “OL” (Open Line) or fluctuates above 0.2 Ω:

     a. Disconnect the alligator clips from the UMC and charge port PE busbar.

     NOTE: DO NOT attempt to rework the charge port. The parts must be returned to engineering in an untampered state so that the issue can be further investigated.

     b. Disconnect the UMC handle from the vehicle charge port.

     c. Replace the charge port (refer to Service Manual procedure 44011602), but return to this procedure after performing the resistance test between the charge port busbar lead and charge port busbar stud.

     d. Skip to step 11.

   - If while wiggling the UMC handle, the multimeter displays ~0.2 Ω or less without ever displaying “OL” or fluctuating above 0.2 Ω, continue to step 8.

8. Disconnect the alligator clips from the UMC and charge port PE busbar.

9. Disconnect the UMC handle from the vehicle charge port.

10. Perform a torque check on the bolt that attaches the charge port carrier ground to the body (torque 5.5 Nm) (Figure 5).

Figure 5

11. If not already performed, disconnect 12V power (refer to Service Manual procedure 17010200).
12. If not already performed, perform the charge port voltage check (refer to Service Manual procedure 44012100).
13. If not already disconnected, release the locking tab from the charge port low voltage connector, and then disconnect the connector from the charge port (Figure 6).

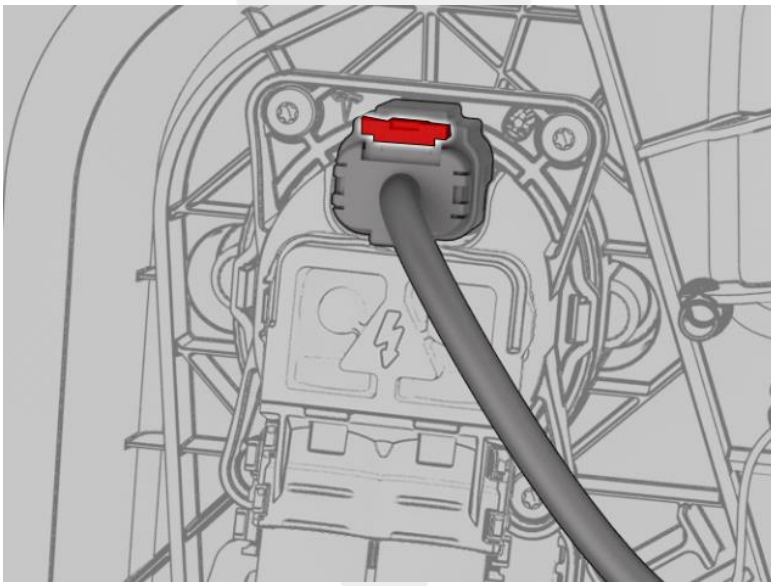

Figure 6

⚠ **CAUTION:** DO NOT push down on the red locking tab. Pull the tab away from the connector until the connector is unlocked, and then continue pulling to release the connector.

14. If not already removed, remove the charge port busbar safety cap from the vehicle (Figure 7).

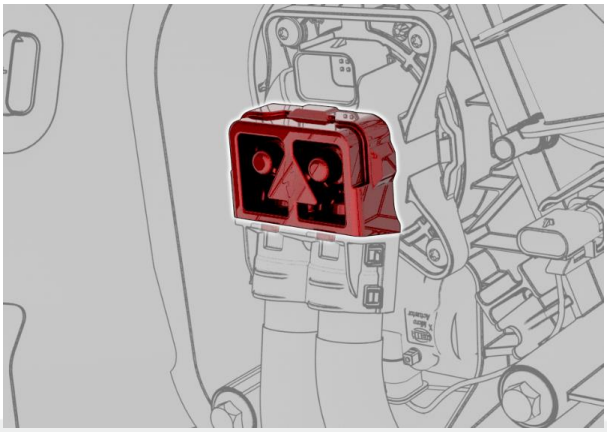

Figure 7

15. Using digital calipers, measure the distance between the electrical terminals on the underside of the charge port busbar safety cap (Figure 8).

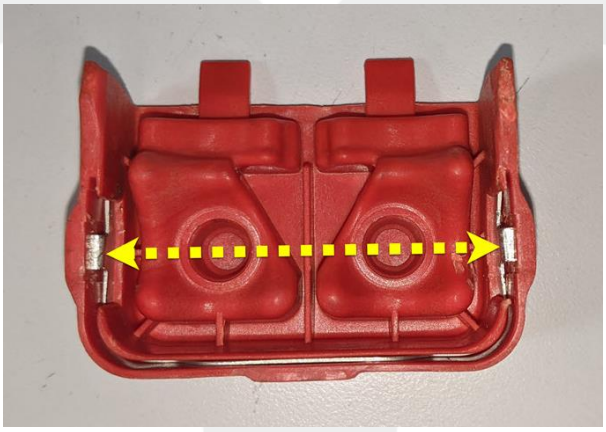

Figure 8

- If the distance between the two terminals is less than 45.94 mm, remeasure the distance. If the measurement is still less than 45.94 mm, continue to step 16.
- If the distance between the two terminals is between 45.94 mm and 46.24 mm, continue to step 16.
- If the distance between the two terminals is greater than 46.24 mm:
    a. Use needle nose pliers and a pocket screwdriver to equally bend both terminals toward the center of the charge port busbar safety cap.
    b. Remeasure the distance between the terminals and continue to step 16 when the measured distance is between 45.94 mm and 46.24 mm.

    NOTE: If the terminals are damaged, or if unable to properly rework the terminals, procure a new charge port busbar safety cap, and then continue to the step 16.

16. Install the charge port busbar safety cap (Figure 7).
17. Install all components that were removed for access.
18. Connect a laptop with Toolbox to the vehicle.
19. Run the “TEST-SELF_CP_X_DOOR_CONNECTIVITY” routine.
20. Position a powered charge cable near the vehicle charge port door.

21. Run the “TEST-SELF_CP_X_UHF” routine. Once the routine begins, hold the charge cable handle near the vehicle charge port door and press the button on the handle.

    NOTE: The routine will time out after 21 seconds.

22. Plug the charge cable into the vehicle charge port and verify charging functionality.