



Replace Penthouse Bolts

Classification	Campaign Bulletin	Section/Group	16 - HV Battery System	Country/Region	United States, Canada
Year	2018	Model	Model 3	Version	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 assumes no liability for injury or property damage due to a failure to properly follow these instructions or repairs attempted by unqualified individuals.

Condition

On certain Model 3 vehicles, some bolts within the high voltage (HV) battery penthouse were insufficiently torqued to internal specifications during manufacturing.

Correction

Replace and properly torque the bolts.

Correction Description	Correction	Time
SB-18-16-007 Not Applicable	S011816007	0.0
Replace And Torque Bolts Inside HV Battery Penthouse	S021816007	2.25

Required Part(s):	Part Number	Description	Quantity
	1108958-00-A	SEAL,PROBE LID,HVBAT	1
	1108907-00-A	BREATHER, NITTO Z-PLUG-S	1
	1117669-00-A	BOLT,5-LOBE,M6X19,[109],ZNNI,MAT,PTP,SEAL	2
	1104475-00-C	BOLTANDWSHR[DBL],M8X23,STL ZNFL,SDOG ADH	8
	1104654-00-B	NUT&WSHR[DBL],M8,BRS,SEALER	1
	1115916-00-A	BOLT,TE,M6X14,[88],ZNNI,SEAL,SDOG	5
	2007104-00-B	NUT HFPT M8X1.25 [10]-ZNNI	1
	1117252-00-A	BOLT,HF,M12X40,STL [109],ZN,ADH,MAT	2
	1111033-00-D	M3 2R BOLSTER CLIP	1
	If necessary:		
	1467483-00-A	KIT, PENTHOUSE HV INSULATORS, M3	1
	1104475-00-C	BOLTANDWSHR[DBL],M8X23,STL ZNFL,SDOG ADH	2

Shop supplies:

Absorbent pads
 Tesla G-48 Coolant (1012820-00-A)
 Butyl rope

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

Special Tool(s):	1076927-00-A	Resistance meter, microohm, Hioki RM 3548
	1126496-00-B	Wrench, Torque+Angle, 3/8" DR
	1059330-00-B	Skt, 1/4in Dr, 5-Lobe Torx External
	1144879-00-A	Kit, Encl Leak Test Adapters, HV Battery
	1026636-00-A	Pack Enclosure Leak Tester, HV Battery
	1132185-00-B	Kit, Coolant Leak Test Adapters, Model 3
	1133843-00-A	Kit, Coolant Drain & Fill Adapters, M3
	1135762-00-A	Kit, Svc Plug, Cooling Hose, Model 3
	1053600-00-C	Drive Unit Pressure Test Fixture
	1108272-00-B	Cap, Logic Conn, Inv, 3DU
	1133603-00-A	Kit, HV Pyro-disconnect Replacement, BRP
	1131071-00-A	Dummy Disconnect, Pyro, Safety
	1050448-00-A	Refiller, Cooling System
	1111868-00-B	Connector Removal, Coolant, PCS, M3
	1057602-00-A	Ratchet, 1/4" Sq Dr, HV Insulated
	1057603-00-A	Ext Bar, Wobble, 1/4" Dr, HV Insulated
	1057607-00-A	Magnet, Flexible, HV Insulated, 18"
	1133768-00-A	Socket, 1/4" Dr, Deep, 10 mm, Thin Wall, Insul
	1057606-00-A	Skt, 1/4" Sq Dr, 13mm, HV Insulated
	1127845-00-A	Asy, Service Cover, Penthouse, Model 3

Procedure

1. Drain the penthouse coolant (refer to Service Manual procedure 16202000).
2. Remove the HV battery negative contactor (refer to Service Manual procedure 16302002).
3. Remove the power conversion system coolant outlet tube (refer to Service Manual procedure 16202202).
4. Remove the HV battery probing guide (refer to Service Manual procedure 16303802).
5. Remove and discard the bolts that attach the HV battery fast charge contactor to the positive and negative busbars (Figure 1).

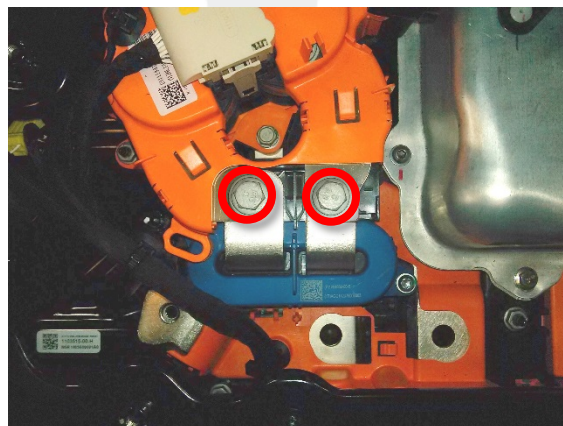


Figure 1

6. **Dual Motor vehicles only:** Remove and discard the bolts that attach the positive and negative busbars to the front drive unit HV header (Figure 2).

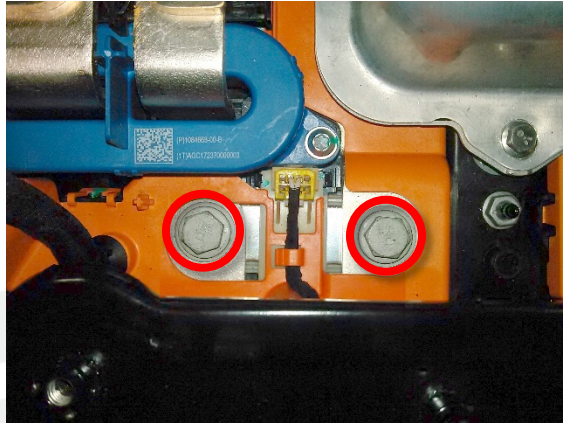


Figure 2

7. Install new bolts to attach the HV battery fast charge contactor to the positive and negative busbars, and then mark the bolts with a paint pen after they are torqued (torque 5 Nm +60°) (Figure 1).
8. **Dual Motor vehicles only:** Install new bolts to attach the positive and negative busbars to the front drive unit HV header, and then mark the bolts with a paint pen after they are torqued (torque 5 Nm +60°) (Figure 2).
9. Use the Hioki resistance meter to measure the resistance at the HV joint between the HV battery fast charge contactor positive output (LH side) and the positive busbar (Figure 3).

NOTE: The maximum acceptable resistance is 0.040 mΩ (40 μΩ). If the resistance is above this value, escalate a Toolbox session, as appropriate.

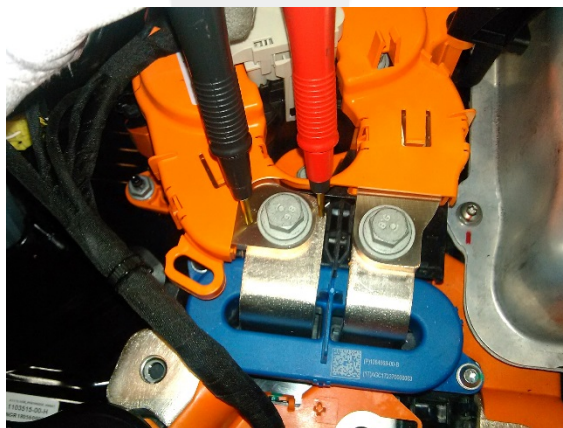


Figure 3

10. Use the Hioki resistance meter to measure the resistance at the HV joint between the HV battery fast charge contactor negative output (RH side) and the negative busbar (Figure 4).

NOTE: The maximum acceptable resistance is 0.060 mΩ (60 μΩ). If the resistance is above this value, escalate a Toolbox session, as appropriate.

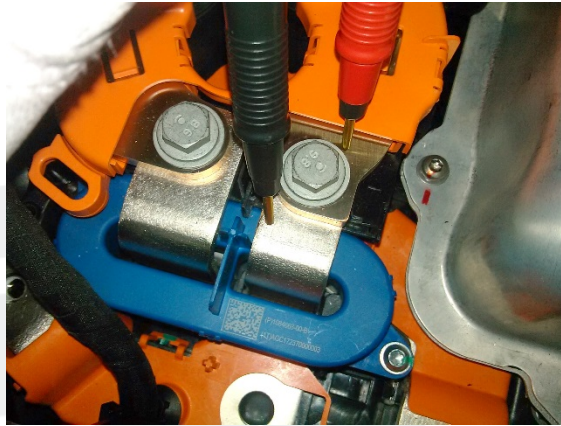


Figure 4

11. **Dual Motor vehicles only:** Use the Hioki resistance meter to measure the resistance at the HV joint between the front drive unit HV header and the busbar at each bolt (Figure 5).

NOTE: The maximum acceptable resistance is 0.070 mΩ (70 μΩ). If the resistance is above this value, escalate a Toolbox session, as appropriate.

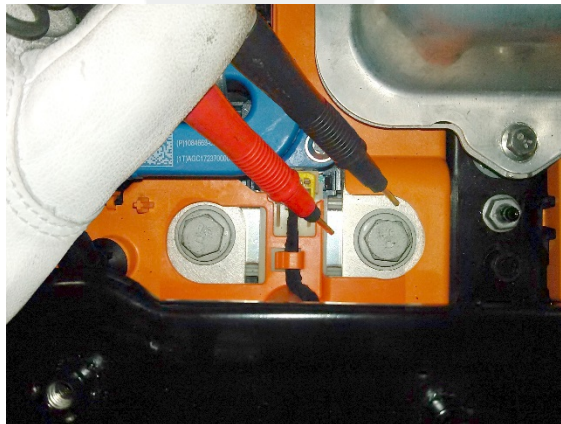


Figure 5

12. Remove the insulator cap from the HV battery positive contactor output terminal bolt (Figure 6).



Figure 6

13. Remove and discard the bolt that attaches the HV battery positive contactor to the positive busbar (Figure 7).



Figure 7

14. Install a new bolt to attach the HV battery positive contactor onto the positive busbar, and then mark the bolt with a paint pen after it is torqued (torque 5 Nm +60°) (Figure 7).

15. Use the Hioki resistance meter to measure the resistance at the HV joint between the HV battery positive contactor and the positive busbar (Figure 8).

NOTE: The maximum acceptable resistance is 0.060 mΩ (60 μΩ). If the resistance is above this value, escalate a Toolbox session, as appropriate.



Figure 8

16. Install the insulator cap onto the HV battery positive contactor output terminal bolt (Figure 6).
17. Raise the high voltage controller vertically, and then remove the fuse access insulator (Figure 9).

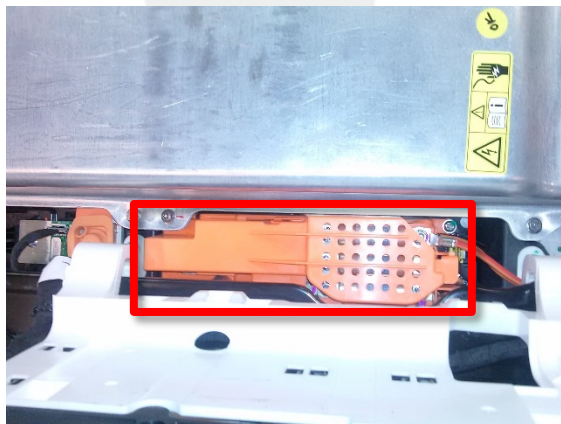


Figure 9

18. Remove and discard the bolts that attach the positive and negative busbars to the rear drive unit HV header (Figure 10).



Figure 10

19. Install new bolts to attach the positive and negative busbars to the rear drive unit HV header, and then mark the bolts with a paint pen after they are torqued (torque 5 Nm +60°) (Figure 10).
20. Use the Hioki resistance meter to measure the resistance at the HV joint between the rear drive unit HV header and the busbar at each bolt (Figure 11).

NOTE: The maximum acceptable resistance is 0.070 mΩ (70 μΩ). If the resistance is above this value, escalate a Toolbox session, as appropriate.

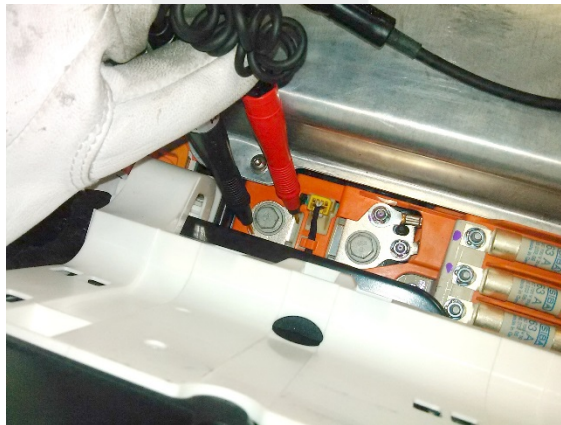


Figure 11

21. Install the fuse access insulator, and then lower the high voltage controller (Figure 9).
22. Install the HV battery probing guide (refer to Service Manual procedure 16303802).
23. Install the HV battery negative contactor (refer to Service Manual procedure 16302002).

Affected VIN(s) Affected Model 3 vehicles built between approximately June 6, 2018 and July 24, 2018.

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@tesla.com.

