 Tesla, Inc. Service Bulletin		<i>Retrofit Hydraulic Control Unit Wake-Up Wire, Model 3 (Heat Pump, Li-Ion Battery)</i>	
SB-22-33-004 April 30, 2022			
Classification		Section/Group	Mobile Service
Repair Bulletin		33 - Brakes	Can Perform (where permitted)
Configuration		Heat Pump, Li-Ion Battery	
Model Year	Model	Country/Region	Build Location
2021 - 2022	Model 3	All	Fremont, Giga Shanghai
<small>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.</small>			

Repair Bulletin: This repair bulletin provides instructions on addressing a noted condition or possible customer concern regarding the operation of Tesla vehicles. These instructions should only be performed by trained professionals.

Condition

Some Heat Pump Model 3 vehicles were built without a hydraulic control unit (HCU) wake-up wire, and in rare circumstances, braking and stability control related alerts may appear on the instrument cluster and touchscreen during the vehicle power-on process. Such faults can typically be corrected and the affected functionality restored with a vehicle power cycle.

Correction

Upon customer complaint of braking and stability control alerts that clear after a vehicle power cycle, retrofit an HCU wake-up wire.

Correction Description	Correction	Time
SB-22-33-004 Not Applicable	S012233004	0.00
Retrofit HCU Wake-Up Wire, Model 3 (Heat Pump, Li-Ion Battery)	S022233004	0.45

	Part Number	Description	Quantity
Parts Required	1742989-00-A	ASY,HARN,ESP WAKE,JUMPER,M3Y	1
	1061177-00-B	WIRE HARNESS REPAIR KIT	As Needed
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	1025812-00-A	Pin Drag Kit	
	1060908-00-A	Soldering Iron and Heat Tool Kit	
	1451046-00-A	Crimp Tool	
	1451045-00-A	Wire cutting and stripping pliers	
Shop Supplies	Electrical tape		

Procedure

1. Remove the underhood storage unit (refer to Service Manual procedure [15240702](#)).
2. Lay a fender protector over the fan shroud and reinforcement beam (Figure 1).

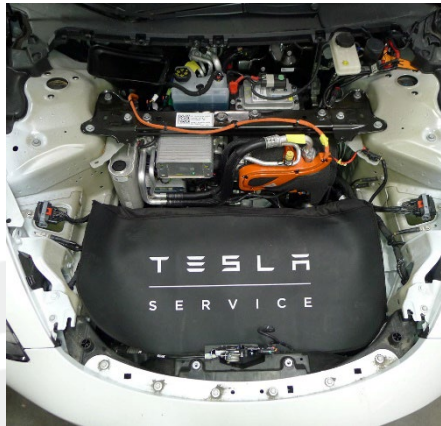


Figure 1

3. Remove the LV battery (refer to Service Manual procedure [17011232](#)).
4. Release the clips (x4) that attach the HV harness to the shock tower brace (Figure 2).

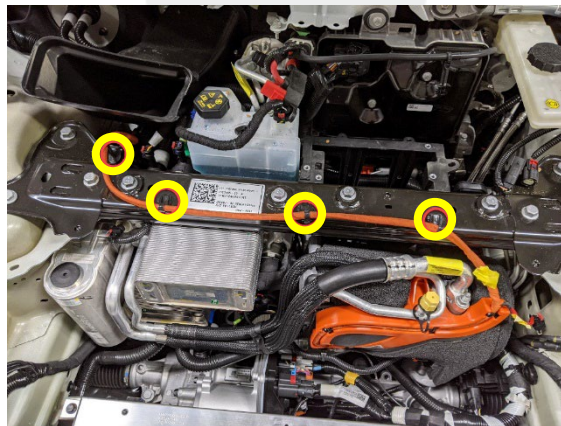


Figure 2

5. Remove the bolt that attaches the A/C compressor ground strap to the A/C compressor (Figure 3).



Figure 3

6. Release the clip that attaches the A/C compressor LV logic harness to the A/C compressor HV harness bracket (Figure 4).

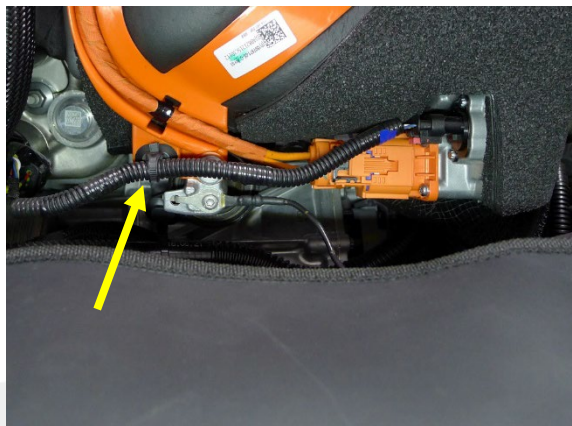


Figure 4

7. Pull the red tab out, and then pull the red tab again to disconnect the A/C compressor LV logic harness from the A/C compressor connector (Figure 5).

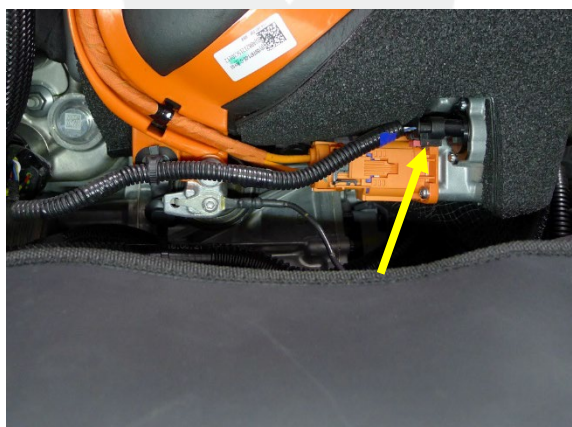


Figure 5

8. Pull the red tab out, and then pull the red tab again to disconnect the A/C compressor HVIL connector from the electrical harness at the LH shock tower (Figure 6).

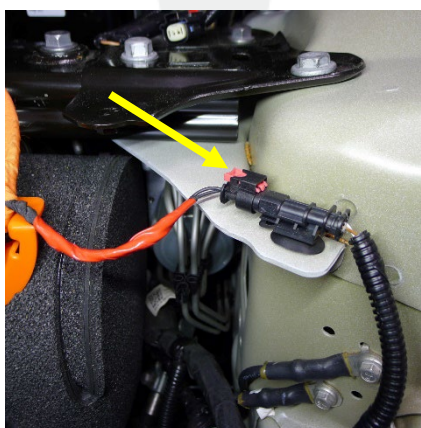


Figure 6

9. With the help of an assistant to support the weight of the A/C compressor, remove the bolts (x3) that attach the A/C compressor to the A/C compressor bracket (Figures 7 and 8).

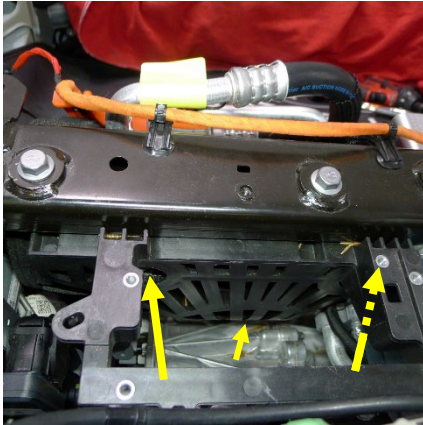


Figure 7

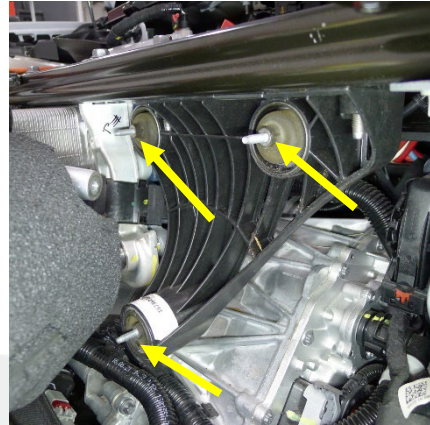


Figure 8

10. Carefully set the compressor onto the reinforcement beam (Figure 9).

⚠ CAUTION: Do not set the compressor down on the HV connector.

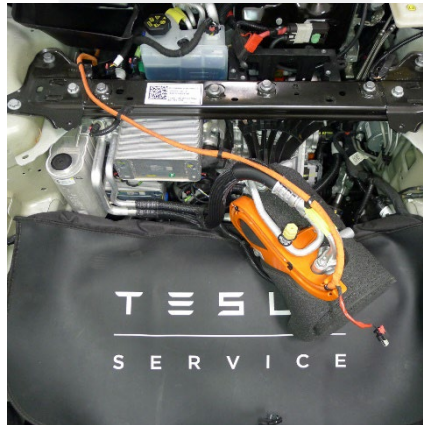


Figure 9

11. Slide the red locking tab, raise the lever (Figure 10), and then remove connector X151 from the HCU (Figure 11).

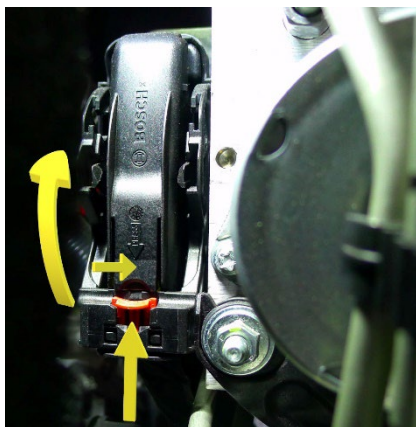


Figure 10

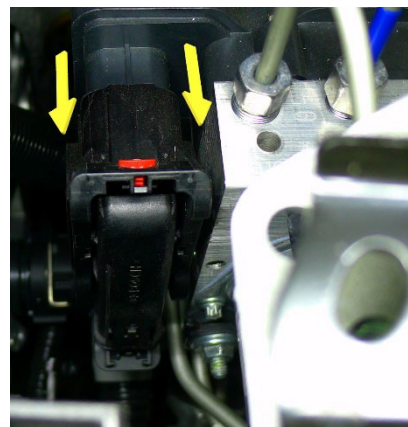


Figure 11

12. If necessary, remove cable ties or cut tape to move connector X151 to a comfortable working position.

13. Remove the cable tie from the rear of connector X151 (Figure 12).



Figure 12

14. Release the tabs (x2) that attach the rear cover to connector X151 (Figure 13), swing the rear cover out (Figure 14), and then remove the rear cover from the connector.

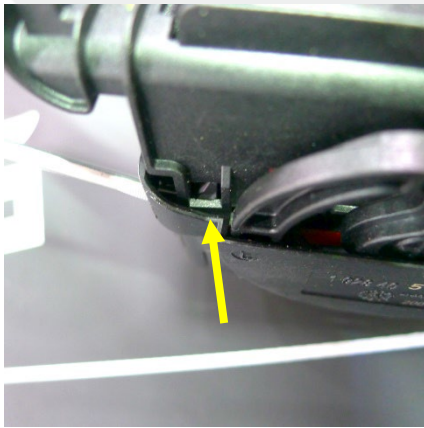


Figure 13

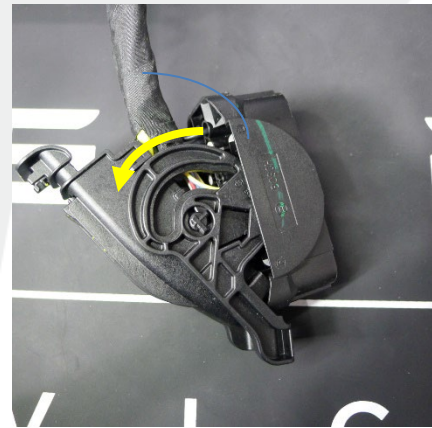


Figure 14

15. Unwrap and remove the electrical tape from the electrical harness for a distance of 150 mm from connector X151 (Figure 15).

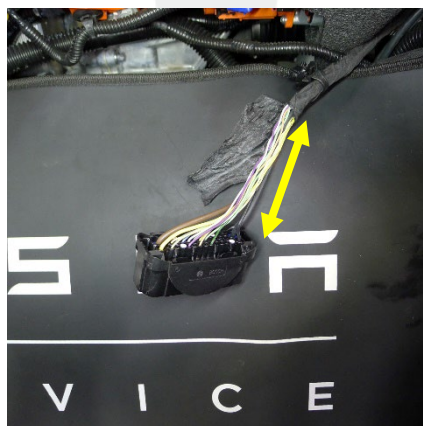


Figure 15

16. Use a pick to slide the large locking tab of connector X151 from “CLOSE” to “OPEN” (Figure 16).

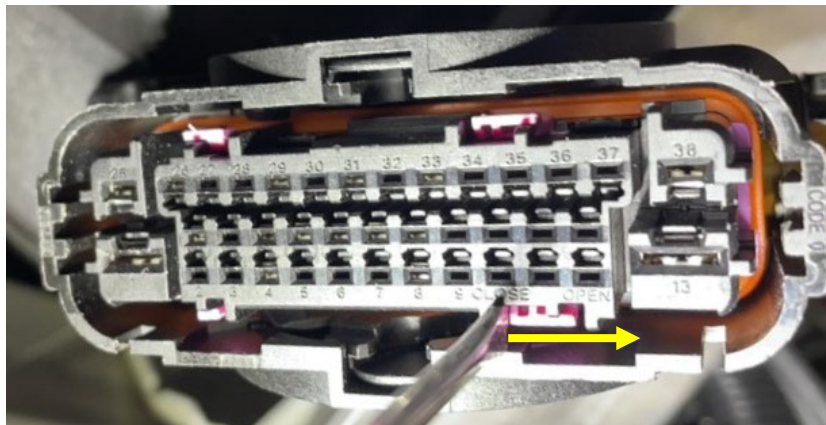


Figure 16

17. Use the tool from the pin drag kit to release the lock for terminal 28 of connector X151 (Figure 17), and at the same time, remove the white wire from receptacle 28 (Figure 18).



Figure 17

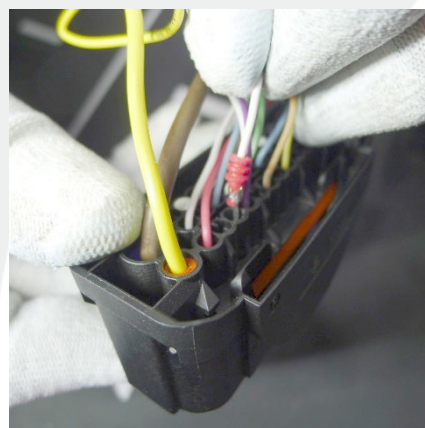


Figure 18

18. Cut the terminal from the white wire, and then wrap the wire end with yellow tape (Figure 19).

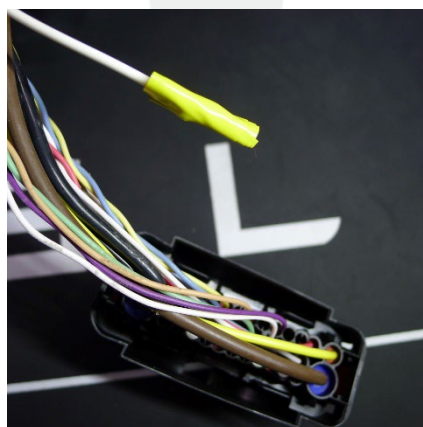


Figure 19

19. Use the tool from the pin drag kit to release the lock for terminal 25 of connector X151 (Figure 20), and at the same time, remove the yellow wire from receptacle 25 (Figure 21).

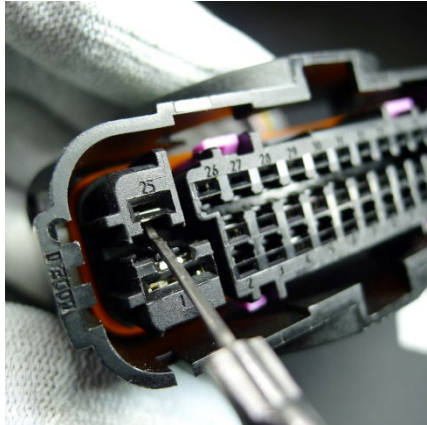


Figure 20

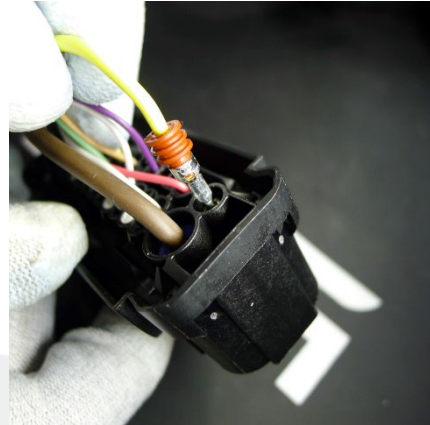


Figure 21

20. Cut the yellow power terminal wire 100 mm from the end (Figure 22), and then discard the end.

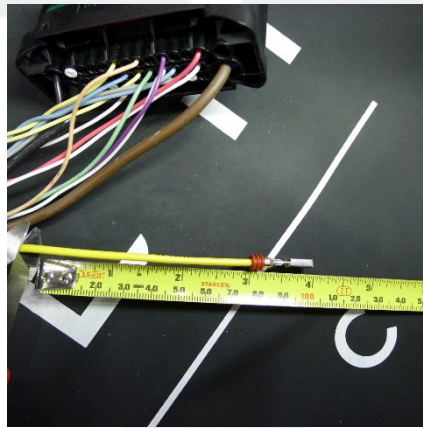


Figure 22

21. Slide the shrink tubing over both wires of the jumper, to the middle of the jumper (Figure 23).

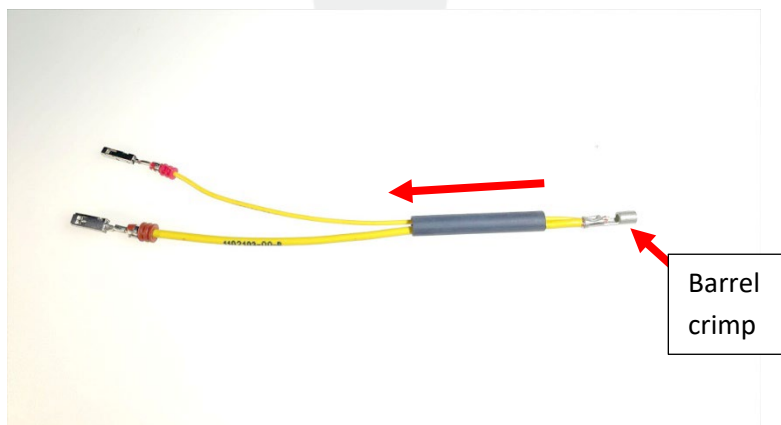



Figure 23

22. Make a butt splice repair to attach the yellow power terminal wire to the barrel crimp of the jumper (Figures 24, 25, and 26).

 **NOTE:** Refer to [SI-17-17-002](#), 'Electrical Harness Repair' for instructions how to make this repair.

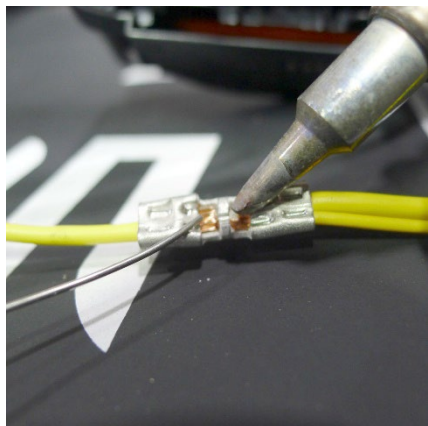


Figure 24 – Crimp wire and solder barrel crimp

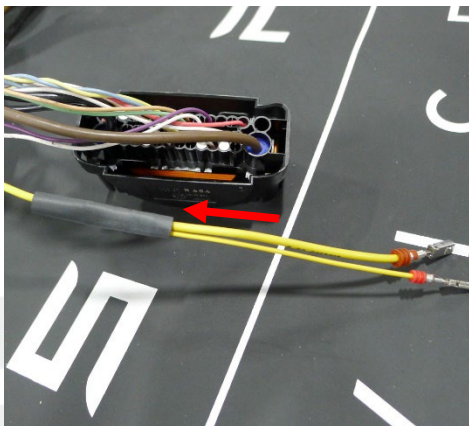


Figure 25 – Slide shrink tubing over barrel crimp and heat

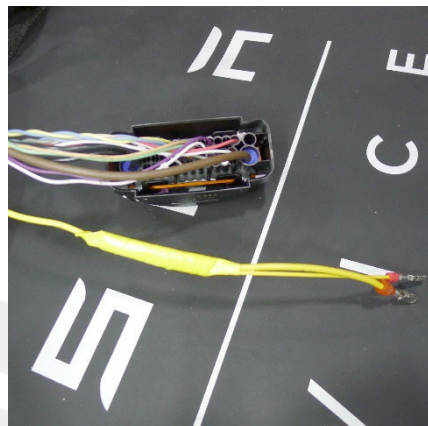


Figure 26 – Wrap with yellow tape to complete

23. Insert the smaller terminal of the jumper into receptacle 28 (Figure 27) and the larger terminal of the jumper into receptacle 25 (Figure 28).

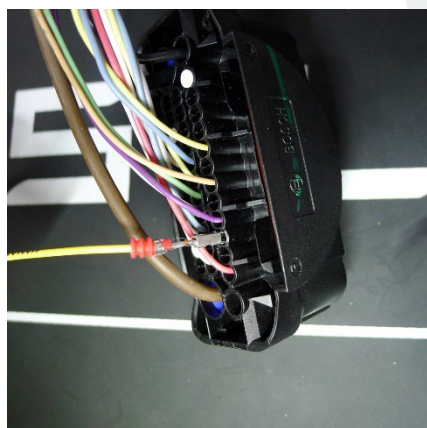


Figure 27

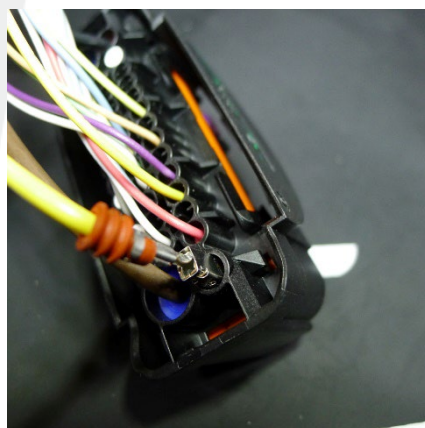


Figure 28

24. Perform a Push-Pull-Push check on each wire to make sure the wires are secure in the connector (Figure 29).

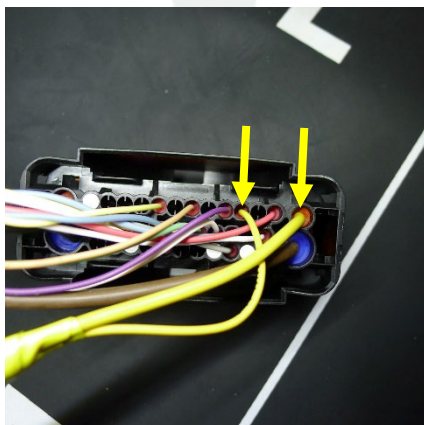


Figure 29

25. Use a pick to slide the large locking tab of connector X151 from “OPEN” to “CLOSE” (Figure 30).

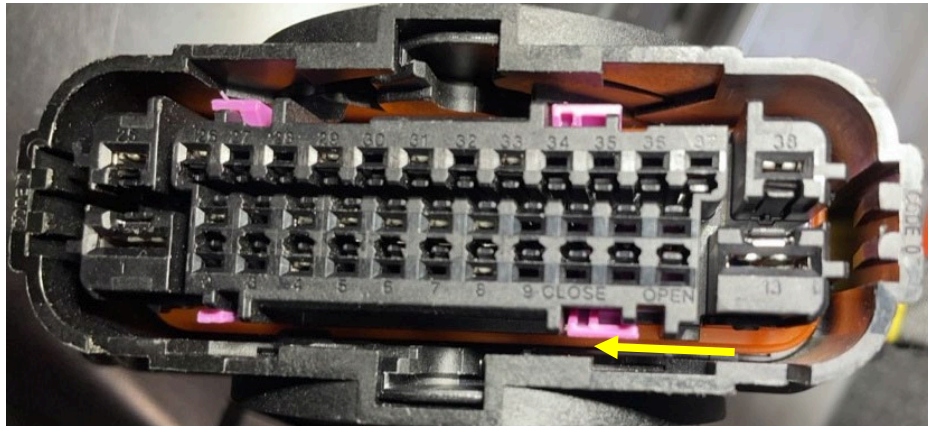


Figure 30

26. Bundle the white wire and excess jumper wire neatly into the electrical harness with yellow tape (Figure 31), and then wrap the harness with anti-abrasion tape (Figure 32).

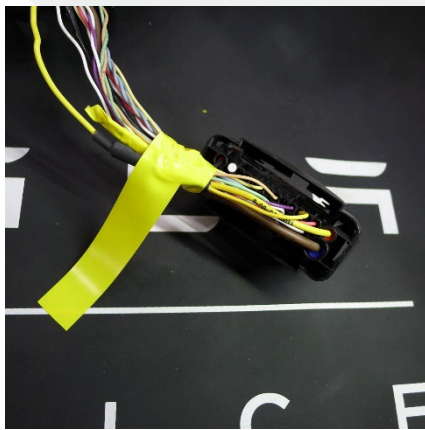


Figure 31

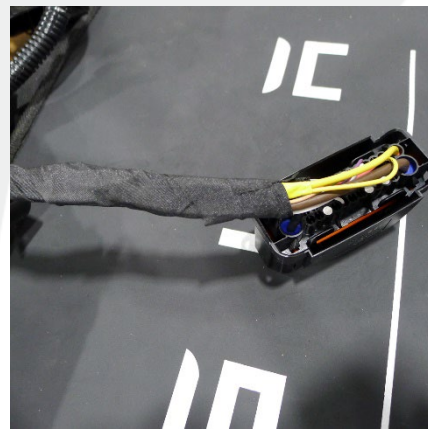


Figure 32

27. Attach the rear cover to connector X151, and then swing the rear cover close (Figure 33), engaging the tabs (x2) (Figure 34).



Figure 33

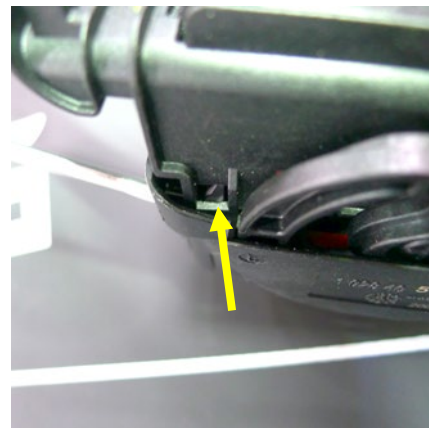


Figure 34

28. Fasten a small cable tie to the rear of connector X151 to secure the rear cover (Figure 35), and then trim the tie.

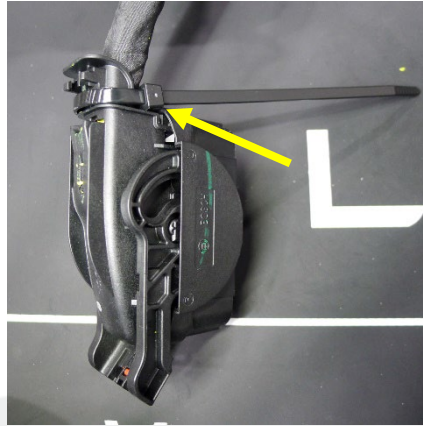


Figure 35

29. Attach connector X151 to the HCU (Figure 36), lower the lever, and then slide the red locking tab (Figure 37).

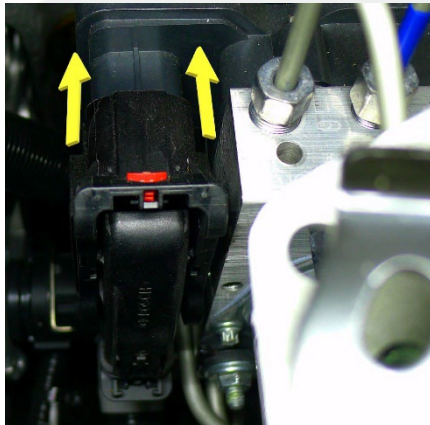


Figure 36

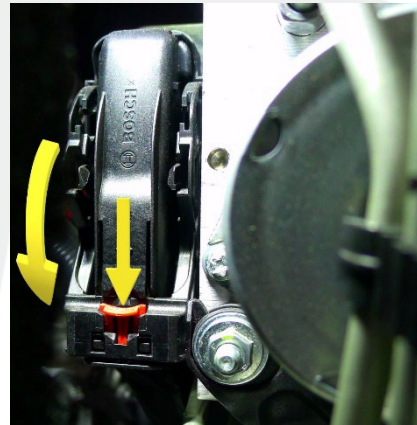


Figure 37

30. With the help of an assistant to support the weight of the A/C compressor, install the bolts (x3) that attach the A/C compressor to the A/C compressor bracket (Figures 38 and 39) (torque 9 Nm).

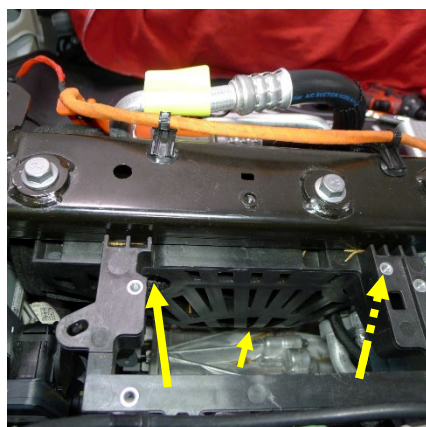


Figure 38

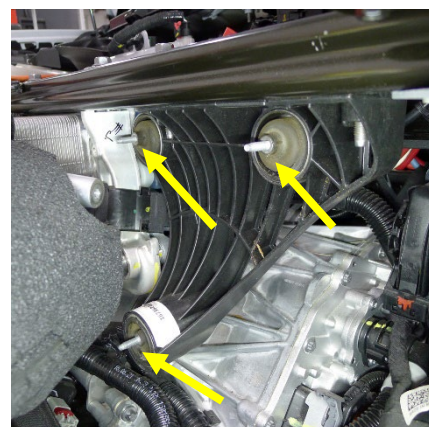


Figure 39

31. Connect the A/C compressor HVIL connector to the electrical harness at the LH shock tower, and then push the red tab in to lock the connector (Figure 40).

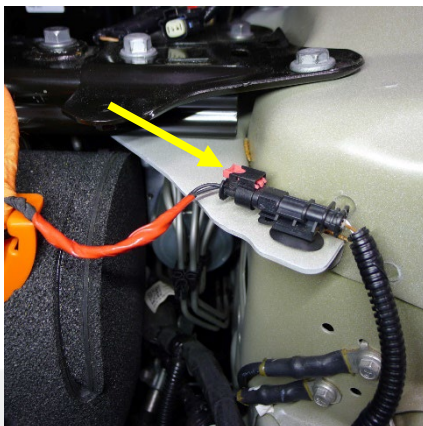


Figure 40

32. Connect the A/C compressor LV logic harness to the A/C compressor connector, and then push the red tab in to lock the connector (Figure 41).



Figure 41

33. Fasten the clip that attaches the A/C compressor LV logic harness to the A/C compressor HV harness bracket (Figure 42).

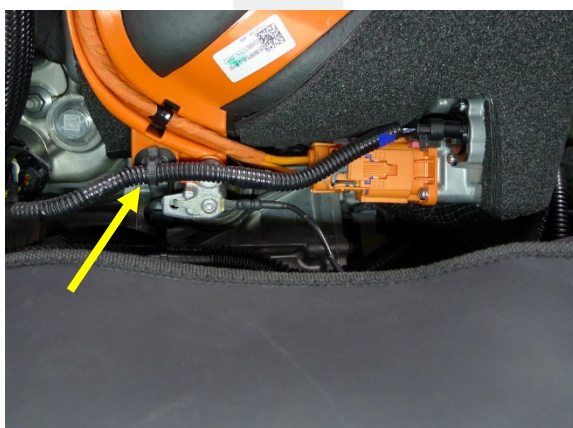


Figure 42

34. Install the bolt that attaches the A/C compressor ground strap to the A/C compressor (Figure 43) (torque 7 Nm).



Figure 43

35. Fasten the clips (x4) that attach the HV harness to the shock tower brace (Figure 44).

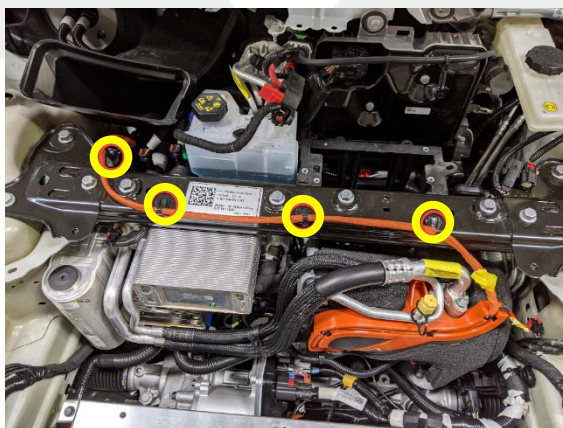


Figure 44

36. Install the LV battery (refer to Service Manual procedure [17011232](#)).

37. Remove the fender protector from the fan shroud and reinforcement beam (Figure 45).

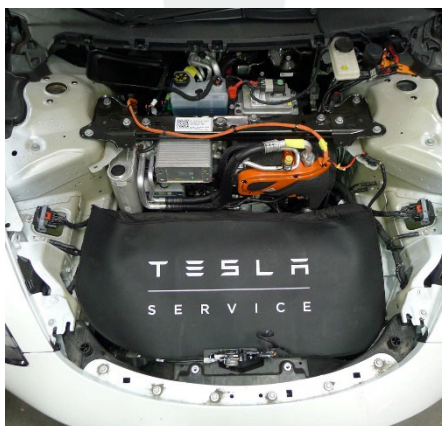


Figure 45

38. Install the underhood storage unit (refer to Service Manual procedure [15240702](#)).