 Tesla, Inc. Service Bulletin		Retrofit Hydraulic Control Unit Wake-Up Wire, Model 3 (Heat Pump, Lead Acid Battery)	
SB-22-33-003 April 30, 2022			
Classification Repair Bulletin		Section/Group 33 - Brakes	Mobile Service Can Perform (where permitted)
			Configuration Heat Pump, Lead Acid Battery
Model Year 2020 - 2022	Model Model 3	Country/Region All	Build Location 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-22-33-003 Not Applicable	S012233003	0.0
Retrofit HCU Wake-Up Wire, Model 3 (Heat Pump, Lead Acid Battery)	S022233003	0.5

	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 12V battery (refer to Service Manual procedure [17011202](#)).
4. Rotate the rear battery tie down strap forward to release, and then remove the strap from the vehicle (Figure 2).

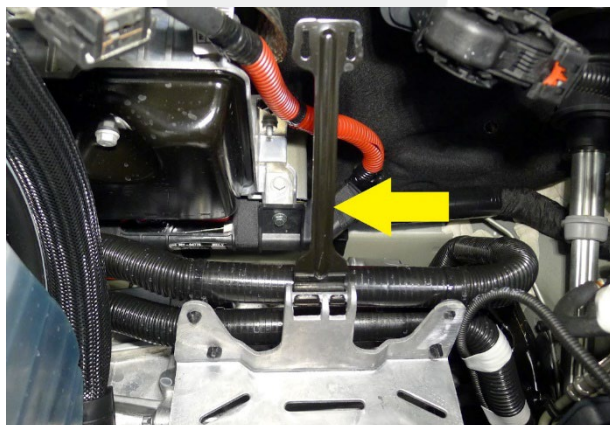


Figure 2

5. Release the clip that attaches the battery vent tube to the battery bracket and set the vent tube aside (Figure 3).

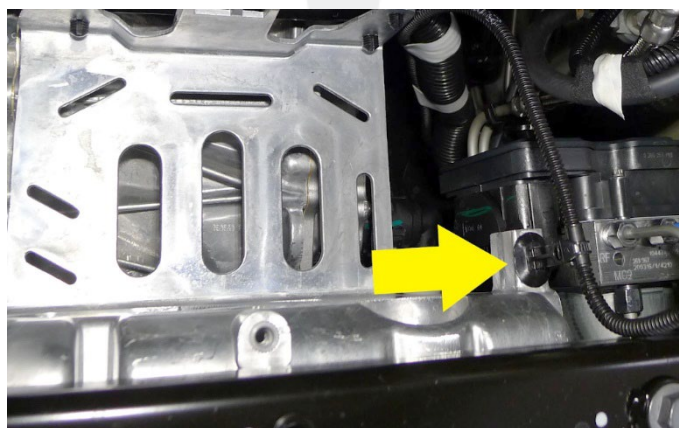


Figure 3

6. Release the clips (x2) that attach the coolant hose to the battery bracket (Figure 4).



Figure 4

7. Release the clips (x4) that attach the HV harness to the shock tower brace (Figure 5).



Figure 5

8. Remove the bolt that attaches the A/C compressor ground strap to the A/C compressor (Figure 6).



Figure 6

9. Release the clip that attaches the A/C compressor LV logic harness to the A/C compressor HV harness bracket (Figure 7).

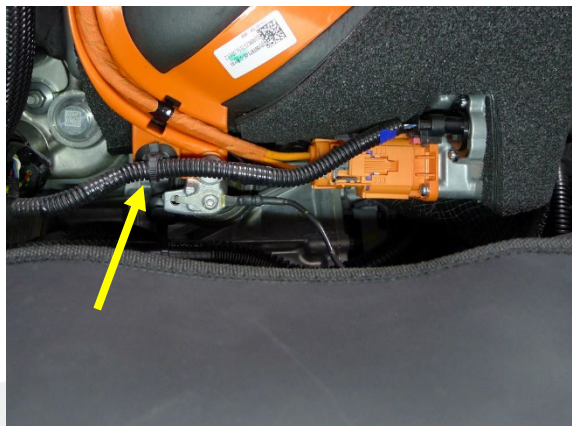


Figure 7

10. 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 8).

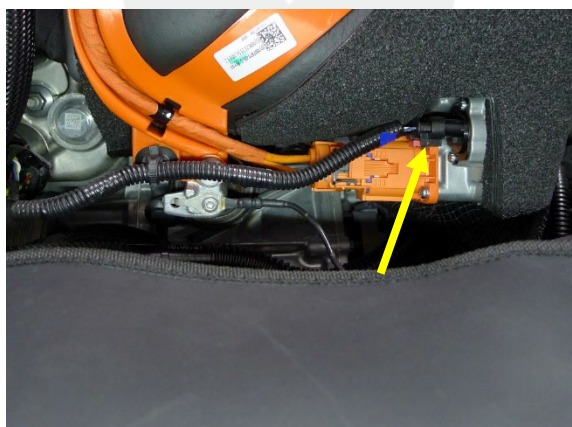


Figure 8

11. 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 9).

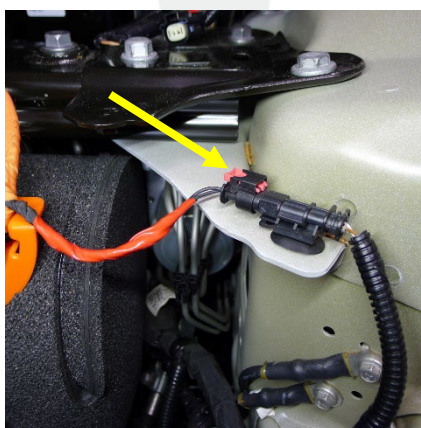


Figure 9

12. Release the clip that attaches the coolant hose to the A/C compressor bracket (Figure 10).

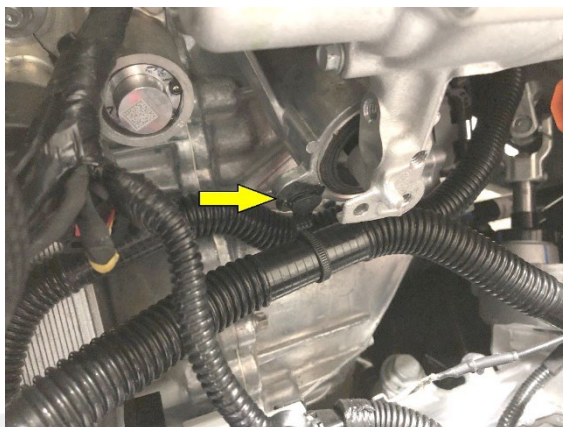


Figure 10

13. With the help of an assistant to support the weight of the A/C compressor, remove the bolts (x2) that attach the A/C compressor bracket to the shock tower brace (Figure 11).

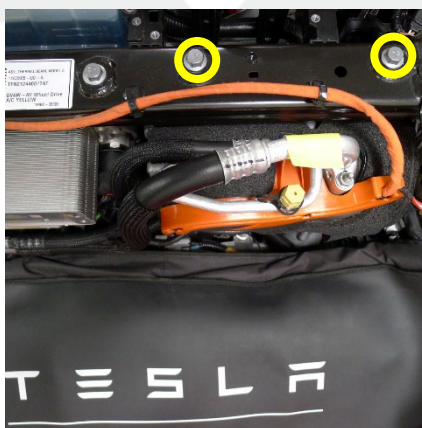


Figure 11

14. Carefully set the compressor and bracket onto the reinforcement beam (Figure 12).

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

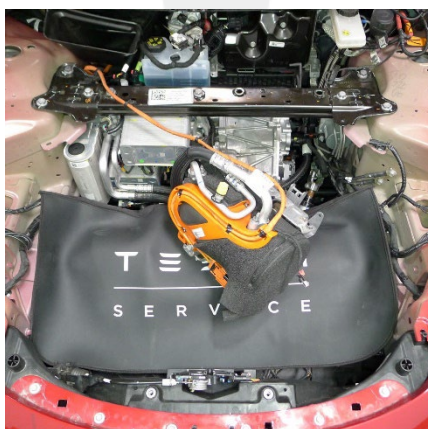


Figure 12

15. Slide the red locking tab, raise the lever (Figure 13), and then remove connector X151 from the HCU (Figure 14).

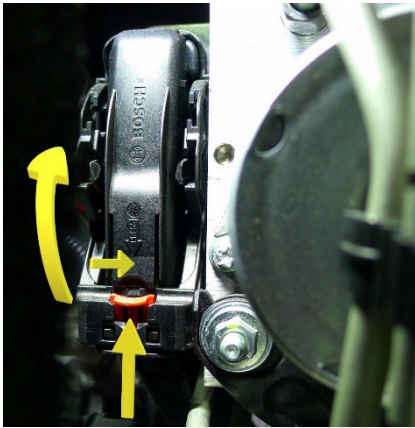


Figure 13

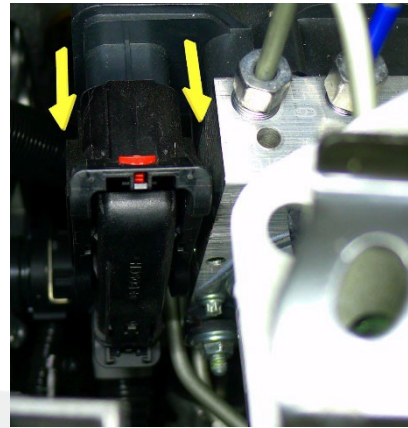


Figure 14

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

17. Remove the cable tie from the rear of connector X151 (Figure 15).



Figure 15

18. Release the tabs (x2) that attach the rear cover to connector X151 (Figure 16), swing the rear cover out (Figure 17), and then remove the rear cover from the connector.

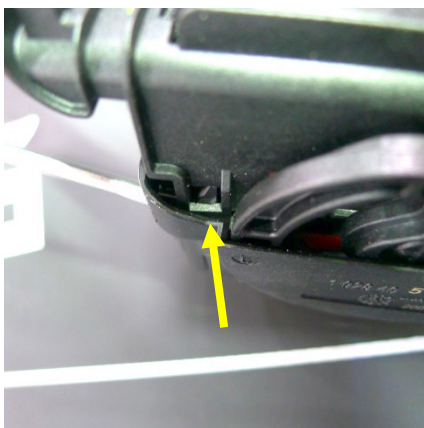


Figure 16

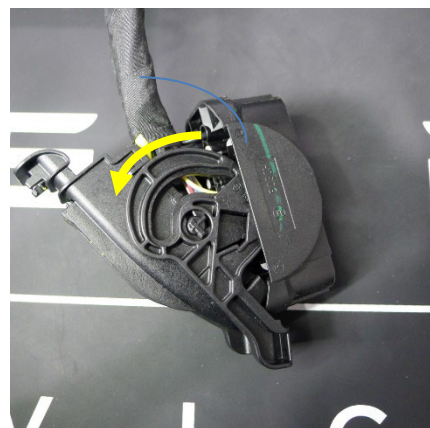


Figure 17

19. Unwrap and remove the electrical tape from the electrical harness for a distance of 150 mm from connector X151 (Figure 18).

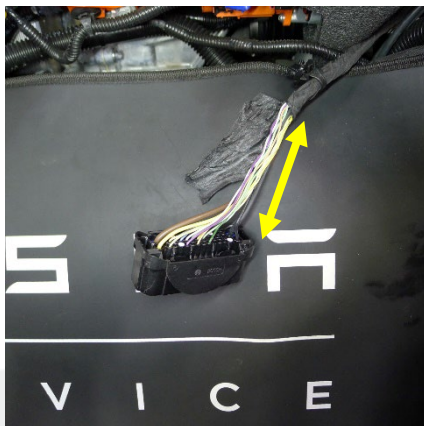


Figure 18

20. Use a pick to slide the large locking tab of connector X151 from “CLOSE” to “OPEN” (Figure 19).

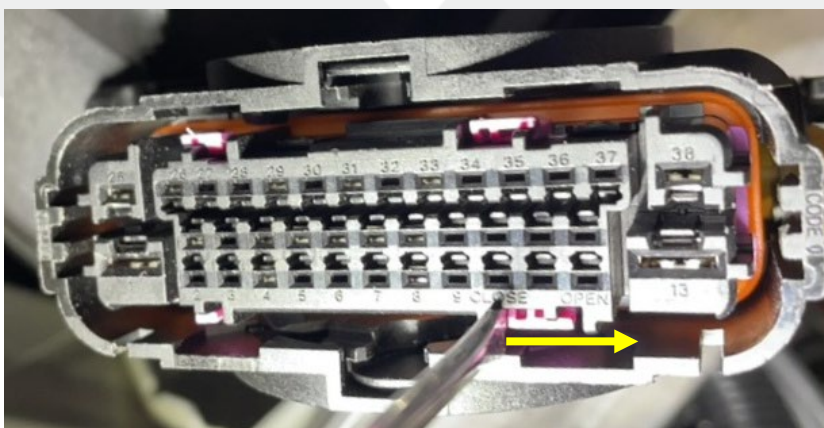


Figure 19

21. Use a pick to remove the plug from receptacle 28 of connector X151 (Figure 20).

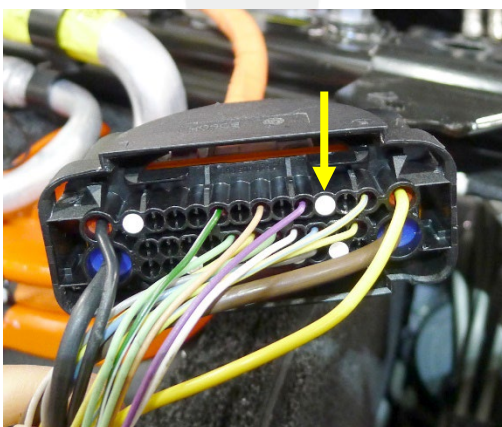


Figure 20

22. Use the tool from the pin drag kit to release the lock for terminal 25 of connector X151 (Figure 21), and at the same time, remove the yellow wire from receptacle 25 (Figure 22).

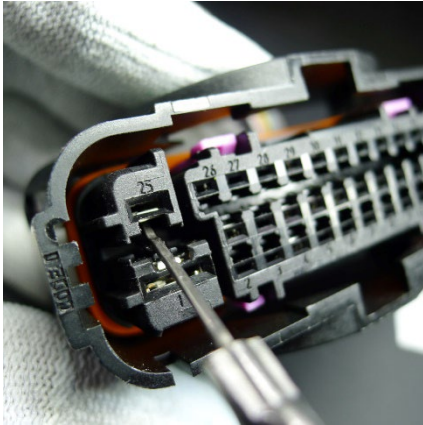


Figure 21

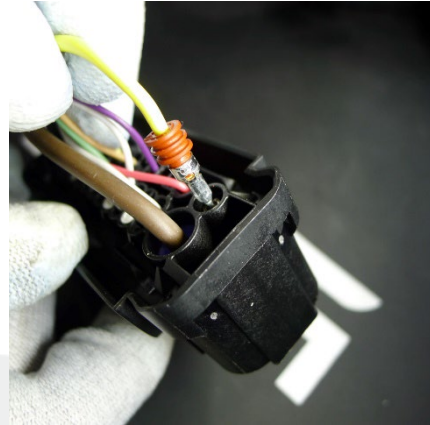


Figure 22

23. Cut the yellow power terminal wire 100 mm from the end (Figure 23), and then discard the end.

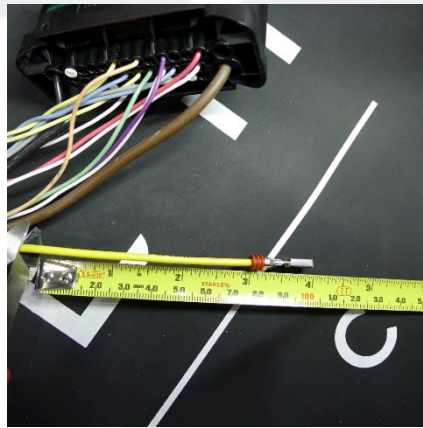


Figure 23

24. Slide the shrink tubing over both wires of the jumper, to the middle of the jumper (Figure 24).

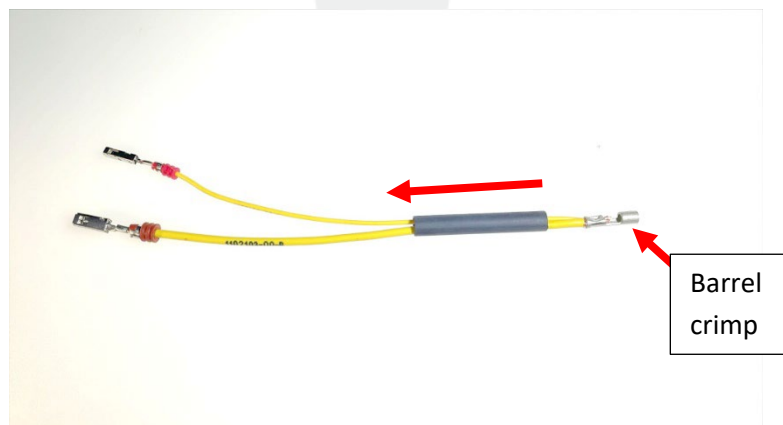


Figure 24

25. Make a butt splice repair to attach the yellow power terminal wire to the barrel crimp of the jumper (Figures 25, 26, and 27).

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

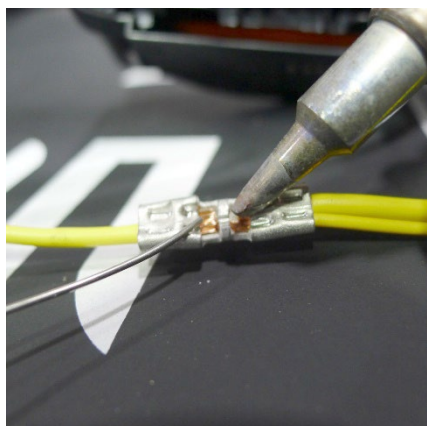


Figure 25 – Crimp wire and solder barrel crimp

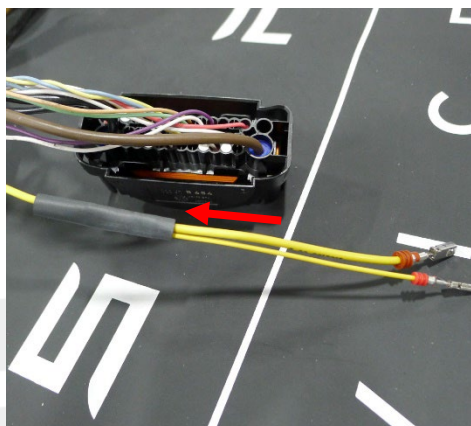


Figure 26 – Slide shrink tubing over barrel crimp and heat

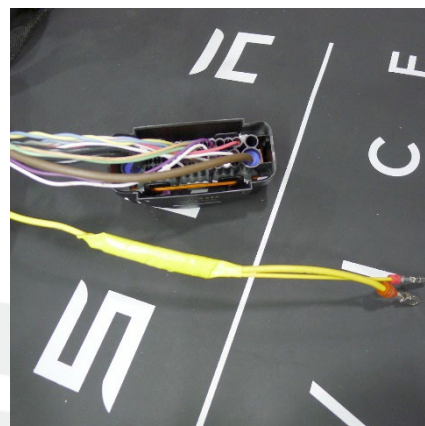


Figure 27 – Wrap with yellow tape to complete

26. Insert the smaller terminal of the jumper into receptacle 28 (Figure 28) and the larger terminal of the jumper into receptacle 25 (Figure 29).

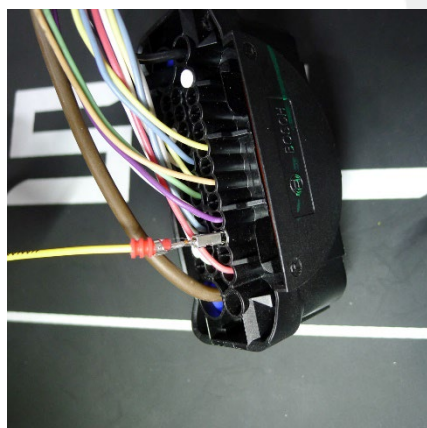


Figure 28

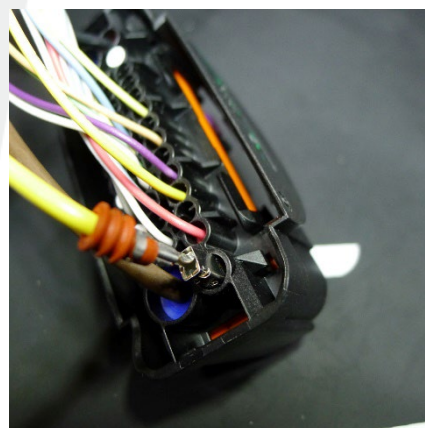


Figure 29

27. Perform a Push-Pull-Push check on each wire to make sure the wires are secure in the connector (Figure 30).

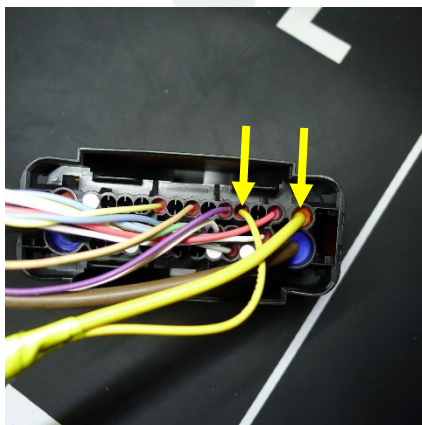


Figure 30

28. Use a pick to slide the large locking tab of connector X151 from “OPEN” to “CLOSE” (Figure 31).

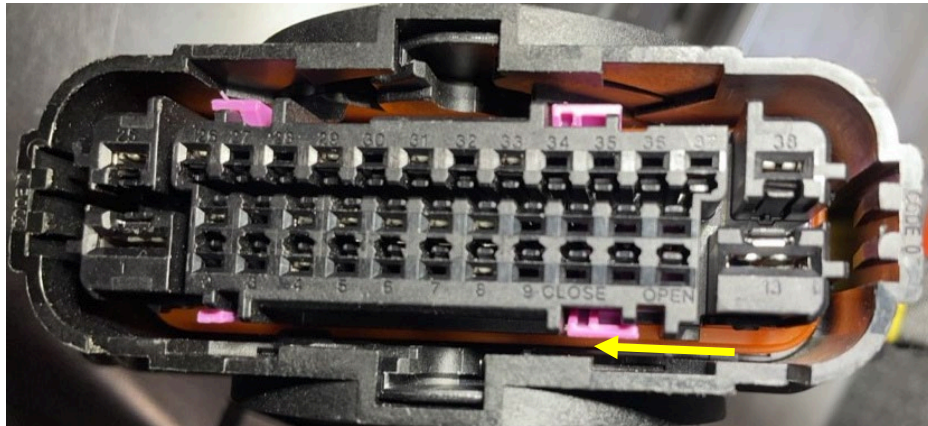


Figure 31

29. Bundle the excess jumper wire neatly into the electrical harness with yellow tape (Figure 32), and then wrap the harness with anti-abrasion tape (Figure 33).

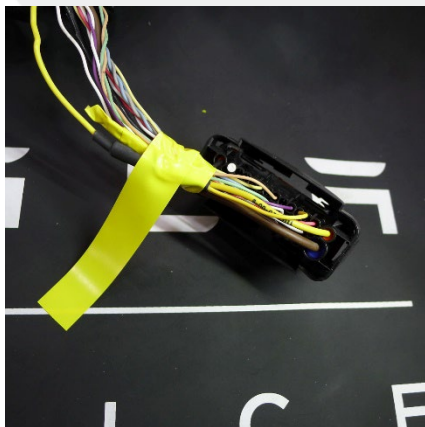


Figure 32

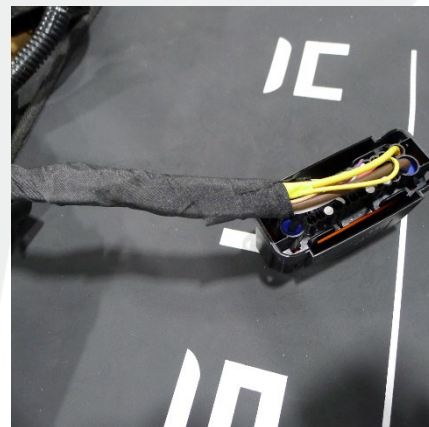


Figure 33

30. Attach the rear cover to connector X151, and then swing the rear cover close (Figure 34), engaging the tabs (x2) (Figure 35).



Figure 34

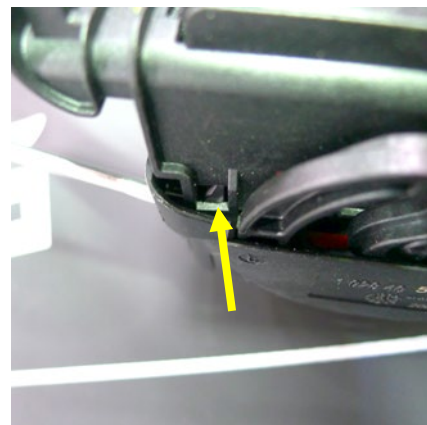


Figure 35

31. Fasten a small cable tie to the rear of connector X151 to secure the rear cover (Figure 36), and then trim the tie.

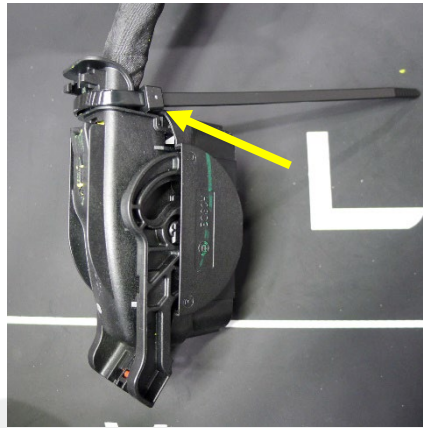


Figure 36

32. Attach connector X151 to the HCU (Figure 37), lower the lever, and then slide the red locking tab (Figure 38).

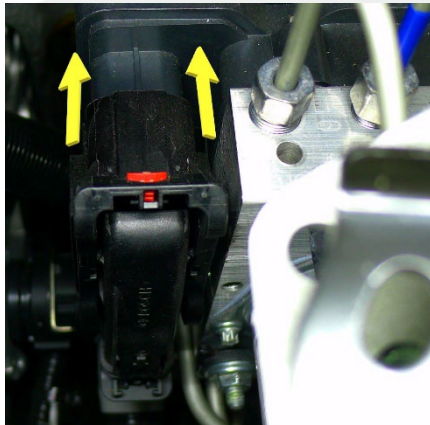


Figure 37

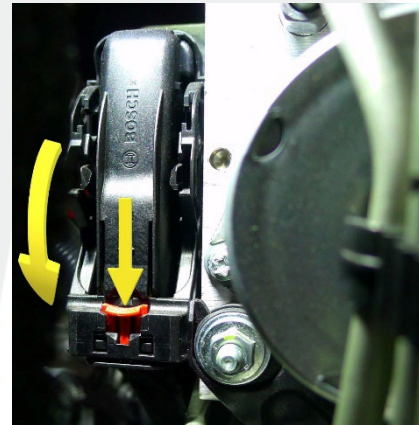


Figure 38

33. With the help of an assistant to support the weight of the A/C compressor, install the bolts (x2) that attach the A/C compressor bracket to the shock tower brace (Figure 39) (torque 31 Nm).

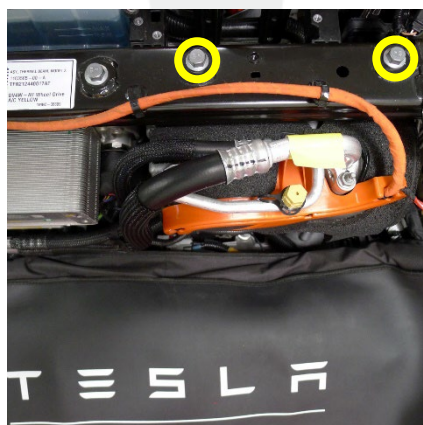


Figure 39

34. Fasten the clip that attaches the coolant hose to the A/C compressor bracket (Figure 40).

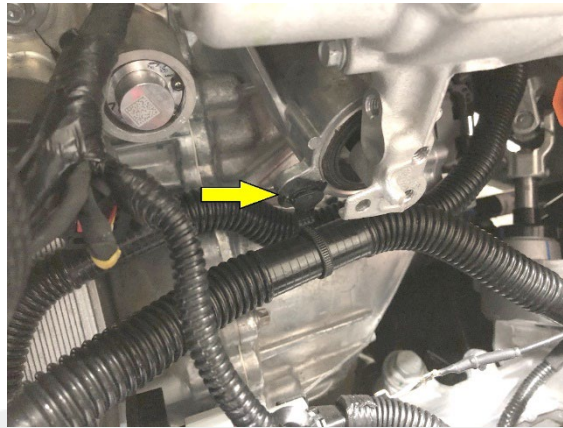


Figure 40

35. 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 41).

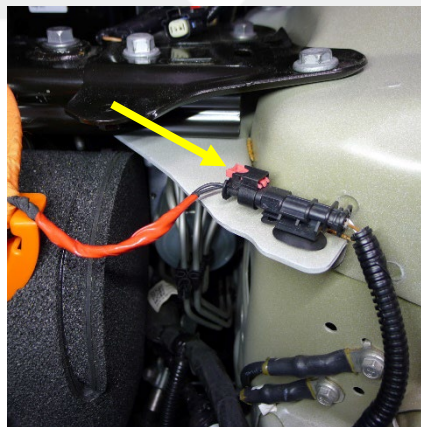


Figure 41

36. 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 42).



Figure 42

37. Fasten the clip that attaches the A/C compressor LV logic harness to the A/C compressor HV harness bracket (Figure 43).

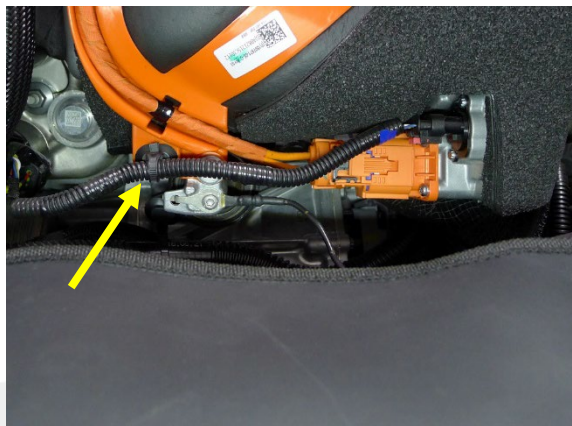


Figure 43

38. Install the bolt that attaches the A/C compressor ground strap to the A/C compressor (Figure 44) (torque 7 Nm).



Figure 44

39. Fasten the clips (x4) that attach the HV harness to the shock tower brace (Figure 45).



Figure 45

40. Fasten the clips (x2) that attach the coolant hose to the battery bracket (Figure 46).



Figure 46

41. Fasten the clip that attaches the battery vent tube to the battery bracket (Figure 47).

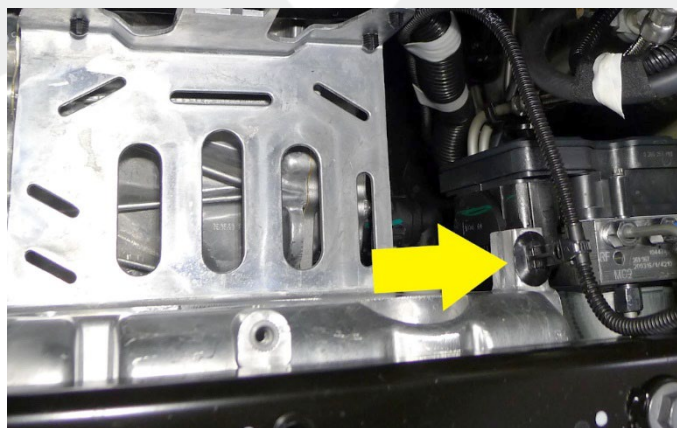


Figure 47

42. Install the rear battery tie down strap, and then rotate the strap rearward to secure (Figure 48).

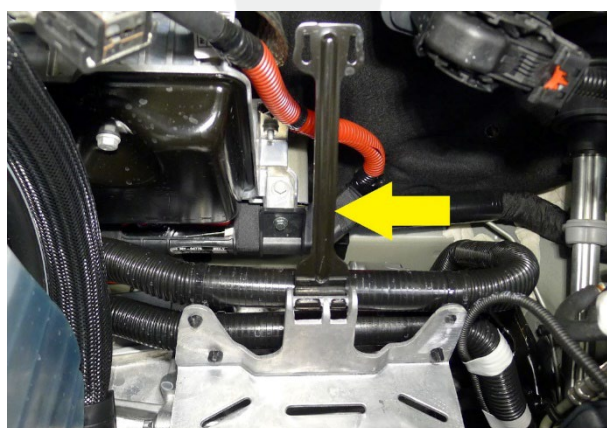


Figure 48

43. Install the 12V battery (refer to Service Manual procedure [17011202](#)).

44. Remove the fender protector from the fan shroud and reinforcement beam (Figure 49).



Figure 49

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