		Tesla, Inc. Service Bulletin		<i>Replace Refrigerant Pressure/Temperature Sensors</i>
SB-21-18-002 March 1, 2021				
Classification		Section/Group		Mobile Service
Campaign Bulletin		18 - Thermal Management		Cannot Perform
Model Year	Model	Country/Region		Version
2020 - 2021	Model 3, Model Y	All		Heat Pump
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

Certain Model 3 and Model Y vehicles may be equipped with refrigerant pressure/temperature (P/T) sensors in the heat pump that can fault over time.

Correction

Replace all 3 refrigerant P/T sensors.

Correction Description		Correction	Time
Replace Refrigerant P/T Sensors		S012118002	1.5

	Part Number	Description	Quantity
Parts Required	1510047-00-B	PT SENSOR, HIGH PRESSURE	2
	1510048-00-B	PT SENSOR, LOW PRESSURE	1
	And if parts are available:		
	1111738-00-A	WASHER, 1/2, STL ZN, SEAL	1
	1111740-00-A	WASHER, 3/4, STL ZN, SEAL	1
<small>These part numbers were current at the time of publication. Use the revisions listed or later, unless otherwise specified in the Parts Catalog.</small>			
Special Tools	1588741-00-A	Model Y HVAC Socket Kit	
	1501412-00-A	Oil Injector, R1234YF	
Shop Supplies	ND-11 Oil		Shop Supplies

Procedure

1. Remove the underhood storage unit (refer to Service Manual procedure 15240702), [Model 3](#), [Model Y](#).
2. Recover the A/C refrigerant (refer to Service Manual procedure 18200102), [Model 3](#), [Model Y](#).
3. Remove the 13 mm bolt that attaches the Supermanifold-to-compressor A/C line to the Supermanifold (Figure 1).

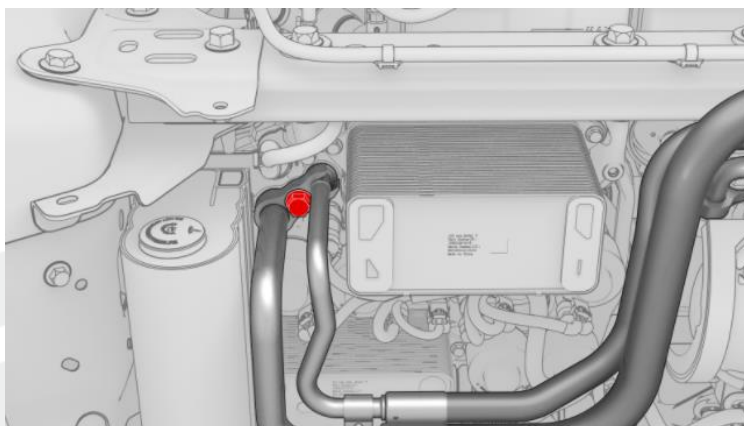


Figure 1

4. Remove the Supermanifold-to-compressor A/C line from the Supermanifold, and then use an S-hook to restrain the line to the underhood storage unit support beam (Figure 2).

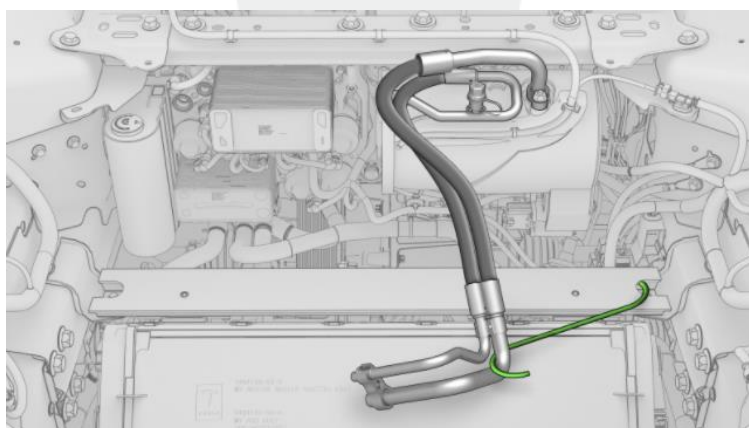


Figure 2

5. Release the locking tab, and then disconnect the electrical harness from the low pressure P/T sensor connector (Figure 3).

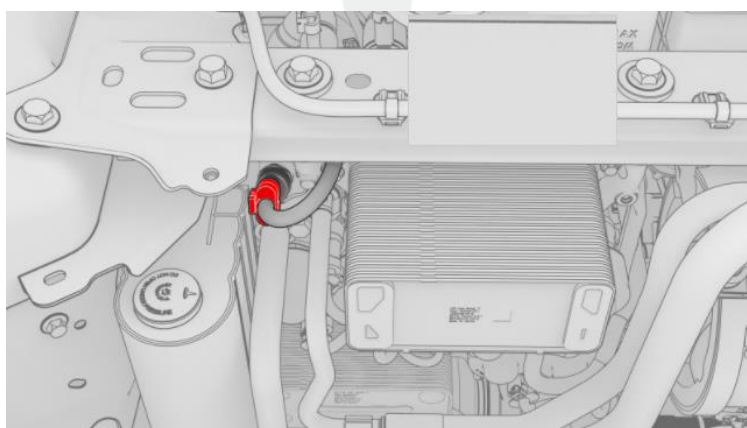


Figure 3

6. Release the locking tab, and then disconnect the electrical harness from the high pressure P/T sensor connector (Figure 4).

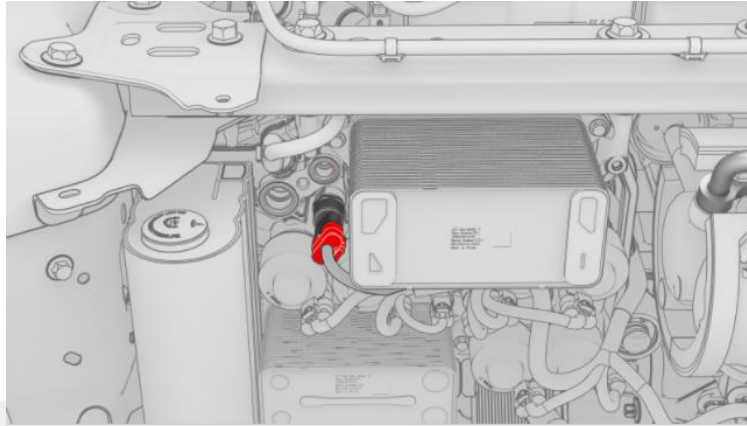


Figure 4

7. Release the locking tab, and then disconnect the electrical harness from the subcool high pressure P/T sensor connector (Figure 5).

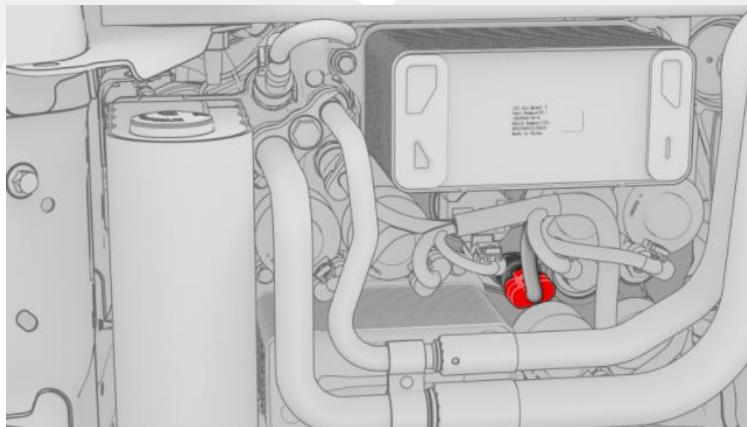


Figure 5

8. Use the HVAC socket kit special tool to remove the low pressure P/T sensor from the Supermanifold (Figure 6).

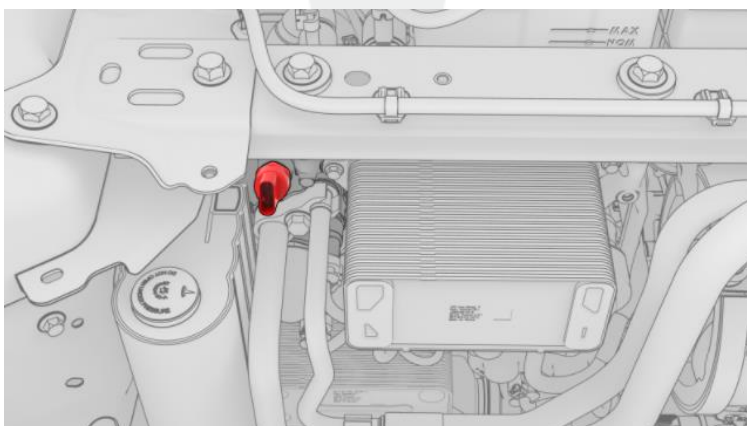


Figure 6

9. Use the HVAC socket kit special tool to remove the high pressure P/T sensor from the Supermanifold (Figure 7).

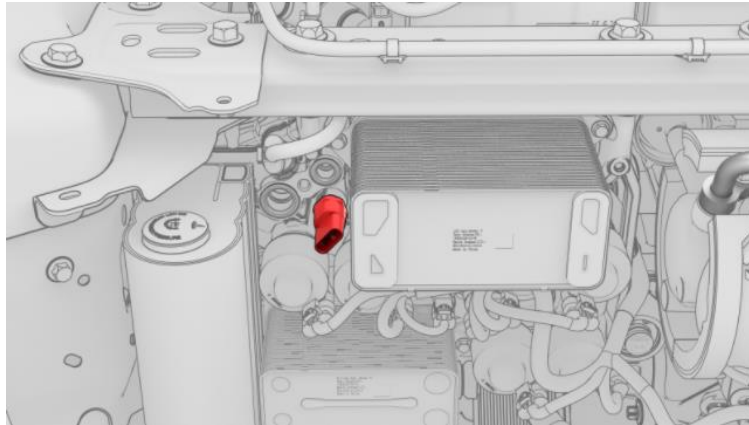


Figure 7

10. Use the HVAC socket kit special tool to remove the subcool high pressure P/T sensor from the Supermanifold (Figure 8).

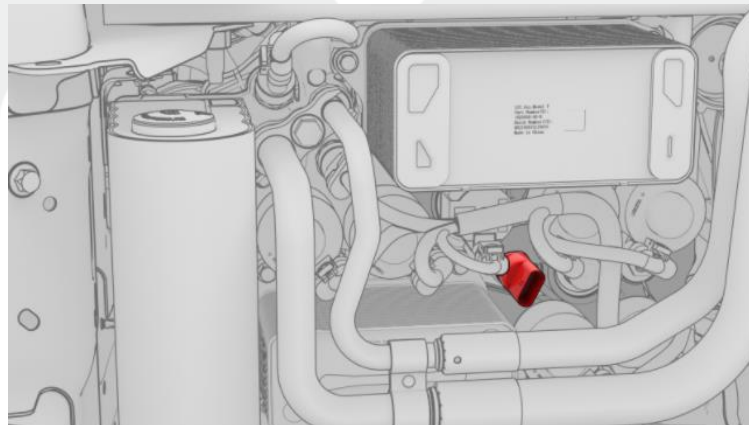


Figure 8

11. If parts are available, install new washers on the Supermanifold-to-compressor A/C line.



NOTE: If the parts are not available, reuse the existing washers.

12. Lubricate the washers of the Supermanifold-to-compressor A/C line and the O-rings and threads of the 3 new P/T sensors with ND-11 oil.
13. Hand-install the new subcool high pressure P/T sensor (black connector) into the Supermanifold, and then use the HVAC socket kit special tool to tighten (torque 9 Nm) (Figure 8).
14. Hand-install the new high pressure P/T sensor (black connector) into the Supermanifold, and then use the HVAC socket kit special tool to tighten (torque 9 Nm) (Figure 7).
15. Hand-install the new low pressure P/T sensor (brown connector) into the Supermanifold, and then use the HVAC socket kit special tool to tighten (torque 9 Nm) (Figure 6).
16. Connect the electrical harness to the subcool high pressure P/T sensor connector, and then fasten the locking tab (Figure 5).
17. Connect the electrical harness to the high pressure P/T sensor connector, and then fasten the locking tab (Figure 4).
18. Connect the electrical harness to the low pressure P/T sensor connector, and then fasten the locking tab (Figure 3).

19. Release the Supermanifold-to-compressor A/C line from the S-hook (Figure 2), install the A/C line into the Supermanifold, hand-install the 13 mm bolt that attaches the A/C line to the Supermanifold, and then tighten (torque 22 Nm) (Figure 1).
20. Perform the vacuum leak test and oil injection (refer to Service Manual procedure 18200102), [Model 3](#), [Model Y](#).
21. Recharge the A/C refrigerant (refer to Service Manual procedure 18200102), [Model 3](#), [Model Y](#).



NOTE: Do not disconnect the laptop from the vehicle at this time.

22. In Toolbox, click the **Actions/Autodiag** tab, type “Thermal” in the search field, click **TEST-SELF_VCFRONT_X_THERMAL-PERFORMANCE**, click **RUN**, and allow the routine to complete.
23. Disconnect the laptop from the vehicle.
24. Install the underhood storage unit (refer to Service Manual procedure 15240702), [Model 3](#), [Model Y](#).

