

		Tesla, Inc. Service Bulletin		<i>Rewrite Shunt Resistance Value</i>
SB-20-16-002 December 22, 2023		R2		
Classification		Section/Group	Mobile Service	
Campaign Bulletin		16 - HV Battery System	Can Perform (where permitted)	All
Model Year	Model	Country/Region	Build Location	
2020	Model 3	All	Fremont, Giga Shanghai	
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.

This Service Document supersedes SB-20-16-003 R1, dated May 29, 2021. This new revision, R2, updates the word “penthouse” to “ancillary”. Each content change is marked by a vertical line in the left margin. Discard the previous version and replace it with this one.

Condition

Certain Model 3 vehicles were configured with incorrect shunt resistance values that can affect charging capacity and range performance.

Correction

Rewrite the shunt resistance with the correct value for the vehicle.

Correction Description	Correction	Time
SB-20-16-002 Not Applicable	S012016002	0.00
Rewrite Shunt Resistance Value	S022016002	0.15

Shop Supplies Paint pen

Procedure

⚠ CAUTION: This procedure has time-dependent steps. Read through the entire procedure to become familiar before performing it.

📄 NOTE: The tool to display the correct shunt resistance value for a given VIN has been integrated into step 2 of this document.

- Make sure that the vehicle is in Park, there is no charging cable connected, and the climate control system is completely powered off.
- Double-click the yellow box below to activate the tool. Type the VIN in upper case, and press the Enter key to display the correct shunt resistance value for the vehicle.

DOUBLE-CLICK YELLOW BOX, THEN TYPE VIN	SHUNT RESISTANCE

- Click on this text to deactivate the tool in step 2.

- Record the 5-digit shunt resistance value, and have it standing by for step 9.

 **NOTE:** For example, the shunt resistance might be 24986.

- Connect a laptop with Toolbox 3 to the vehicle.
- In Toolbox, select the **Actions** tab, type “contactors” into the search field, and click **Ensure Power Off** (Figure 1).

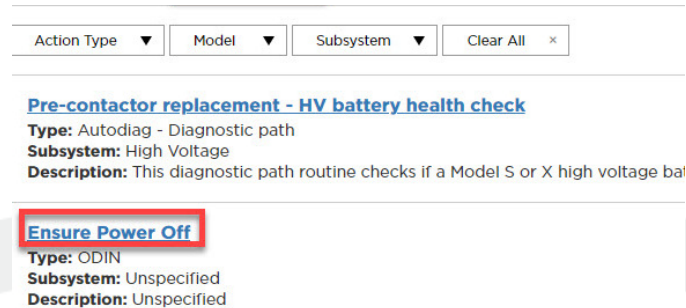


Figure 1

- Click **RUN** (Figure 2).

 **CAUTION:** After the contactors open, steps 8 and 9 must be completed within 60 seconds.



Figure 2

- Select the **Actions** tab, type “shunt” into the search field, click **HVP write shunt ohm** (Figure 3), and then click **Run Network** (Figure 4).

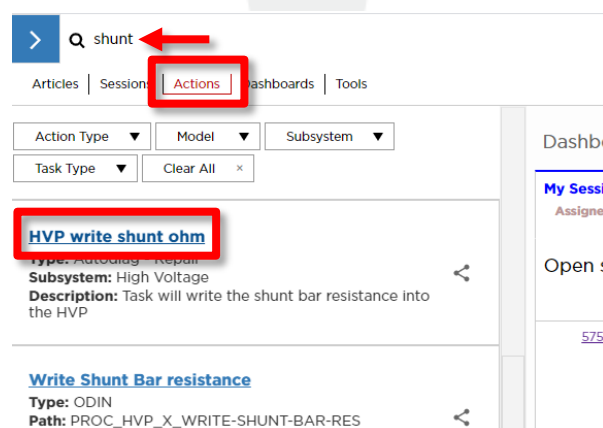


Figure 3

HVP write shunt ohm

Description: Task will write the shunt bar resistance into the HVP

Models: 3Y

Subsystem: High Voltage - Battery Management System

Associated articles:

- [#2952000](#) - Updating Shunt Bar resistance on the HVP

Product ID
5YJ3GDEF5LFR00580

Session Date
05/25/2021 08:35 PM

(Optional) Select a session associated with the given VIN...

Run Network

repair_network.ODIN_HVP_WRITE_SHUNT_OHM

Figure 4

- In the window that opens, click on the line above "Submit", type the 5-digit shunt resistance value from step 4, click **Submit** (Figure 5), and then wait for the routine to successfully complete (Figure 6).

NOTE: If the routine fails, repeat from step 6.

Run #1 is waiting for user input:

Please enter the **shunt bar resistance in nanoOhms** to program into the HVP as it is displayed on the stricker on the shunt PCBA (should be **5 digit number like 25400**):

24986

Submit

Figure 5

Run #2 results complete for your vin:

Shunt bar resistance was succesfully flashed to the HVP.

Figure 6

- Disconnect the laptop from the vehicle.
- Remove the 2nd row lower seat cushion (refer to Service Manual procedure [13051002](#)).
- Use a paint pen to write: "Shunt res: <shuntres>, <date>" onto the ancillary cover.

Where:

- <shuntres> is the 5-digit value from step 4.
- <date> is the date.

For example: "Shunt res: 24986, 05/25/2021"

- Install the 2nd row lower seat cushion (refer to Service Manual procedure [13051002](#)).