

Technical Journal

TITLE:

Diagnose of HV system after HVCH malfunction

REF NO: TJ 35721.3.0	ISSUING DEPARTMENT: Technical Service	CAR MARKET: United States and Canada	
PARTNER: 3 US 7515		ISSUE DATE: 2020-11-03	STATUS DATE: 2020-11-06
FUNC GROUP: 8760	FUNC DESC: Auxiliary heater, electrically operated	Page 1 of 3	

Attachment

File Name	File Size
TJ 35721.jpg	0.1643 MB

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
534							2021-2021	19	0000001-9999999	202007-999952

CSC Customer Symptom Codes

Code	Description
BE	Starting/Engine does not start/Engine does not turn/Unsure when/at all times
BJ	Starting/Engine does not start/Unsure when/at all times

VST Operation Number

VST Operation Number	Description
36050-2	Calibrating/Identifying with VIDA
31130-2	High Voltage Battery, disconnecting and connecting

DTC Diagnostic Trouble Codes

Rows beginning with * are modified

Note! If using a printed copy of this Technical Journal, first check for the latest online version.

Technical Journal 35721.3.0

DESCRIPTION:

* This TJ is rewritten in its entirety

If confirmed HVCH malfunction, please follow advice under service.

SERVICE:

If a defect is found with the HVCH causing an isolation warning, before replacement of the HVCH perform a test of high voltage battery pre-charge contactor. This is to determine if the pre-charge resistor has been damaged. If the result confirms the pre-charge resistor is damaged, also replace the complete BDU.

High voltage battery contactor test found in Vida as follow: Planning & Diagnostics->Components->ECUs->Battery Energy Control Module->Diagnostic Sequences

If high voltage battery contactor test result is ok, please remove the MSD to prevent further stress on pre-charge resistor.

After HVCH replacement please test the 3-phase AC Charging circuit to determine if the OBC has been damaged. This has to be done on an 11kW and above power charge station to utilize 3-phase charging. If a red indication is present in the EVI Charging Inlet, please follow fault tracing according to VIDA.

HVCH = High Voltage Coolant Heater

BDU = Battery Disconnect Unit

MSD = Manual Service Disconnecter

OBC = On Board Charger

EVI = Electrical Vehicle Inlet

Warranty claim info:

To get warranty claim accepted for a job described in this TJ, please use following data:

VST OP number: 36050-2

VST OP number: 31130-2

36050-2 Calibrating/Identifying with VIDA

31130-2 High Voltage Battery, disconnecting and connecting

VEHICLE REPORT:

Yes, please submit a Vehicle Report if the service solution described in this TJ has no effect. Use concern area "Vehicle Report Polestar" and sub concern area "Support needed Polestar", use function group 3113.

o view TJ attachment continue to next page. This TJ has one attachment.

Technical Journal 35721.3.0

The screenshot displays a diagnostic software interface for a vehicle. At the top, the VIN is LPSVSECCDA001106 and the model/year is Polestar 2, 2021, 891188. The interface is divided into several sections:

- Left Panel:** A navigation menu with categories like Planning, Customer Symptom (CSM), Claim Types, Technical Journal, Service Programs, Operations and Packages, Parts, Software, Diagnostics, and Service Functions. The 'Diagnostics' section is highlighted with a red circle '2'.
- Top Bar:** Shows 'Planning & Diagnostics', 'Software Installation', 'Information', and 'Service Journals'. A 'Home' button is also present, with a red circle '1' next to it.
- ECU List:** A table with columns 'ECUs' and 'Other'. The 'ECUs' column is highlighted with a red circle '3'. The table lists various modules, with 'Subtle Energy Control Module (SECM), Default' highlighted in blue and marked with a red circle '4'.

ECUs	Other
4184	Active Safety Domain Master (ASDM)
16185	Audio Control Module (ADM)
4220	Battery Pack-up Launcher (BBL)
4178	Subtle Energy Control Module (SECM), Default
4221	Battery Monitoring Sensor (BMS)
4171	Brake Control Module 2 (BCM2)
16262	Center Console Display (CCD)
426	Central Electronic Module (CEM)
4124	Climate Control Module (CCM)
4213	Driver Door Module (DDM), Default
51	Driver Information Module (DIM)
4197	Electronic Gear Selector Module (EGSM)
448	Engine Control Module (ECM)
- Diagnostic Sequences:** A list of diagnostic tasks. The task 'Test of high voltage battery contacts, pre-charge' is highlighted with a red box and a red circle '5'.
 - High voltage battery (complete), cell module temperature overview
 - High voltage battery, cell and cell module voltage/SoC overview
 - Insulation self-test for the high voltage system
 - Mounting of current measurement unit and EECM
 - Resetting wear counters for the high voltage battery contacts
 - Test of high voltage battery contacts, pre-charge

TJ 35718