



# Service Bulletin

File in Section: -

Bulletin No.: 18-NA-342

Date: November, 2018

## TECHNICAL

**Subject: Malfunction Indicator Lamp (MIL) Illuminated Hybrid/EV Battery Temperature Sensor DTCs Set - Battery Too Cold Plug in to Warm Message May be Displayed**

Brand:	Model	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Chevrolet	Volt	2013		—		—	—
Holden	Volt						

<b>Involved Region or Country</b>	United States, Canada, Australia.
<b>Condition</b>	Some customers may comment that the Malfunction Indicator Lamp (MIL) is illuminated and/or the Battery Too Cold Plug in to Warm message is displayed in the Driver Information Center when the ambient temperature is warmer than -14°F (-25°C). The Technician may observe on a scan tool one or more of the Hybrid/EV Battery Temperature Sensor DTCs Set in the K114B Hybrid/EV Powertrain Control Module 2.
<b>Cause</b>	The DTCs indicate that at least one of the nine Hybrid/EV Battery Temperature Sensors has failed.
<b>Correction</b>	If you encounter a vehicle with the above condition, review the Information and the Diagnostic Trouble Codes and then follow the Service Procedure.

## Service Procedure

### Information

The A4 Hybrid/EV Battery Pack has 9 Hybrid/EV Battery Temperature Sensors. The temperature sensors are a variable resistor that measures the temperature of the Hybrid/EV battery cell groups. The K114B Hybrid/EV Powertrain Control Module 2 uses the battery temperature sensors to determine the Hybrid/EV battery module temperature in order to control the battery cooling system operation.

### Diagnostic Trouble Codes

The following list identifies the Diagnostic Trouble Codes associated with their respective Battery Temperature Sensors:

- **Battery Temperature Sensor 1:** DTC P0A9C Hybrid/EV Battery Temperature Sensor 1 Performance, DTC P0A9D Hybrid/EV Battery Temperature Sensor 1 Circuit Low Voltage, DTC P0A9E Hybrid/EV Battery Temperature Sensor 1 Circuit High Voltage
- **Battery Temperature Sensor 2:** DTC P0AC6 Hybrid/EV Battery Temperature Sensor 2 Performance, DTC P0AC7 Hybrid/EV Battery

Temperature Sensor 2 Circuit Low Voltage, DTC P0AC8 Hybrid/EV Battery Temperature Sensor 2 Circuit High Voltage

- **Battery Temperature Sensor 3:** DTC P0ACB Hybrid/EV Battery Temperature Sensor 3 Performance, DTC P0ACC Hybrid/EV Battery Temperature Sensor 3 Circuit Low Voltage, DTC P0ACD Hybrid/EV Battery Temperature Sensor 3 Circuit High Voltage
- **Battery Temperature Sensor 4:** DTC P0AE9 Hybrid/EV Battery Temperature Sensor 4 Performance, DTC P0AEA Hybrid/EV Battery Temperature Sensor 4 Circuit Low Voltage, DTC P0AEB Hybrid/EV Battery Temperature Sensor 4 Circuit High Voltage
- **Battery Temperature Sensor 5:** DTC P0BC3 Hybrid/EV Battery Temperature Sensor 5 Performance, DTC P0BC4 Hybrid/EV Battery Temperature Sensor 5 Circuit Low Voltage, DTC P0BC5 Hybrid/EV Battery Temperature Sensor 5 Circuit High Voltage
- **Battery Temperature Sensor 6:** DTC P0C34 Hybrid/EV Battery Temperature Sensor 6 Performance, DTC P0C35 Hybrid/EV Battery Temperature Sensor 6 Circuit Low Voltage, DTC P0C36 Hybrid/EV Battery Temperature Sensor 6 Circuit High Voltage

- **Battery Temperature Sensor 7:** DTC P0C7D Hybrid/EV Battery Temperature Sensor 7 Performance, DTC P0C7E Hybrid/EV Battery Temperature Sensor 7 Circuit Low Voltage, DTC P0C7F Hybrid/EV Battery Temperature Sensor 7 Circuit High Voltage
- **Battery Temperature Sensor 8:** DTC P0C82 Hybrid/EV Battery Temperature Sensor 8 Performance, DTC P0C83 Hybrid/EV Battery Temperature Sensor 8 Circuit Low Voltage, DTC P0C84 Hybrid/EV Battery Temperature Sensor 8 Circuit High Voltage
- **Battery Temperature Sensor 9:** DTC P0C89 Hybrid/EV Battery Temperature Sensor 9 Performance, DTC P0C8A Hybrid/EV Battery Temperature Sensor 9 Circuit Low Voltage, DTC P0C8B Hybrid/EV Battery Temperature Sensor 9 Circuit High Voltage

### Service Procedure

Perform the following:

1. Vehicle in Service Mode.
2. Perform the Diagnostic System Check - Vehicle. Refer to **Diagnostic System Check - Vehicle** in SI.
3. Refer to the preceding Diagnostic Trouble Codes list. Are any of the identified Battery Temperature Sensor DTCs Set?
  - ⇒ If any of the identified Battery Temperature Sensor DTCs are Set, Go to Step 4.
  - ⇒ If any other DTCs are Set, refer to **Diagnostic Trouble Code (DTC) List - Vehicle** in SI.

**Important:** Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt programming. Install the

**EL-49642** SPS Programming Support Tool or use the recommended equivalent workshop equipment in your Region to maintain system voltage. If not available, connect a fully charged 12 V jumper or booster pack disconnected from the AC voltage supply. **DO NOT** connect a battery charger.

4. Reprogram the K114B Hybrid/EV Powertrain Control Module 2 with the latest available software. Refer to **Hybrid Powertrain Control Module 2 Programming and Setup** in SI.

### Parts Information

The new Hybrid/EV Powertrain Control Module 2 Calibration Part Numbers are PN 24296176 and PN 24296177.

### Warranty Information

For vehicles repaired under the Emission coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
5080248*	HPCM2 Service Calibration Reprogramming for Spares on Board Thermistor Strategy	0.4 hr
*This is a unique Labor Operation for Bulletin use only.		

### Version Information

Version	1
Modified	Released November 19, 2018

