

Technical Journal

TITLE:

Unnecessary Replacements of BEV and PHEV Charging Cables

REF NO: TJ 34102.2.1	ISSUING DEPARTMENT: Technical Service	CAR MARKET: United States and Canada	
PARTNER: 3 US 7510 Volvo Car USA		ISSUE DATE: 2023-02-02	STATUS DATE: 2023-02-06
FUNC GROUP: 3773	FUNC DESC: Cable harness, high volt. ext. charging	Page 1 of 4	

“Right first time in Time”

Rows beginning with * are modified

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

DESCRIPTION:

If a customer claims their Mode 2 Charging Cable (for charging at a household socket, not at a wall box) is going into failure mode (red LED indication blinking or permanent), the cable should not be replaced unless the issue can be reproduced at the workshop.

CSC Customer Symptom Codes

Code	Description
YN	High voltage battery/Discharged/poor charge
YL	Plug-in charging/No/reduced/incorrect function/With external AC-cable
YW	Charging socket/LED indicates fault/reduced charging/Unsure when/at all times

DTC Diagnostic Trouble Codes

Control Module	Code	Fault Type
OBC	P0D67A2	Intermittent

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Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
224	BK	B1LPHEV					2020-2022		-	201920-202146
224	H6	BH6PHEV					2022-9999		-	202147-999952
225	BK	B1LPHEV					2020-2022		-	201920-202146
225	H6	BH6PHEV					2022-9999		-	202147-999952
227	BK	B1LPHEV					2020-2022		-	201920-202146
227	H6	BH6PHEV					2022-9999		-	202147-999952
235	H6	BH6PHEV					2022-9999		-	202147-999952
236	H6	BH6PHEV					2022-9999		-	202147-999952
238	BK	B1LPHEV					2020-2022		-	201920-202146
238	H6	BH6PHEV					2022-9999		-	202147-999952
246	BK	B1LPHEV					2020-2022		-	201920-202146
246	H6	BH6PHEV					2022-9999		-	202147-999952
256	BK	B1LPHEV					2020-2022		-	201920-202146
256	H6	BH6PHEV					2022-9999		-	202147-999952
2XX	BC						2016-9999		-	201526-999952
2XX	BR						2018-9999		-	201717-999952
536	ED	E400V6					2021-2023		-	202037-202317
536	EF	E400V2					2022-2023		-	202146-202317
539	ED	E400V6					2022-2023		-	202139-202317
539	EF	E400V2					2022-2023		-	202139-202317

SERVICE:

The majority of charge cables replaced have been found to have no fault.

The internal logs in the cable's control unit often show that charging has been attempted with a lack of ground at the home outlet side.

This may indicate that the customer experienced a fault because of an intermittent, poor, or missing ground connection at the outlet(s) where they attempted to charge.

Before replacing the cable, the fault should be confirmed in the workshop according to the following method:

- Test a known good cable, outlet & vehicle and confirm the vehicle charges correctly (white status indicator blinking on the cable). Test using the same type of outlet that the customer is using (either 110 volt or 220 volt).
- Test the customer's cable using the same known good outlet and vehicle. Confirm that there is a fault, usually accompanied by one of the following:
 - No indicators illuminate.
 - Blinking red indicator.
 - Permanent red indicator.

Note 1: A momentary blink of the red indicator at plug-in to the wall outlet is the normal startup check. This blink is then followed by the white Indicator.

Note 2: Check of the cable is part of the recommended fault tracing in VIDA (CSC YW recommended)

Replace the cable if a fault can be reproduced.

If an intermittent fault is suspected, please create a TIE Vehicle Report (Support Needed) and include a detailed description of the customer's complaint.

* If the fault cannot be reproduced at the workshop, it is likely that the external charging source (household socket where the customer charges) is the root cause of the charging issues. Inform the customer to follow the advice given in the owner's manual which includes the following:

- The charging cable has a built-in circuit breaker. Charging must only take place with grounded and approved sockets.
- Never connect the charging cable to an extension cord or a multiple-plug socket.
- Do not use one or more adapters between the charging cable and the electrical socket.
- Do not connect one or more adapters of any type between the charging cable and the car.
- Do not use an external timer between the charging cable and the electrical socket.
- If the fuse of the wall socket has too low a current capacity, the fuse could blow while the car is charging. Set a lower amperage for charging in the car's center display (BEV only). If the problems persist, contact a qualified electrician for investigation of further measures.

Note 3: Checking of the external charging source - though cannot be performed at the workshop when the problem is caused by the customer's household socket - is part of the recommended fault tracing in VIDA (CSC YW recommended)

* Vehicles types, engines, and DTC added in this version 2 of the Technical Journal

List of abbreviations:

TJ - Technical Journal

LED - Light-emitting diode

DTC - Diagnostic Trouble Code

CSC - Customer Symptom Code

Warranty claim info:

To get a warranty claim accepted for a job described in this TJ, the following data must be used:

Failing Part: PN of the replaced Mode 2 charging cable

VST OP number: No OP number as the check is part of fault tracing in VIDA (CSC YW recommended)

NOTE TJ number must be stated in the repair order text.

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VEHICLE REPORT:

Yes, please submit a Vehicle Report if the service solution described in this TJ has no effect. Use the concern area “Vehicle Report” and sub-concern area “Support Needed,” use function group 3771.

If possible, attach a short video showing the failure. For suspected intermittent faults, include a detailed description of the customer’s complaint.