VOLVO CAR
SERVICE AND PARTS BUSINESS

Technical Journal

TITLE:

Low battery State of Charge due to FMDM disturbance

REF NO:	ISSUING DEPARTMENT:	CAR MARKET:	
TJ 32162.1.0	Technical Service	United States and Canada	
PARTNER:		ISSUE DATE:	STATUS DATE:
3 US 7510 Volvo Car USA		2016-12-20	2016-12-20
FUNC GROUP:	FUNC DESC:	Page 1 of 4	
3666	Access (central looking & remote)		

"Right first time in Time"

Attachment

File Name	File Size
TJ_32162_AM_transmitter.pdf	0.1337 MB
TJ_32162_QC.pdf	0.1455 MB

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
234							2017-2017		-	201617-201645
256							2016-2017		-	201505-201645

CSC Customer Symptom Codes

Code	Description
LM	Battery/Dead battery
LN	Battery/Weak or low electrical power
42	Power Operated Tailgate/Opening with foot movement does not work
4B	Power Operated Tailgate/Opening with foot movement does not work

VST Operation Number

DTC Diagnostic Trouble Codes

Text

DESCRIPTION:
FMDM = Foot Movement Detection Module
CEM = Central Electronic Module

The FMDM may be falsely triggered by outside influences such as AM radio broadcast antennas in the area where the vehicle is parked.
This will not result in the tailgate opening since the key is not present, but will result in a small amount of electrical current consumption since a key search is performed.

If this happens regularly in combination with a vehicle that is driven relatively little, it can reduce the battery's State of Charge, resulting in a Low Battery Charge message.

SERVICE:
When viewing the Quiescient Current Statistics in VIDA, vehicles with a regular FMDM disturbance will often show a number of counts in the 400-800mA range.

If a vehicle with the latest software continues to have a low State of Charge and no cause can be found, replace the FMDM.

Perform a Total Upgrade according to TJ 31543. The new FMDMs are not compatible with older CEM software.

FMDM part numbers:
31652056 for XC90
31652057 for S90

VEHICLE REPORT:
Yes, please submit a Vehicle Report if the service solution described in this TJ has no effect. Use concern area "Vehicle Report" and sub concern area "Support not needed", use function group 3666.

To view TJ attachment continue to next page. This TJ has two attachments.

P2P (VCC-494042-1, version 1.3)

CEM - Battery State of Charge (SoC)

58.1 %

CEM - Vehicle Battery Voltage

12 V

CEM - Battery average quiescent current, low range

-12 mA

CEM - Main battery - time in service

7 Day

CEM - Number of key starts

139

Message counter

Parameter	Value
CEM - Low battery counter	11
CEM - Shutdown counter	11

Driving cycle length history

Parameter	Value
CEM - Driving 0 – 10 min	795 Counts
CEM - Driving 10 – 30 min	884 Counts
CEM - Driving 30 – 90 min	195 Counts
CEM - Driving > 90 min	33 Counts

State of Charge (SoC) history

Parameter	Value
CEM - Battery State of Charge counter for range >= 95 %	0
CEM - Battery State of Charge counter for range 85-94 %	0
CEM - Battery State of Charge counter for range 75-84 %	0
CEM - Battery State of Charge counter for range 50-74 %	6
CEM - Battery State of Charge counter for range 25-49 %	0
CEM - Battery State of Charge counter for range 0-24 %	0

Main battery quiescent current history

Parameter	Value
CEM - Quiescent current: > 2 A	0
CEM - Quiescent current: 1.7 - 2 A	0
CEM - Quiescent current: 1.4 - 1.7 A	0
CEM - Quiescent current: 1.2 - 1.4 A	0
CEM - Quiescent current: 800 - 1 200 mA	0
CEM - Quiescent current: 400 - 800 mA	6
CEM - Quiescent current: 300 - 400 mA	0
CEM - Quiescent current: 200 - 300 mA	0
CEM - Quiescent current: 100 - 200 mA	0
CEM - Quiescent current: 0 - 100 mA	18

May indicate FMDM disturbance

Main battery voltage history

Parameter	Value
CEM - Battery voltage >12.8V	0
CEM - Battery voltage 12.75V	0
CEM - Battery voltage 12.65V	0
CEM - Battery voltage 12.55V	0
CEM - Battery voltage 12.45V	0
CEM - Battery voltage 12.35V	1
CEM - Battery voltage 12.25V	1
CEM - Battery voltage 12.15V	8
CEM - Battery voltage 12.05V	1
CEM - Battery voltage 11.95V	0
CEM - Battery voltage 11.85V	0
CEM - Battery voltage 11.75V	0
CEM - Battery voltage 11.65V	1
CEM - Battery voltage 11.55V	0
CEM - Battery voltage <11.5 V	0

Read again | Close