



Technical Journal

TITLE:
2016 XC90 D-TPMS, Service required and DTC's

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PARTNER: 3 US 7510 Volvo Car USA		ISSUE DATE: 2016-03-30	STATUS DATE: 2016-03-30
FUNC GROUP: 7761	FUNC DESC: pressure control	Page 1 of 4	

“Right first time in Time”

Attachment

File Name	File Size
TJ 31398.jpg	0.0849 MB

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
256							2016-2016		0000001-0105000	201505-201616

CSC Customer Symptom Codes

Code	Description
LI	Warning lights and chimes/Tire pressure monitoring, Service required warning

VST Operation Number

VST Operation Number	Description
96364-2	TPMS troubleshooting CSC = LI
77201-0	Tyre x1 replace (only use if removing tyre to inspect TPMS sensor brand)
38641-2	Sensor (TPMS) x 1 replace (only use if replacing TPMS sensor)

DTC Diagnostic Trouble Codes

Control Module	Code	Fault Type
CEM	C1A5655	Intermittent
CEM	C1A5855	Intermittent



Control Module	Code	Fault Type
CEM	C1A6055	Intermittent
CEM	C1A6255	Intermittent
CEM	C1A5687	Intermittent
CEM	C1A5887	Intermittent
CEM	C1A6087	Intermittent
CEM	C1A6287	Intermittent
CEM	U201F00	Intermittent

Text

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

D-TPMS = Direct Tire Pressure Monitoring Sensors

DIM = Driver Information Module

TPMS = Tire Pressure Monitoring Sensors

DTC = Diagnostic Trouble Code

VIDA = Vehicle Information and Diagnostics for Aftersales

OBD = On Board Diagnostic

CEM = Central Electronic Module

MAM = Multimedia Antenna Module

If the vehicle is equipped with direct tyre pressure monitoring sensors (D-TPMS), follow advice under “Service” if a warning message TPMS Service Required in DIM with one or more DTC’s related to communication issues between TPMS sensors and the vehicle.

Note: Vehicles with D-TPMS can be identified by one of the following VDN codes:

RG02;RG03;RG04;RG05

Note: Cases with “Low tire pressure” messages are not covered by this TJ, check TJ 31408 or if any VIDA method is available.

SERVICE:

In case there are DTC’s due to poor communication / non working TPMS sensors / not programmed TPMS sensors:

1. Always use Volvo TPMS tool PN 9513035 to diagnose the car.
2. Ping each TPMS sensor so that you are able to read out sensor ID, tire pressure, temperature, battery status etc.

NOTE: for XC90, it may require 2-3 attempts to ping each TPMS sensor since this system requires more time to wake up.

3. Visual inspect TPMS sensors for damages etc, which could happen if driving with a flat tire, or bending the air valve to much.
4. Replace any TPMS sensor (PN 31362304) that after several attempts does not respond to the TPMS tool ping function.



5. Once all TPMS sensors can be pinged with the TPMS tool, use the OBD cable, TPMS tool and the “OBD Relearn” function to program all TPMS sensor IDs to CEM.

NOTE: OBD Relearn function may require a newer firmware to be installed in the TPMS tool (refer to www.volvotools.com).

In case the OBD Relearn has been completed without errors, but the DTC's and TPMS Service required remains, then fault trace:

1. If CEM-U201F00 is present, then start with fault tracing the Multimedia Antenna Module (MAM). Check cables/terminals/ground, eventually try with another MAM unit if nothing wrong can be found.
2. Fault trace DTC's according to VIDA. For TPMS design and function overview, check VIDA VCC-ID VCC-477152-1
3. Check if dark tinted window films has been installed, try TPMS function with windows down to see if anything changes. Remove films if this has negative impact on TPMS functionality.
4. Check and if necessary turn off any non-Volvo accessory using 433 MHz that has been installed in the vehicle.
5. Remove tire from rim and inspect that the correct TPMS sensor is being used, the Volvo logo must be printed on the decal on TPMS sensor (see photo).
6. Try a battery reset.

General notes about D-TPMS:

- Do not download CEM Reload or CEM Upgrade software, it will not help.
- Do not carry out TPMS Calibration when having TPMS Service Required.
- Always use Volvo original XC90 TPMS sensor PN 31362304, other Volvo TPMS sensors and universal TPMS sensors will not work due to a different signal algorithm.

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 7761.

If the tire has been removed from the rim, take a photo of the bar code printed inside rim, and also a photo of the label on TPMS sensor.

Note: If any other reasons for TPMS Service Required was found, then please include this in the Vehicle Report in order to improve this TJ.

To view TJ attachment continue to next page. This TJ has 1 attachment.



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