Attachment

File Name	File Size
Google Built-in Connectivity Fault Tracing (1).pdf	0.7355 MB
Know Your Triangles.pdf	0.1573 MB

Rows beginning with * are modified
Note! If using a printed copy of this Technical Journal, first check for the latest online version.

DESCRIPTION:

NOTE: Do not replace TCAM units for the symptoms described below.

If the vehicle has no internet connection and shows any of the following three symbols (see attached "Know Your Triangles.pdf" for reference) at the top of the CCD:

1. "Hollow Triangle With An X"
2. "LTE Full Triangle With An X"
3. "Full Triangle With An X"

Please see advice under "Service."

CCD = Central Console Display
DIM = Driver information Module
BUB = Back up battery
T&C = Terms & Conditions

CSC Customer Symptom Codes

Code	Description
EM	Internet Connection/Does not work
7N	Navigation/Other navigation problems
EO	Navigation/Does not work

DTC Diagnostic Trouble Codes

Vehicle Type

Type	Eng	Eng Desc	Sales	Body	Gear	Steer	Model Year	Plant	Chassis range	Struc Week Range
224							2023-9999		-	202222-999952
225							2023-9999		-	202222-999952
227							2023-9999		-	202222-999952
235							2022-9999		-	202122-999952
236							2022-9999		-	202122-999952
238							2022-9999		-	202122-999952
246							2022-9999		-	202122-999952
256							2023-9999		-	202222-999952
536							2021-9999		-	202037-999952
539							2022-9999		-	202139-999952

SERVICE:

Full Triangle With An X:

This symbol will most likely appear when cellular connection is present, but internet services are disabled.

Customer Questionnaire:

- When was this issue first detected? During or in between driving cycles?
- For how long has this issue been present?
- Is the navigation system and GPS working as expected or is there a message in DIM stating “Searching for GPS”?

Support:

- Verify that Vehicle SIM Data is enabled in the Settings-->Connectivity menu. If found disabled, wait a few minutes before proceeding with fault tracing to see if full connectivity is restored.
- Perform an IHU restart by pressing and holding the home button for approximately 20 seconds.
- If symptom is still present, do a TCAM restart by pressing and holding the front defrost button for approximately 20 seconds.
- If no change after 24-48 hours and no known network disturbances have occured, please fault trace as normal using VIDA.

Hollow Triangle with X:

This symbol will most likely appear when there is an issue relating to the TCAM unit.

Customer Questionnaire:

- When was this issue first detected? During or in between driving cycles?
- For how long has this issue been present?
- Is the navigation system and GPS working as expected or is there a message in DIM stating “Searching for GPS”?

Support:

- Confirm that a TCAM Certificate has not inadvertently been removed by navigating to the Remote Services section in VIDA (Planning & Diagnostics-->Diagnostics-->Remote Services-->Click on orange box and follow instructions)
- If the customer has done a TCAM restart via the front defrost button and 24-48hrs have passed without any improvement, please try to reset the TCAM through the VIDA application.
- If no diagnostic connection is possible, a hard reset of the TCAM BUB (Back-Up Battery) and 12V Main battery (by physically disconnecting power) is needed. Please observe that the BUB needs to be disconnected **prior** to disconnecting the 12V Main battery.

LTE Full Triangle With An X:

When LTE is displayed this means that the TCAM unit is connected to a network.
Issue is likely to be caused by either a network issue or communication issue between IHU and TCAM.

Customer Questionnaire:

- Has the customer accepted the T&C process?
- When was this issue first detected? During or in-between driving cycles?
- For how long has this issue been present?

Support:

- Verify that Vehicle SIM Data is enabled in the Settings-->Connectivity menu. If found disabled, wait a few minutes before proceeding with fault tracing to see if full connectivity is restored.
- Perform an IHU restart by pressing and holding the home button for approximately 20 seconds.
- If symptom is still present, do a TCAM restart by pressing and holding the front defrost button for approximately 20 seconds.
- If no change after 24-48 hours and no known network disturbances have occurred, please fault trace as normal using VIDA.

For additional information, please reference the attached "Google Built-in Connectivity Fault Tracing (1).pdf" and visit the Connected Car Support site:

https://retailers.volvocars.biz/s/connectedcarsupport

Warranty claim info:

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

Failing Part: No part replacement accepted
VST OP number: 99922-2, General reimbursement acc. to TJ/QB

Note: TJ number must be stated in repair order text!

VST Operation Number

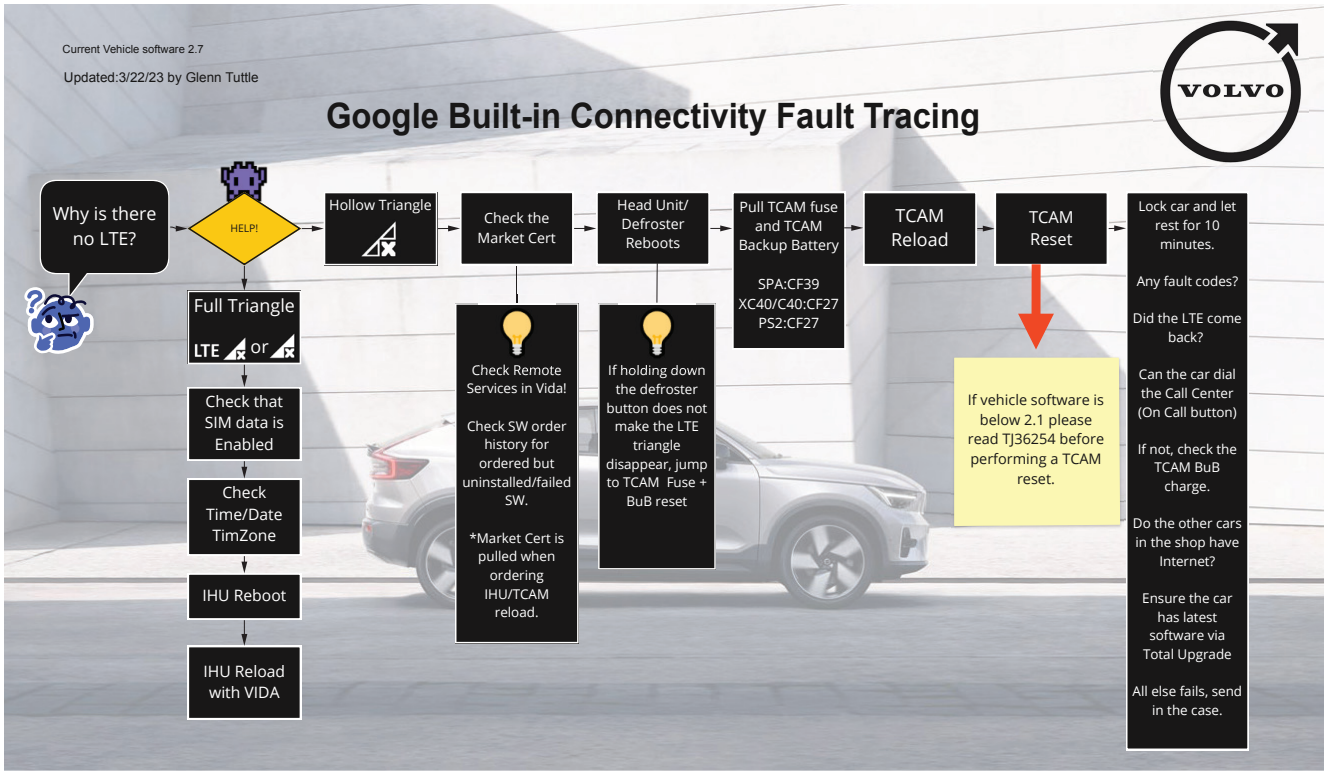
VST Operation Number	Description
99922-2	General reimbursement acc. to TJ/QB

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 needed”, use function group 3975.

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


KNOW YOUR
TRIANGLES
(GOOGLE BUILT-IN)
Updated: December 14, 2022
Current App v5.22
Current Car SW 2.5
LTE
"FULL LTE"
You have full connection to the cellular network, Internet, and Google.
LTE
"LTE FULL TRIANGLE WITH AN X"
You have a cellular connection but cannot establish a valid Internet connection.
"HOLLOW TRIANGLE WITH AN X"
You have neither cellular nor a Google/Internet connection.
"FULL TRIANGLE WITH AN X"
You have a cellular connection but limited Internet services.


Current Vehicle software 2.7
Updated:3/22/23 by Glenn Tuttle
Google Built-in Connectivity Fault Tracing
VOLVO
Why is there no LTE?
HELP!
Full Triangle
LTE or
Check that SIM data is Enabled
Check Time/Date TimZone
IHU Reboot
IHU Reload with VIDA
Hollow Triangle
Check the Market Cert
Check Remote Services in Vida!
Check SW order history for ordered but uninstalled/failed SW.
*Market Cert is pulled when ordering IHU/TCAM reload.
Head Unit/ Defroster Reboots
If holding down the defroster button does not make the LTE triangle disappear, jump to TCAM Fuse + BuB reset
Pull TCAM fuse and TCAM Backup Battery
SPA:CF39
XC40/C40:CF27
PS2:CF27
TCAM Reload
TCAM Reset
If vehicle software is below 2.1 please read TJ36254 before performing a TCAM reset.
Lock car and let rest for 10 minutes.
Any fault codes?
Did the LTE come back?
Can the car dial the Call Center (On Call button)
If not, check the TCAM BuB charge.
Do the other cars in the shop have Internet?
Ensure the car has latest software via Total Upgrade
All else fails, send in the case.