

Knowledge base

40-0001 - KB - USA - YT - TT - RT - KL50 error message

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40-0001
KL50 error message
YT - TT - RT

Introduction :

The term **KL50**, originates from the German DIN 72552 standard for automotive electrical terminal designations. It specifically refers to the **starter control circuit**. This is the wire that carries the positive signal (+12V or +24V, depending on the system) to the starter motor's solenoid when the ignition key is turned to the "start" position or a start button is pressed. A KL50 error message is a general term for any malfunction within this critical engine cranking circuit.

There could be two different error codes related to this issue:

SPN	FMI	Description
677	5	KL50 high side output short circuit to battery
677	6	KL50 high side output short circuit to ground

Recommended Action :

Mercedes OM906LA / OM926LA / OM936LA - TT2/RT2 & TT3/RT3

Check the signal integrity from the Mercedes MCM ECU (A05) pin 21 or the Mercedes MR ECU (A05) pin 12 to the PCB connector labeled BEB 04, and from BEA 04 to the starter relay K30 on the engine.

Volvo TAD750VE - TT2/RT2 & TT3/RT3

Check the signal integrity from the Volvo EMS2 ECU (A05) pin B29 to connector X22-2, and from connector XD to X22-3. Then, verify the connection from X22-2 and X22-3 to the starter relay K30 on the engine.

Volvo TAD850VE / TAD870VE / TAD880VE / TAD1183VE - TT3/RT3

Check the signal integrity from the Volvo EMS ECU terminals EB29 and EB37 to the starter relay K30 on the engine.

Cummins B6.7 / QSB6.7 – YT3

Check the signal integrity from the YTCC2 (A02) controller output A18 to the PCB A17 connector PA pin 36, and from connector PEC pin 4 to the starter relay K30 on the engine.

Cummins B6.7 / QSB6.7 – YT0 & YT2

Check the signal and power to fuse 8, along with relay 104 on the main PCB. Then verify the connection from PCB connector CD 04 to connector BA 03, and from BA 03 to the starter relay K30 (102) on the engine.

Please, use this information together with the schematics of your vehicle.