

P4 cascadia codes 3597 4 & 5741 13 only...



[Ethan Cook](#) 45 posts since Apr 11, 2018

P4 cascadia codes 3597 4 & 5741 13 only active with key off Nov 30, 2019 2:00 PM

vin: LF0157, Alright folks I've got a weird one... P4 Cascadia came in with CEL, mil was illuminated, checked codes with key on, none active. keyed off and codes 3597 4 & 5741 13 come active under "exhaust emissions controller" j1939-61 (acm UDS-61 goes offline when keyed off) codes go inactive immediately when key is turned on. started t/s 3597 4, got all the way through the steps with no problems, everything checked out per t/s steps. I checked common chafe points for p4 Cascadia's, air comp bracket, over top of trans and back to one box connectors, nothing chafing through, there was a little spot on left corner of trans, but not rubbed through harness, harness was just resting on that corner... is that worth splitting loom for? Also during t/s for 3597 4 you are asked to unplug aftertreatment components one at a time(def doser, pump, header...). when you unplug a component codes come active like normal, did my check per t/s step then plug component back in, except when you key off instead of the initial codes 3597 4 & 5741 13 coming active again, the last set of codes that were active with my component test come active.... weird... So I moved to the next component, same thing, the last active code comes active when key is off and all the codes before it disappear... So I figured it could be some issue with the cgw or cpc, I updated all PT modules, ssam and cgw. for a moment everything was fine, no codes came active when key is off. Then I tried starting the truck and it hesitated, acted like starter was going out, it started and my initial two codes came active again... I'm kinda lost on this one. I did verify relay r16 in vpdm for aftertreatment system was ok. any thoughts?



[Jon Cecil](#) 929 posts since Nov 25, 2014

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 5:07 AM

Have you tried a test ACM? Since 5741/13 is for the soot sensor and 3597/4 is for HSD1 which also connects to the soot sensor, I would concentrate on that area. Since you went through the troubleshooting, did you disconnect the soot sensor and see if codes return with key off. Have you verified all powers and grounds to ACM? Also check if ACM still has ignition voltage with key off.



[Ethan Cook](#) 45 posts since Apr 11, 2018

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 5:10 AM

Tried test acm, cgw, pt can starpoint, and cpc, still no fix. A lot of modules stay on with key off, thinking its a logic issue with ssam/vpdm. (Still getting ign voltage after 5min with key off on with most modules) our tech dept for my company recommended contacting detroit monday, will update with results then.



[Jon Cecil](#) 929 posts since Nov 25, 2014

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 5:38 AM

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Are you getting partial voltage on ignition? I would find out what modules are still getting ignition voltage and find some common ground.



[Ethan Cook](#) 45 posts since Apr 11, 2018

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 5:41 AM

Got 12.6 on cpc and acm with key off chassis ground



[Jon Cecil](#) 929 posts since Nov 25, 2014

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 6:38 AM

Have you checked for ignition voltage on MCM and TCM? Assuming you are measuring ignition voltage on those still, I would try breaking down the circuit. Remove fuse 49 from VPDM and see if voltage is still present. Fuse 49 is ignition to powertrain modules. If voltage still is present, seems like battery wire might be shorted to ignition. Review schematic G66-00596-003. 439A and 439B could possibly be shorted. To help narrow down possibly, there are two fuses. Fuse 4 powers battery to the ACM, and the fuse 1 powers battery to the remaining powertrain modules.

Edit: Fuse 1 and Fuse 4 I reference are located in the BCA.



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 2:15 PM

I like you thinking on this. That re24 relay could be sticking on, it feeds the f49 fuse.



[Michael Palumbo](#) 1,620 posts since Nov 13, 2014

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 1, 2019 1:45 PM

I have seen DL display a code active with key off and inactive with key on before but it was an M2 with an ISL. Codes were obviously different. Turned out that the engine ECM was feeding power to it's ignition circuit, which then powered a bulkhead module common node, which in turn was powering other modules.

The ABS module was the one with the active code at key off. Besides the modules you have already replaced or installed test modules for, what is left, the MCM? On mine the BHM had five common nodes to the ignition circuit feeding the ABS module with the code, so I removed the common node wires from their BHM connectors and reconnected the connectors to the BHM. The engine ECM wire was the one still hot with the key off. After putting all BHM wires and connectors back, I removed the ignition wire from the engine ECM connector then put the connector back on the ECM. No power on wire, power still at ECM with key off was my confirmation. That was the short story anyway.



[Ethan Cook](#) 45 posts since Apr 11, 2018

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Dec 14, 2019 12:18 PM

sorry for the late reply...

P4 cascadia codes 3597 4 & 5741 13 only...

another tech had to come behind me over the weekend, they state that pin 18 in the acm 21 pin connector had been pushed in, I guess that's why I had active faults with key off, not sure. I do know that the modules staying online is normal however, so I was chasing a ghost there. In my opinion this truck is probably gonna come back... I'll keep this thread posted on what happens



[Hector Garibay](#) 1 posts since Jan 20, 2015

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Mar 26, 2020 6:45 PM

Have you tried updating the ACM? I Had this same problem with they key off and same codes going active. It stopped logging those codes after I updated the ACM. Good Luck...



[Francis Lapointe](#) 3 posts since Dec 14, 2016

Re: P4 cascadia codes 3597 4 & 5741 13 only active with key off Feb 11, 2021 6:11 PM

i got this fault alote and i found out that most of the time it is due to poor battery maintenance . low power to the ACM during cranking in cold winter triggering the HSD1 and soot sensor active