

SN KB3779 TS Help - Shutting off while...



[Justin Johnson](#) 981 posts since May 12, 2017

SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 May 29, 2018 9:49 PM

Came across a question and wanted to see if any of you've run into something like this:

How would you troubleshoot?

truck came in for shutting off while driving. ran truck and got up to temp, codes 523515/31, 639/14 became active. followed troubleshooting for 523515 and installed test cgw, still no fix and all main mods are connected to diagnostic link.

- checked resistance in pin c and d in data link connector, 60 ohms. installed cgw, no fix.
- checked different connections in datalink could not find problem.
- came in originally for shutting off while driving.
- had no codes till after getting truck to operating temp, now truck is cooled and codes are still active.

Any thoughts?

Found poor ground connection near A-Pillar.

Tags: truck shuts down, random shut down, pt can, 639 fmi 14, 523515 fmi 31



[Mic Loschuk](#) 27 posts since Nov 19, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 16, 2018 8:17 PM

I know we have had multiple issues with the new Cascadia's with spread, damaged and loose pins and connectors at multiple modules. Just going through all your J1939 connections in the new module rack in front of the pas. side seat we tend to find at least one busted up connection (throws all kinds of intermittent communication codes).

Have found the main ground stud that mounts through the fire wall on the driver side loose causing modules to drop out (above the throttle pedal).

I know most modules are flashed to the wrong vin numbers on the chassis side compared to the truck vin. I have had codes created by this (module was looking for something in the system that was not on the current unit) Now this is an iffy subject since I have been told to talk to tec. support before flashing the modules on the new Cascadia.

Also our dash splice packs, we have found the bus bar caps not fully locked in and even some times fully missing.....

Hopefully this helps (I know it is fairly generic answers). I know these new units have nothing but a cluster of electrical issues from factories.



[Chaz Trimble](#) 1,358 posts since Feb 2, 2015

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 16, 2018 8:25 PM

This type of issue needs to have a thorough interview of the operator. It can make the diagnosis a lot easier. What happened during the failure? What was still operational if anything. Next what modules are being connected to? Is the ASAM being checked for faults? No power train modules faulting? Are there any ABS faults? Knowing all vehicle modules faults can narrow the failure. The H1939 faults can easily be caused by a glitching nexiq 2 or laptop. It is always good to completely disconnect the laptop and nexiq 2 (all cords). Restart the laptop. Then a hard reset (batteries disconnected). Reconnect and check for active faults. This way you know you have or do not have an H1939 issue. Especially if the fault has only occurred at the shop. H1939 shouldn't cause a shutdown. This being a new Cascadia I would start with the basics. Check battery cables, BCA connections/fuses, pass through connections for ASAM, VPDM, then start digging into the VPDM for ignition power to the power train modules (check fuses, open circuits, short circuits, etc). If there was an issue with power loss to a particular module other modules should fault. Grounds are huge on the new Cascadia. Check the MGJB for loose connections. These are just suggestions. Complaints like this you have to go off what you know and troubleshoot based on how the vehicle is setup (and should work). This can help you eliminate possibilities of the failure. This is why a good interview is crucial.



[Kyle Siebert](#) 4,007 posts since Nov 14, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 17, 2018 11:00 PM

Totally agree, came in for truck shutting down. The code **523515** says it could be a nuisance fault. A actual J1939 issue will not cause a shut down like this. And a actual issue with j1939 would likely cause a MUX regen switch code in the CPC.



[Robert Cadell Jr](#) 2,640 posts since Nov 9, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 16, 2018 10:07 PM

I'd want to check 21 pin at mcm, battery, grounds, verify voltage on j1939 data bus and can bus I'd have to look up faults this is off the top of my head.

Does unit have GPS tied into it, we had a unit the finance company tied in a GPS and well they shut the truck down because customer didn't pay the bill.

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Just a thought if you want me to dig deeper let me know.

Rob "Doc" Cadell
Diagnostic Technician
TransChicago Truck Group BFWD
Shorewood IL 60404
803 917 5397 cell
Keep digging you'll find the answer



[Robert Cadell Jr](#) 2,640 posts since Nov 9, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 16, 2018 11:23 PM

Also had one awhile back shutting down also, I think I made a post on it 439b was not seated in the 3 pin connector it sits with in view behind the cgw on the inside of the frontwall pass side.

Rob "Doc" Cadell
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Keep digging you'll find the answer



[Talbert Simonian](#) 1,786 posts since Nov 21, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 17, 2018 12:11 AM

Check the software level on the SSAM. If it is at 16.32.0. Then it needs to be updated to 17.48.0 or 17.50.0. Then I would check the terminals at the CGW. I have had four units. That some of the terminals would not stay lock into the connector. I did a drag test. Or pull slightly on the wires. Would then check terminals at the CPC03.



[Robert Cadell Jr](#) 2,640 posts since Nov 9, 2014

Re: SN KB3779 Complaint - Shutting off while driving - codes: 523515/31 & 639/14 May 17, 2018 12:14 AM

Interesting find talbert

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Re: SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 Dec 11, 2019 6:47 PM

Researching codes as MCM code 639/14 doesn't exist in PSL, Detroit knows this and has no response as to what it means or anything. Just found a little more description in Virtual tech, its description is "" taken from VT for vin LL9959

Im thinking this is a j1939 issue or ground issue like this post is saying. Diagnostic link fault analyzer mislead me. Gonna check grounds and j1939H. Tired of spending 12 hours trying to flash a IPPC that highly likely isn't the cause of the complaint.

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[illegible]

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Fault Codes		VIN: 3AKJHHRZLL9959 ESN: 47291050723782		Transmission: DT12-DT12 DA Engine: DDEC16-DD15 Vehicle: New Cascadia 2020-Sleeper			
Faults		Fault History		Test Results		Virtual Technician Data	
Description	Number	Mode	Status				
[UDS-0] CPC302T - Common Powertrain Controller 3				Previously active			
Vehicle Speed Above Programmable Threshold1 While Driving	84	0	not active				
Vehicle Speed Above Programmable Threshold2 While Driving	84	11	not active				
[UDS-1] MCM21T - Motor Control Module 2.1							
J1939 Data Link Failure	639	14	previous				
[UDS-11] ABS02T - Antilock Braking System							
SPN/FMI=520216/31 ESC function is reduced (trailer ABS not OK) / condition exists	520216	31	not active				
SPN/FMI=520240/9 External Brake Demand System (VRDU) / abnormal update rate	520240	9	not active				
SPN/FMI=629/11 Controller #1 / failure mode not identifiable / root cause not known	629	11	not active				
[UDS-17] IPPC01T - Integrated Predictive Powertrain Control							
Measurement CAN common circuit error	520203	6	previous				
Application Error	520217	11	previous				
[UDS-19] SAS01T - Steering Angle Sensor							
SAS Communication	520192	19	not active				
[UDS-23] ICUC01T - Instrument Cluster							
ECU "BS" is missing	524011	31	not active				
EEPROM checksum fault	523002	31	not active				
[UDS-33] SSAM02T - Single SAM							
Subbus switch missing	520880	13	previous				
[UDS-37] CGW04T - Central Gateway							
Lost communication with TPM	524051	31	previous				
[UDS-42] RDF02T - Radar Frontend 2							
ECU Contamination error (blockage detection)	523010	31	previous				
[UDS-74] CTP01T - Common Telematics Platform							
No modem communication	520224	31	previous				
No Communication with GPS module	520320	31	previous				
GPS antenna short circuit	520581	31	previous				
[UDS-127] MPC02T - Multi Purpose Camera 2							
DTC_CAMERA_ECUMalfunctionFailure	523000	12	previous				
[UDS-232] VRDU02T - Video Radar Decision Unit 2							
ECU RDF data error	524042	19	not active				
ECU MPC data error	524127	19	not active				
ECU CPC data error	524000	19	not active				
ECU EBS timeout	524011	9	not active				
ECU EBS data error	524011	19	not active				
507991274 ECU EBS data error	524011	19	11/21/2019 9:31 AM				
507990626 AG: Automatic mode not available	521002	14	11/21/2019 9:31 AM				
507990553 AG: Unexpected shift behavior	521001	14	11/21/2019 9:31 AM				
507990305 ABS fault restricts automatic gear selection functionality. Check ABS for proper function.	1243	12	11/21/2019 9:31 AM				
507990059 Undocumented SPN: 524127	524127	19	11/21/2019 9:31 AM				
507989769 ECU EBS data error	524011	9	11/21/2019 9:31 AM				
507838216 Vehicle Speed Sensor	84	11	11/21/2019 7:01 AM				
507838138 Vehicle Speed Sensor	84	0	11/21/2019 7:01 AM				
507217583 ECU EBS	524011	9	11/20/2019 1:46 PM				
507039106 ECU Contamination Error (blockage detection)	523010	31	11/20/2019 10:17 AM				
507039101 ECU RDF	524042	19	11/20/2019 10:17 AM				
506421768 Heavy Duty Multi Speed Fan J1939 Signal	639	14	11/19/2019 7:24 PM				
506024209 Vehicle Speed Sensor	84	11	11/19/2019 9:53 AM				
506024232 Vehicle Speed Sensor	84	0	11/19/2019 9:53 AM				
505443339 ECU EBS data error	524011	19	11/18/2019 8:06 PM				
505443171 AG: Unexpected shift behavior	521001	14	11/18/2019 8:06 PM				
505442661 ECU RDF	524042	19	11/18/2019 8:06 PM				
505442660 Undocumented SPN: 524127	524127	19	11/18/2019 8:06 PM				
505442592 ECU EBS	524011	9	11/18/2019 8:06 PM				
505442391 ECU EBS data error	524011	9	11/18/2019 8:06 PM				
505398230 Heavy Duty Multi Speed Fan J1939 Signal	639	14	11/18/2019 6:20 PM				
503103452 Vehicle Speed Sensor	84	11	11/15/2019 8:15 AM				
503103502 Vehicle Speed Sensor	84	0	11/15/2019 8:15 AM				
501416028 Vehicle Speed Sensor	84	0	11/13/2019 4:53 PM				
501410452 Vehicle Speed Sensor	84	11	11/13/2019 4:44 PM				
499896453 ECU RDF	524042	19	11/12/2019 9:39 AM				
499896640 ECU Contamination Error (blockage detection)	523010	31	11/12/2019 9:39 AM				
499626623 Vehicle Speed Sensor	84	0	11/12/2019 5:53 AM				
499626674 Vehicle Speed Sensor	84	11	11/12/2019 5:53 AM				
498767325 ECU RDF	524042	19	11/11/2019 9:33 AM				
498779387 ECU Contamination Error (blockage detection)	523010	31	11/11/2019 9:33 AM				
496971927 ECU EBS	524011	9	11/8/2019 9:37 AM				



Kyle Siebert 4,007 posts since Nov 14, 2014

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Re: SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 Oct 9, 2020 12:14 AM

Mine ended up being two things, cut j1939 wire about 18" from TPMS, was making intermittent contact. When it did make contact, the TPMS ECU was corrupting J1939 to 3 volts high side and 1 volt low side.



[Kyle Siebert](#) 4,007 posts since Nov 14, 2014

Re: SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 Dec 14, 2019 2:54 AM

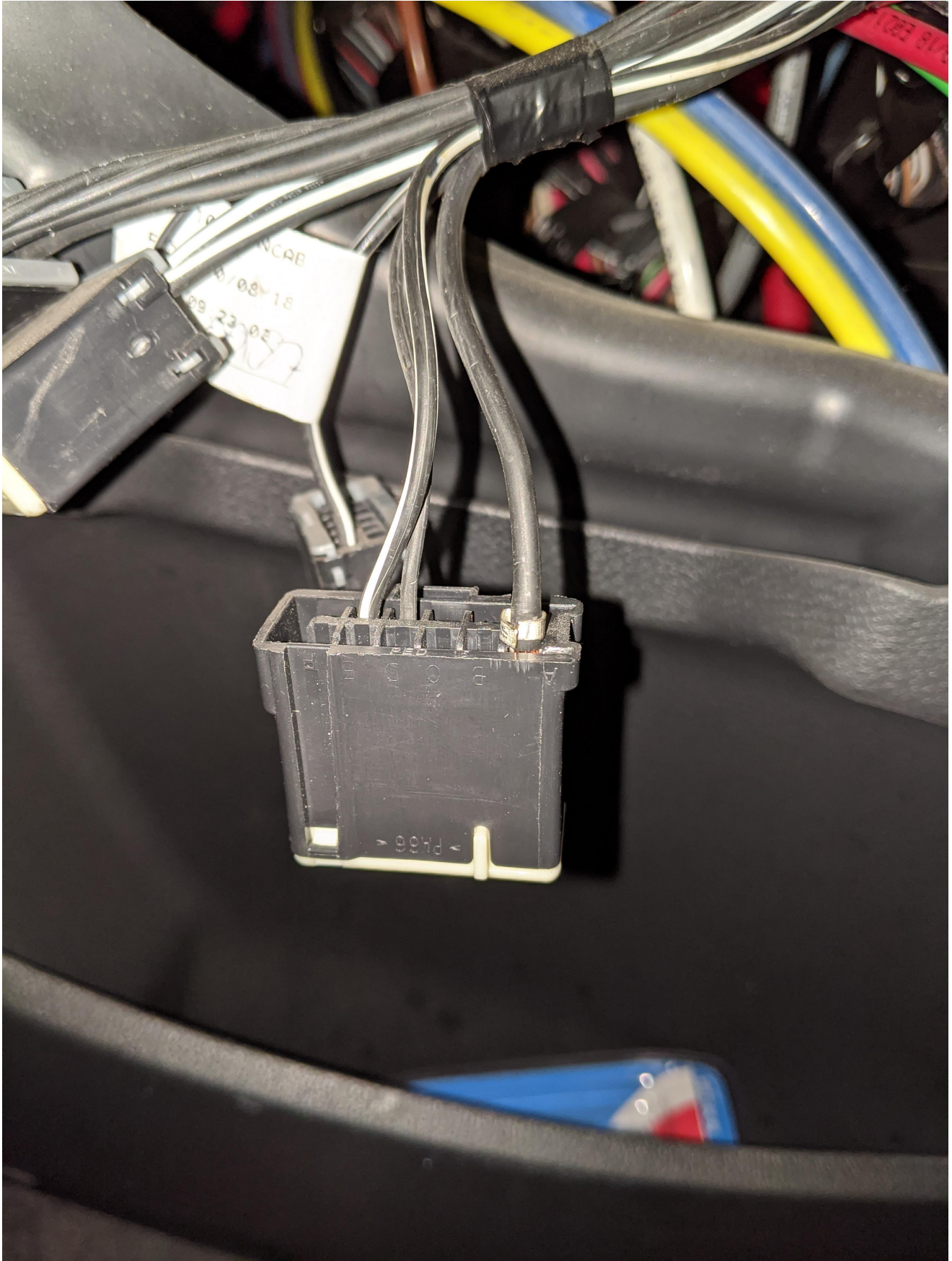
[Justin Johnson](#), where was this branched from? Who posted this? Im curious which a-pillar and what ground connection it was.



[Graham Jones](#) 31 posts since Sep 14, 2017

Re: SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 Oct 8, 2020 2:46 PM

Had the same 2 codes and found this at the ground splices behind the pull panel. Crimped so badly at the top that it wouldn't even lock into place. Was able to repair it and no more code.



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[Kyle Siebert](#) 4,007 posts since Nov 14, 2014

Re: SN KB3779 TS Help - Shutting off while driving - codes: 523515/31 & 639/14 Oct 9, 2020 12:17 AM

Do you know what ground wire that is? Splice pack ground supply or ground for a particular single component.