

DTNA Solutions > Discussions and Feedback > Tech Talk

> Re: Alternator Overcharging with A/C switch On onl...



Jim_McGee

Knuckle Buster

02-22-2021 08:59 AM

Alternator Overcharging with A/C switch On only

Curious if anyone has come across on a New Cascadia when the A/C is turned on the alternator spikes to 17 volts and it only happens when the center button for the A/C is turned on as soon as it is shut off it goes back to normal. Looking at different schematics they only appear to come in close contact in modules in the VPDM, I thought maybe the A/C Compressor was causing it but with it unplugged it still does it. There does not appear to be any damage to wiring and the remote sensor fuse is not blown, sadly I do not have a test HVAC controller head to try, not sure if that could cause this or not. Any assistance would be useful because I have never come across this issue before and I have contacted Freightliner and they were at a loss too.

Truck Info

2019 New Cascadia

VIN KD3711

Mileage 341,187

Labels :

Cascadia

Electronics | Controls | Configuration | Communication | and Diagnostics

EngineTransmission Cooling | and HVAC

Freightliner

Power | Electrical | Harnesses | and Wiring

Service

Add tags



1 Kudo

Reply



Steve_Reppard

Piston Head

02-22-2021 11:27 AM

I would check voltage at alternator remote sense connections and make sure nothing is spiking or dropping out. Have you checked wiring that runs in front of oil pan- this is a common chaffing point.

Add tags



1 Kudo

Reply



Jesse_Gutierrez
Solutions Pro

02-24-2021 07:17 PM

I have also had the wiring chafe along the air compressor as well

Add tags



0 Kudos

Reply



Jim_McGee
Knuckle Buster

02-25-2021 10:58 AM

Checked all the usual chaffing points and found no damage to wiring, continued and removed ground wire to alternator from the starter and checked it to make sure that ground was good and now with the A/C on it tops out at 14.9v with the A/C on. This is making me wonder if there was just a ground issue due to the spray they put on the electrical connections from the factory. I installed a jumper between the plug of the voltage sense harness to the alternator to monitor voltage with A/C on & off, on it is at 13.8v and off at 13.5v. Currently working with Freightliner to try and get some answers but they seem as baffled as I am on this one.

Add tags



3 Kudos

Reply



Talbert_Simonia

King Pin

02-25-2021 02:30 PM

Please keep us informed on this. But I think you got it with the possible ground issue.

Add tags



2 Kudos

Reply



Jesse_Gutierrez

Solutions Pro

02-27-2021 12:49 PM

Ok thinking about it now similar issues we had one P4 Cascadia with clock springs etc working not working due to bad grounds

Add tags



0 Kudos

Reply



Jim_McGee

Knuckle Buster

03-03-2021 06:38 PM

I found the issue and it was a surprise, I went back over the wiring harness for the voltage sense wire and noticed a section that was swelled but there was no external damage to the harness. I cut the tape off the harness thinking someone had repaired this and found the wire corroded through and it had started to cause another wire to lose insulation on it. The only thing I can think of is that the wire might have been damaged when the harness was built and over time the moisture got into it and caused it to corrode and eventually break. Once I repaired these wires the system started to charge at 14.2v with the A/C on or off. The wires I found are close to the bracket under the MCM that goes into the harness that goes to the 21 pin connector. I appreciate the help on this all of you it did help me eliminate certain items.

Add tags



1 Kudo

Reply



Jesse_Gutierrez
Solutions Pro

03-03-2021 07:00 PM

Nice , sometimes as a quick troubleshooting step I will run a quick jumper from my load to source / etc and see if everything works if not then I know it's hardware or software related at that point and can go after those issues

Add tags



0 Kudos

Reply

