 Jim_McGee
Knuckle Buster

05-04-2021 09:20 AM

No Comms with CPC, MCM or ACM

Vehicle Information

VIN: 5KJJBLDV9LLLU7497

Model: WESTERN STAR 5700XE SET-BACK
FRONT AXLE DAY CAB CHASSIS

Model Year: 2020

Mileage: 155663 miles

Make: WST

Base Model: 5700XE DC

Are you currently seeing this same issue on
other DTNA vehicles at your location?: no

Vehicle Systems Involved

ELECTRICAL

Currently experiencing an issue with a Western Star 5700, customer shut truck off and than it would not restart. When we brought the truck into the shop we noticed that there is no Comms with any module except the CGW and ICU. At this point went through and checked all fuses and relays and found no issues, checked PNDB and PDM for wiring issues found none. Inspected wiring in dash as well as all grounds including the MGJB and have found no issues, installed test CPC and CGW with no change to issue. From here started to check resistances and voltage to everything on the J1939 for any variances and at first on pins C & D of the diagnostic connector it was 40 Ohms but I did find a customer installed device that when unplugged let it go to 59.9 Ohms but the modules will still not communicate. Started checking battery, ignition and J1939 voltages, at the CPC, ABS, ECC & ICU battery voltage and ignition voltage was battery at the proper times, J1939 voltage is where the variance is occurring and it occurs when the CPC is plugged in and by this I mean when the CPC is not plugged in at the Diagnostic connector and various modules the voltages runs 2.4v and 2.5v but as soon as the CPC is plugged in the voltage jumps to 3.3v and 3.7v. I thought that it was possibly a bad CPC however it acts the same way with the test CPC. I have disconnected everything on this backbone and with the key on there is 0v on the J1939 and if I plug everything in 1 at a time and monitor the changes the all voltages stay at 2.4v and 2.5v until the CPC is plugged in. I have inspected the Bulkhead connectors and and found no issues there and checking the wiring to all modules there does not appear to be any issues anywhere. If anyone has any suggestions or advice I would appreciate it, when I contacted Freightliner for assistance they were unable to help me with anymore than what has already been completed.


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0 Kudos

Reply



 Rob_Layne
Knuckle Buster

05-04-2021 10:40 AM

Have you tried disconnecting modules one at a time to see if the others start communicating? Also, I've noticed that checking j1939 voltage with DDDL connected, the voltages read higher than normal. Not sure if that will help you or not... Is there anything else added to the J1939 by the customer? This truck is equipped with virtual technician, have you checked it? I have seen those mess up the J1939.

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0 Kudos

Reply




 Nick_Voit
Lube Tech

05-04-2021 11:11 AM

inspect ground splice pac for issues noticed unit had f1852 ground splice recall, i have had other units with intermittent lost comms with individual modules due to splice pac terminal not seated well after recall was performed


[View solution in original post](#)

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 6 Kudos

Reply



 HANS_SCHMEIDER
Apprentice

05-04-2021 12:26 PM


I have seen lots of issues with fl852 recall, did you load test your ignition and battery voltages at each module using the grounds in each connector?

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 3 Kudos

Reply



 Scott_Trippel
Optimus Prime

05-04-2021 03:11 PM


I agreed with Hans and Nick
See schem G66-11924-000 and fuse ten is a 10 amp for the cpc acm and mcm ignition power in the PT PDM

Add tags

 0 Kudos

Reply




 Jim_McGee
Knuckle Buster

05-04-2021 07:08 PM

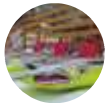
Update to this I found the problem and it turned out to be one of the ground splice packs, it was not until I pulled the vehicle info and checked the history of recalls completed that I seen this recall had been completed. When I looked for the splice packs that are part of that recall I moved one of them and all comms returned to all modules, however it was locked in properly and it is not melted or damaged so I will need to inspect this further so it does not happen again. I appreciate the help and advice of things to check from all of you.


[View solution in original post](#)

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 2 Kudos

Reply




 Scott_Trippel

Optimus Prime

05-05-2021 06:38 AM

If you can please mark you answer as correct, it helps the community when they troubleshoot. This has been the fix for several comm issues.

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 2 Kudos

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