code spn 523525 fmi 14

 Kelowna Service 263 posts since Nov 29, 2014

code spn 523525 fmi 14 Oct 8, 2019 8:08 PM

2019 Western Star VIN KU4999
GHG '17 DD13
CEL/SEL ON CODE SPN 523525 FMI 14
UNIT IS 2HRS AWAY FROM SHOP, WAS SCANNED BY ANOTHER SHOP AND THIS IS THE CODE THEY GOT.
CUSTOMER TRIED TO POWER SYSTEM DOWN ALREADY AND LEFT OVERNIGHT, ENGINE LIGHTS STILL COME ON RIGHT AWAY.
TRIED TO LOOK UP ON PSL AND DET. LIT. NOTHING IN SYSTEM.
CALLED DET. CSC THEY SAID THEY COULD NOT FIND ANY INFO ON IT.
JUST CURIOUS IF ANYONE HAS SEEN THIS CODE.
THANKS.
EVAN.

 Kyle Siebert *4,151 posts since Nov 14, 2014*

Re: code spn 523525 fmi 14 Oct 8, 2019 10:04 PM

What ECM is broadcasting this code?

 Michael Palumbo *1,620 posts since Nov 13, 2014*

Re: code spn 523525 fmi 14 Oct 8, 2019 10:34 PM

Like Kyle said.

Need the Source Address (SA) number so we know, for sure, which module is reporting the SPN you have..

 Jon Cecil *929 posts since Nov 25, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 12:42 AM

Seems like there is an issue going on with the 500k J1939.

3.06.028 SPN 523525 FMI 14

SPN 523525 FMI 14: J1939 500k Bus Electrical Performance	
Description	J1939 500k Bus Electrical Performance

Monitored Instrument	J1939+, J1939-
Typical Enabling Conditions	Key ON, battery voltage between 9 and 16V, electrical short to BAT at H1939+ or short to GND at H1939-.
Possible Causes	Nuisance code, wiring harness integrity, CGW
Monitor Sequence	Continuous
Execution Frequency	10 ms
Typical Duration	110 ms
Dash Lamps	—
Symptom	—
Verification	Circuit restored, fault inactive
Reference Module	160, 835

NOTE: This code may be present when no problem exists with the J1939 500k databus wiring or the CGW module. The J1939 500k databus is more susceptible to errors caused by transient conditions that are difficult to isolate as compared to the J1939 250k databus. 1.Turn the ignition to the ON position.2.Measure the voltage between the battery ground terminal and the diagnostic connector pin C (J1939 500k). Compare the voltage values: **0.1 to 5.0 volts** : J1939+ 500k wiring is intact, go to step 3. **0 volts** : J1939+ 500k wiring is shorted to ground. Repair as necessary. Refer to EZWiring for detailed schematic. **12.5 volts** : J1939+ 500k wiring is shorted to battery. Repair as necessary. Refer to EZWiring for de- tailed schematic. 3.Measure the voltage between the battery ground terminal and the diagnostic connector pin D (J1939- 500k). Compare the voltage values: **0.1 to 5.0 volts** : J1939-500K wiring is intact go to step 4. **0 volts** : J1939-500K wiring is shorted to ground. Repair as necessary. Refer to EZWiring for detailed schematic. **12.5 volts** : J1939-500K wiring is shorted to battery. Repair as necessary. Refer to EZWiring for de- tailed schematic. 4. Inspect the J1939 500k databus for devices added by customers. If 4.Inspect the J1939-500k databus for devices added by customers. If added devices are found, ensure that the wiring meets J1939 requirements: Device stubs must be attached to the J1939 500k databus backbone. Device stubs must be spaced at least 10 centimeters (4 inches) apart. Insulation displacement crimp devices (3M, ScotchLock) must not be used. Device stubs must be less than 1.67 meters (5 feet) in length, as measured from the backbone to the device. Stub wiring must be jacketed twisted pair cable with a minimum twist rate of one twist per inch of length. Twisted pair cable with a foil or braided shield can be used. Primary wire that is twisted together is not acceptable if the wire is not taped over its entire length to ensure that the minimum twist rate is maintained. If no added devices are found, continue with step 5. 5.Turn the ignition OFF.6.Remove the CGW, and install a test CGW.7.Turn the ignition to the ON position.8.Connect the vehicle to DiagnosticLink 8.03, or higher.9.Review the identification screen window and fault code window. If the CGW is operating normally, replace the CGW, then verify repair. If the central gateway needs to be replaced, refer to Central Gateway in the *New Cascadia Workshop Manual* for instructions.

Michael Palumbo *1,620 posts since Nov 13, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 2:33 AM

Western Star or New Cascadia?

Same or at least similar info can be found in the Western Star Workshop manual 54.18.300
Only has 8 steps and the reference modules 160, 280, 81b are different.

SPN 523525 FMI 14: J1939-500k Bus Electrical Performance

SPN 523525 FMI 14: J1939-500k Bus Electrical Performance	
Description	J1939-500k Bus Electrical Performance
Monitored Instrument	J1939+, J1939-
Typical Enabling Conditions	CGW is awake and battery voltage is in range between 10V and 30V.
Possible Causes	Nuisance code, wiring harness integrity, CGW
Monitor Sequence	Continuous
Execution Frequency	10 ms
Typical Duration	110 ms
Dash Lamps	—
Symptom	—
Verification	Circuit restored, fault inactive
Reference Module	160, 280, 81B

1.Turn the ignition to the ON position.2.Connect the vehicle to DiagnosticLink and check the fault code. If **SPN 523525 FMI 14** is active, got to step 4. If **SPN 523525 FMI 14** is inactive, got to step 3. 3.Check the roll call for J1939-500k. Does J1939-500K show up in the roll call? YES → Clear the fault. If SPN 523525 FMI 14 returns, go to step 4 NO → No further action is necessary.4.Turn the ignition to the OFF position and turn the battery load disconnect switch to the OFF position.5.Disconnect CGW connector 1A and check for bent, spread, or corroded pins. Is there any pin damage? YES → Repair as necessary, then verify the repair. NO → Go to step 6.6.Turn the battery load disconnect switch to the ON position, and turn the ignition ON.7.Measure the voltage between CGW connector 1A, pin 9 (-J1939-500k) and battery ground (GND). Is voltage 2.5V ± 0.6V? YES → Go to step 8. NO → Repair as necessary, then verify the repair.8.Measure the voltage between CGW connector 1A, pin 4 (+J1939-500k) and battery ground (GND). Is voltage 2.5V ± 0.6V? YES → The CGW may be faulty. NO → Repair as necessary, then verify the repair. If the central gateway needs to be replaced, refer to Removal and Installation in this section for instructions.


Jon Cecil *929 posts since Nov 25, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 2:33 AM

Found that troubleshooting in the New Cascadia manual. I would start diagnosing the 500k baud J1939 for issues. Troubleshooting might not be accurate for a Western Star but should point in the right direction.


Kelowna Service *263 posts since Nov 29, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 5:28 AM

hey Jon,
This is a Western Star 4700, brand new plow truck.
Thanks for the info, just waiting on the truck to get to our shop.

 Jon Cecil *929 posts since Nov 25, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 5:44 AM

I saw it was a Western Star. Since you were having issues locating the code, I just typed the code in the advance search box and searched all materials. It only found one link in the new cascadia manual. Figured it would still help being it was a fault on the J1939 and most CAN networks have relatively the same troubleshooting steps.

 Michael Palumbo *1,620 posts since Nov 13, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 10:59 AM

I was in the WStar manual when I searched the SPN, it did find it that way.

The One Portal Project is supposed to have an improved global search engine. Not sure how far along or how far away it is.

 Kelowna Service *263 posts since Nov 29, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 5:34 AM

Thanks Michael for the info, greatly appreciated.

 Kyle Siebert *4,151 posts since Nov 14, 2014*

Re: code spn 523525 fmi 14 Oct 9, 2019 2:59 PM

So this code is or isn't coming from the CGW Source address 37?

If its not not the CGW I'd get in contact with freightliner or whoever's ECU it is to have a correct path to follow.

 Troy Smith *2 posts since Feb 25, 2015*

Re: code spn 523525 fmi 14 Jan 12, 2021 4:52 PM

Any update on this?

 Eric Bloom *130 posts since Nov 10, 2014*

Re: code spn 523525 fmi 14 Feb 10, 2021 7:14 PM

VIN # MV0649 594 MILES SO WE HAVE THIS CODE ON A BRAND NEW 49X IT LEFT THE FACTORY WITH THE CHECK ENGINE LIGHT ON. ALL THE TROUBLESHOOTING STEPS HAVE BEEN DONE ALL THE WIRING IS CORRECT INSTALLED A NEW CGW AND THE CODE IS ACTIVE IN 3DL BUT NOT ON THE DASH . WE ARE NOW PUTTING A TICKET IN WITH WESTERN STAR FOR HELP. WILL POST WHAT WE FIND.