



Countries: CANADA, COLOMBIA, UNITED STATES, PUERTO RICO
Availability: ISIS, FleetSIS
Major System: ENGINES
Current Language: English
Other Languages: NONE
Viewed: 2652

Document ID: IK1200921
Revision: 9
Created: 6/18/2013
Last Modified: 10/2/2014
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Coding Information

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Title: N9/N10/N13 Aftertreatment Private Data Link Troubleshooting

Applies To: EPA 2010 Navistar N13 Engine EPA 2014 Navistar N9/N10 Engine

CHANGE LOG

DO NOT delete the CHANGE LOG

Updated : 09/26/14 - Added N9/N10 information

Description

When troubleshooting this system it's important to know the difference between PRIVATE and PUBLIC 1939 datalink and how they are used with this system. The first thing to note is the DEF sending unit, NH3, both NOx sensors, SCR Temp Sensor Module are on the PRIVATE datalink and **NOT** the PUBLIC 1939. Components that are on the private datalink **only** will not show as a detected module when using any diagnostic tool.

Another key is the ACM is on **both** the private and the public datalink communicating on both to the ECM. If the ACM shows up on the Helios, Intune or ServiceMaxx 1939 sniffer, then the ACM is communicating on the public 1939. The ACM will show as Source Address 85

For troubleshooting the Public datalink, refer to [IK0800080 - Data Link Troubleshooting](#).

[N13 SCR Datalink Wiring Diagram](#)

[N9/10 SCR Datalink Wiring Diagram](#)

Faults

SPN	FMI	Description
3216	19	NOx IN not detected on J1939
4346	19	SCR Temp Sensor Module not Detected on J1939
3226	19	NOx OUT not Detected on J1939
1761	19	DEFTL not Detected on J1939
4360	19	SCR Temp Sensor Module not Detected on J1939
609	19	ACM not Detected on J1939

Service Procedure

Any Sensor or Module with 1939 faults, you must verify power/ground and ignition feeds to that component. If each passes a load test, move forward with the below 1939 circuit test at each suspect component with the complaint present.

If the PDC cover behind the DEF Tank is removed, ensure the cover is reinstalled fully.

1. **Check for datalink voltage + and - at each sensor or module with the key on.**
 - You should have approximately 5v total when you add the voltages from each wire together, i.e. 2.7v on one and 2.3v on the other.

- These 2 wires should not have exactly the same voltage on them. If they do, you might have the 2 wires shorted together. Check the resistance between the 2 wires in Step 2 to be sure.
- If you get 0v or close to it on either wire, you probably have a short to ground on that wire.

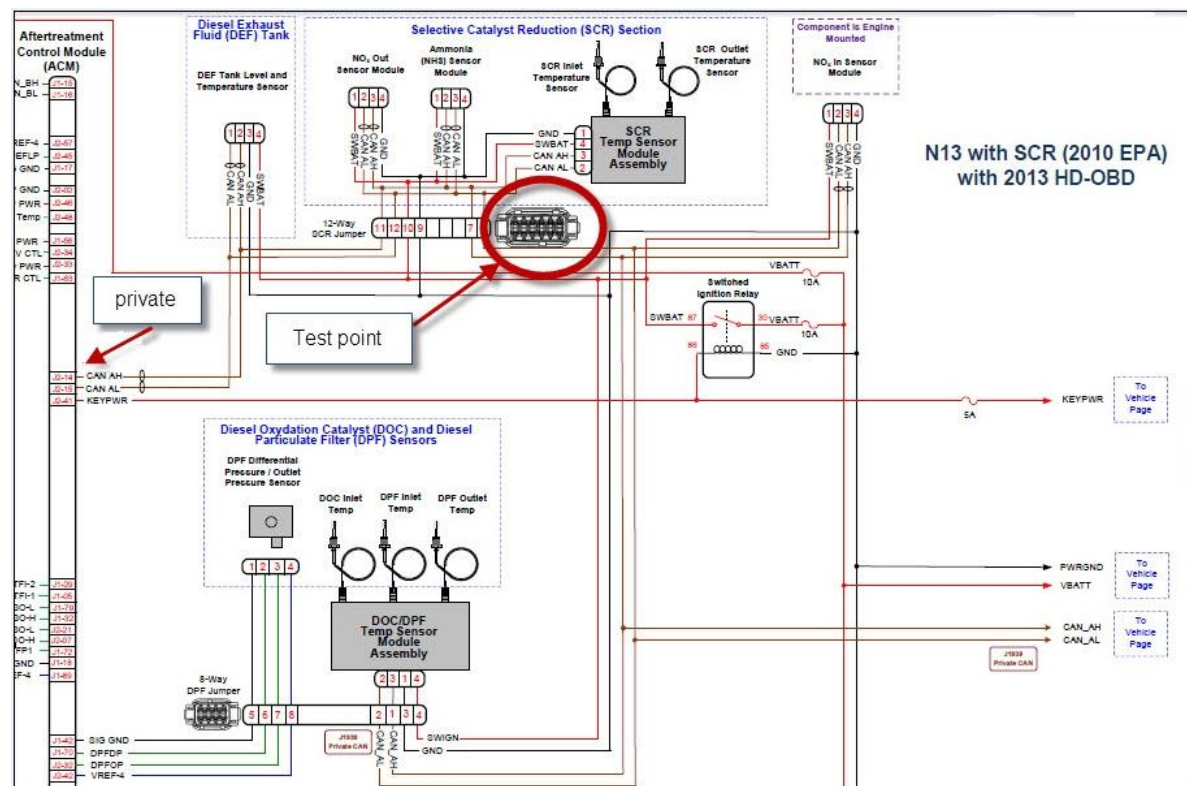
2. Check the resistance measuring across the + and - terminals. (Batteries must be disconnected)

- You should have approximately 60 ohms.
- If you get 0 ohms, then you have a short between the 2 wires.
- If you get 120 ohms, you have an open somewhere in the datalink or you're missing one of the resistors.

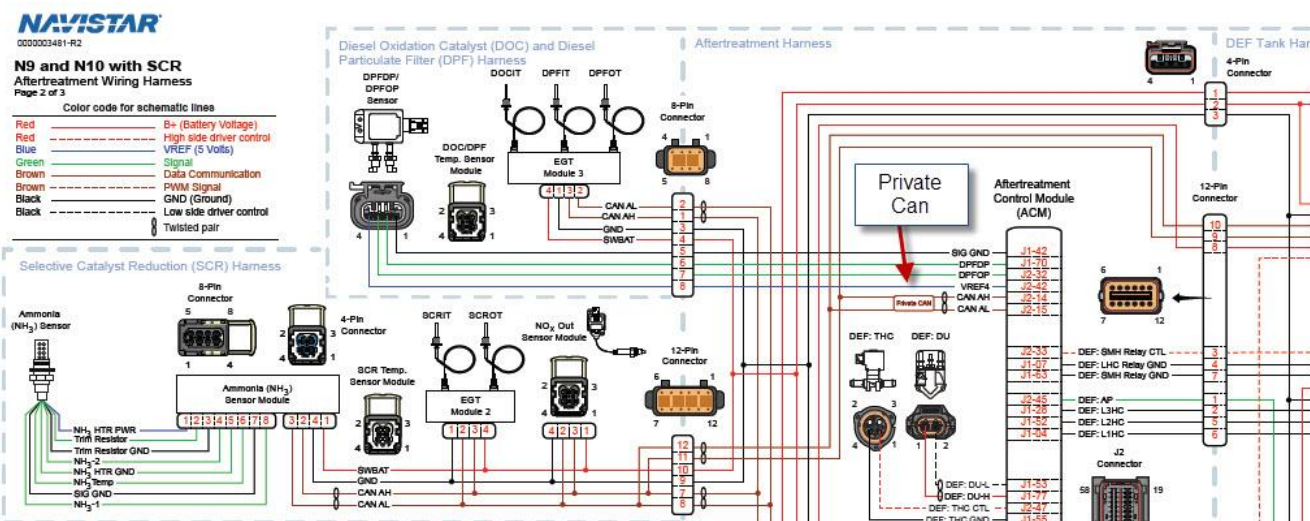
3. Check for short to ground. Check the resistance from + to ground and then – to ground. (Batteries must be disconnected)

- Resistance should be greater than 1,000 ohms.
- If resistance is less than 1,000 ohms, then you have a short to ground.

N13 Circuit



N9/N10 Circuit



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