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Coding Information

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Title: N13 Aftertreatment Private Data Link Troubleshooting
Applies To: N13

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.

[SCR Datalink Wiring Diagram](#)

FAULTS

DTC	Trouble Description	FMI
SPN3216	NOxIN not detected on J1939	19
SPN4363	SCR Temp Sensor Module not Detected on J1939	19
SPN3226	NOxOUT not detected on J1939	19
SPN1761	DEFTL not detected on J1939	19
SPN4360	SCR Temp Sensor Module not Detected on J1939	19
SPN1569	SCR Tamperproof Warning & Protection System Inducement Severe	31
SPN1761	DEFTL not detected on J1939	19
SPN4360	SCR Temp Sensor Module not Detected on J1939	19
SPN1569	SCR Tamperproof Warning & Protection System Inducement Severe	31
SPN609	ACM Not Detected on 1939	19

REPAIR 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.

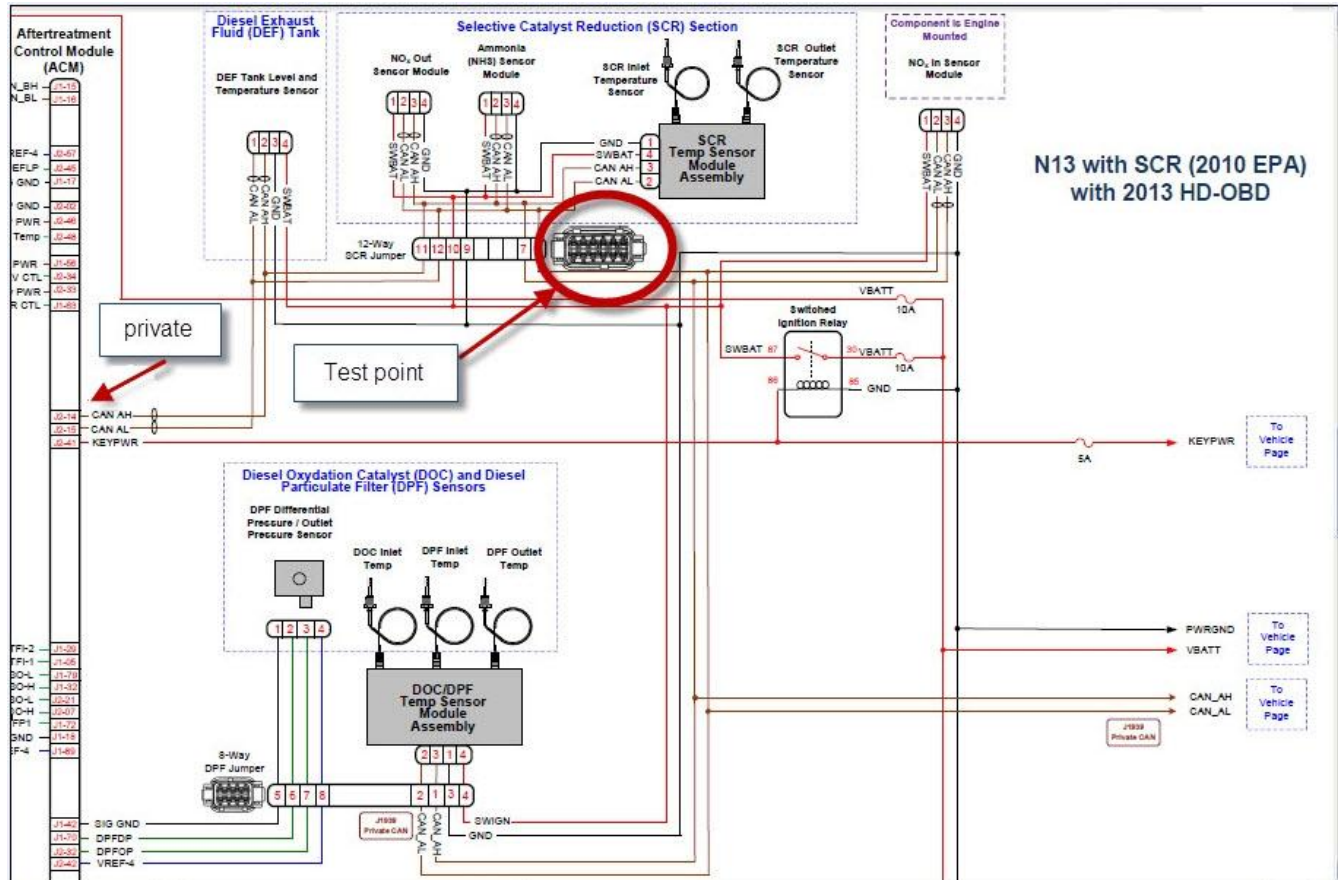
- You should have approximately 5v total when you add the voltages from each wire together, i.e. 2.7v on one and 2.3v on the other.
- These 2 wires should not have exactly the same voltage on them. If they do, you might have the 2 wires shorted together. Check the resistance between the 2 wires in Step 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 -. (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.



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