RLink Lite/RLink J2534 Case Study

TOPDON®

GM Engine Fault Detection Case

How to Use TOPDON RLink Lite/RLink J2534 and GDS2 to Perform GM Diagnostics

CONTENT

Vehicle Fault Problems

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Vehicle Fault Problems

Vehicle Information: 2012 Cadillac SRX car, with a driving mileage of 145,325 kilometers.
Customer Feedback: The Check Engine Light suddenly comes on while driving, and the engine is shaking.

Fault Confirmation

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Fault Confirmation

1. According to customer feedback, check and confirm that the Check Engine Light is on, and the Anti-skid Light is on.
2. Conduct a real-vehicle test, and no engine shaking fault is tested. It may be an occasional phenomenon.

Devices Required for Diagnostics

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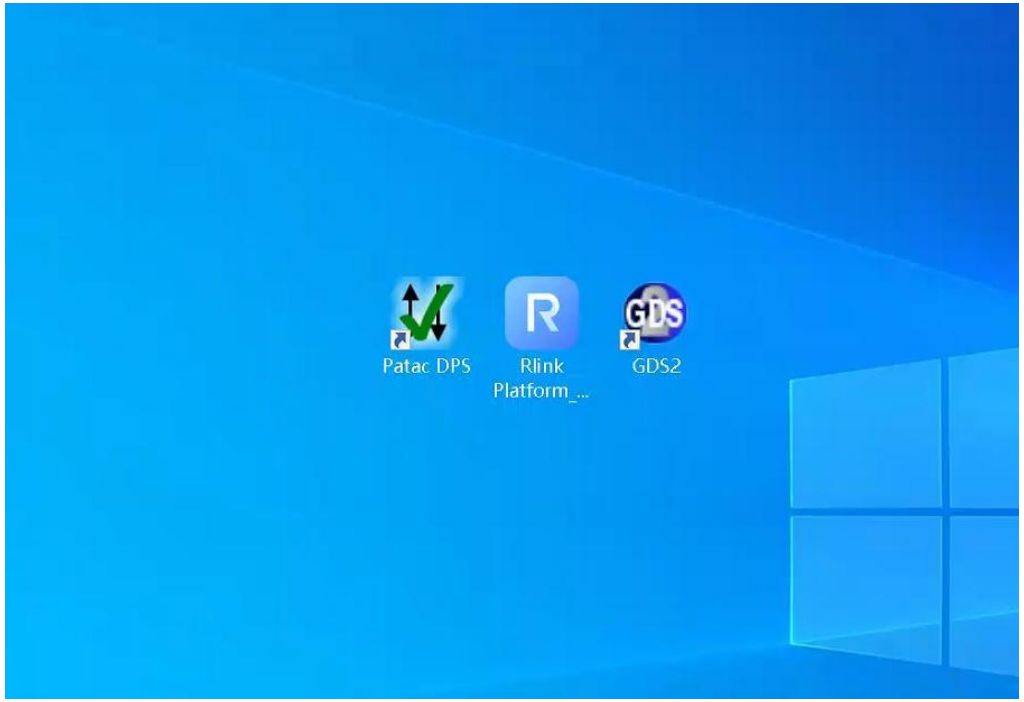
Devices Required for Diagnostics

Or



RLink Lite **RLink J2534** **Computer with GM OEM Software**

Tips: Both the RLink Lite and the RLink J2534 can be used with GM OEM software for diagnostics.

Operations for Diagnostics

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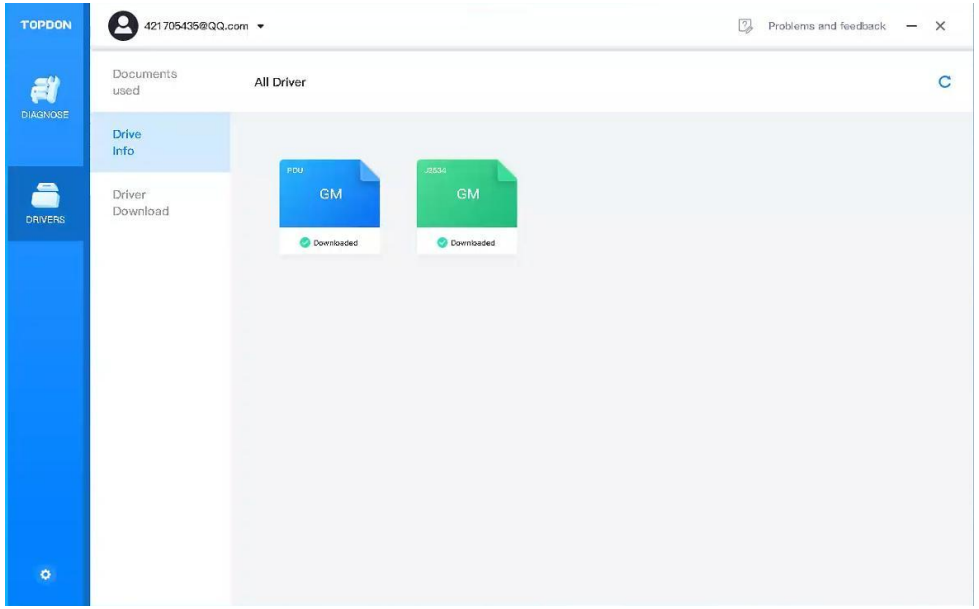
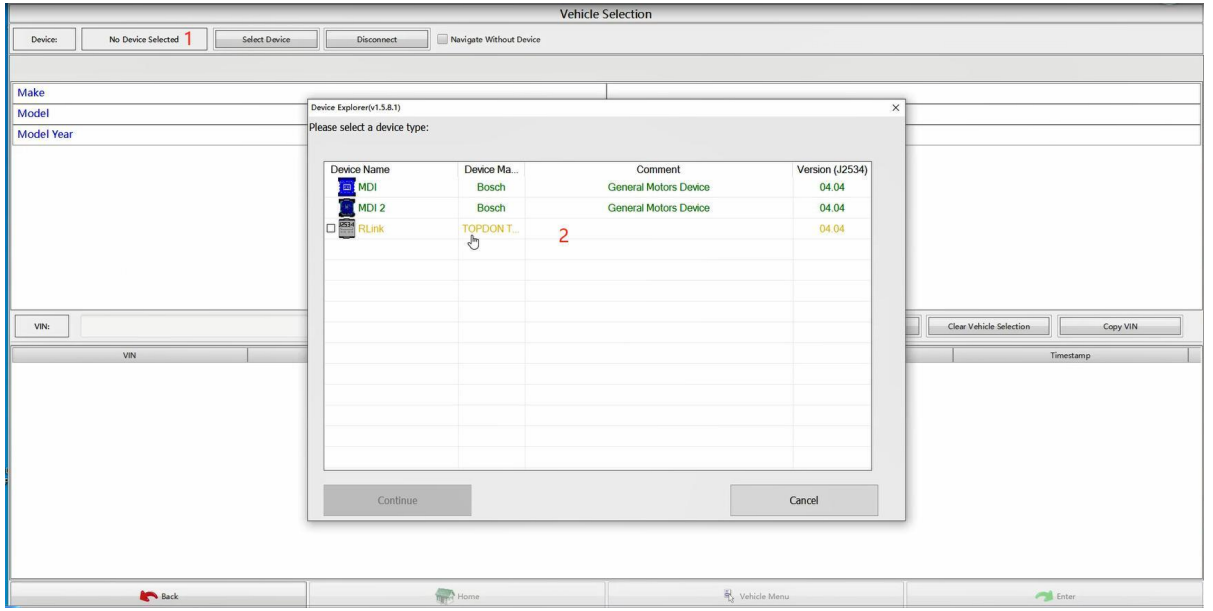
Operations for Diagnostics

1. Open RLink Platform to download the GM driver.

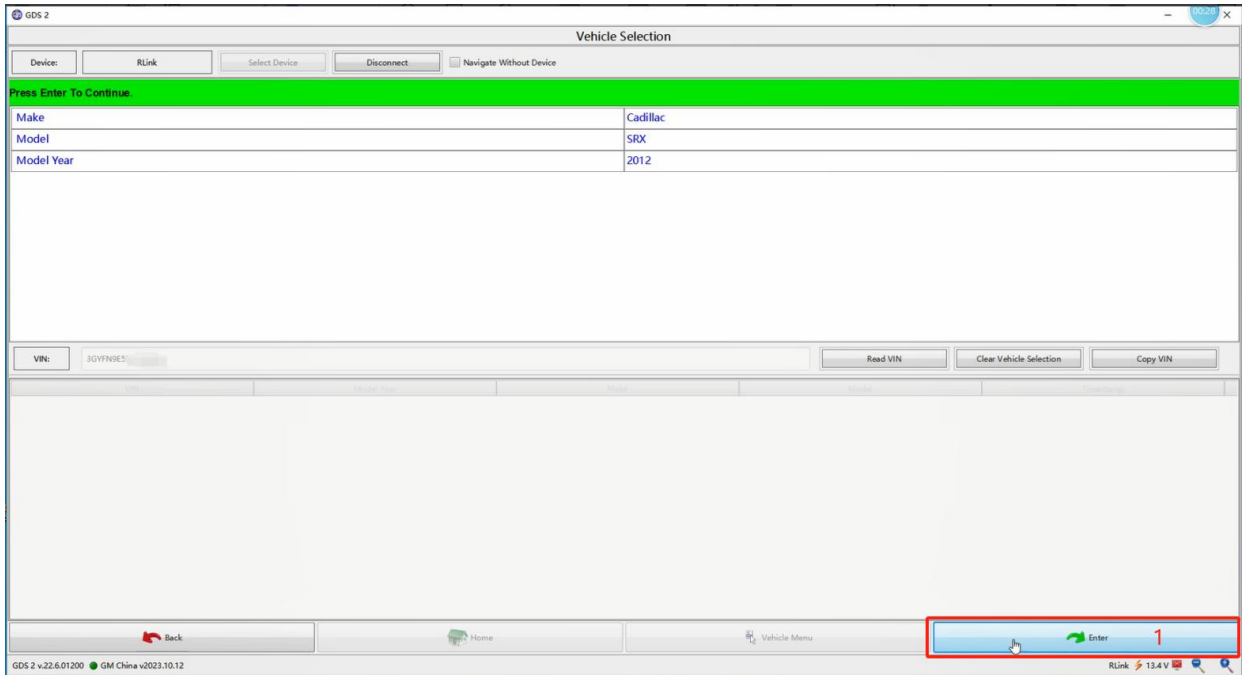


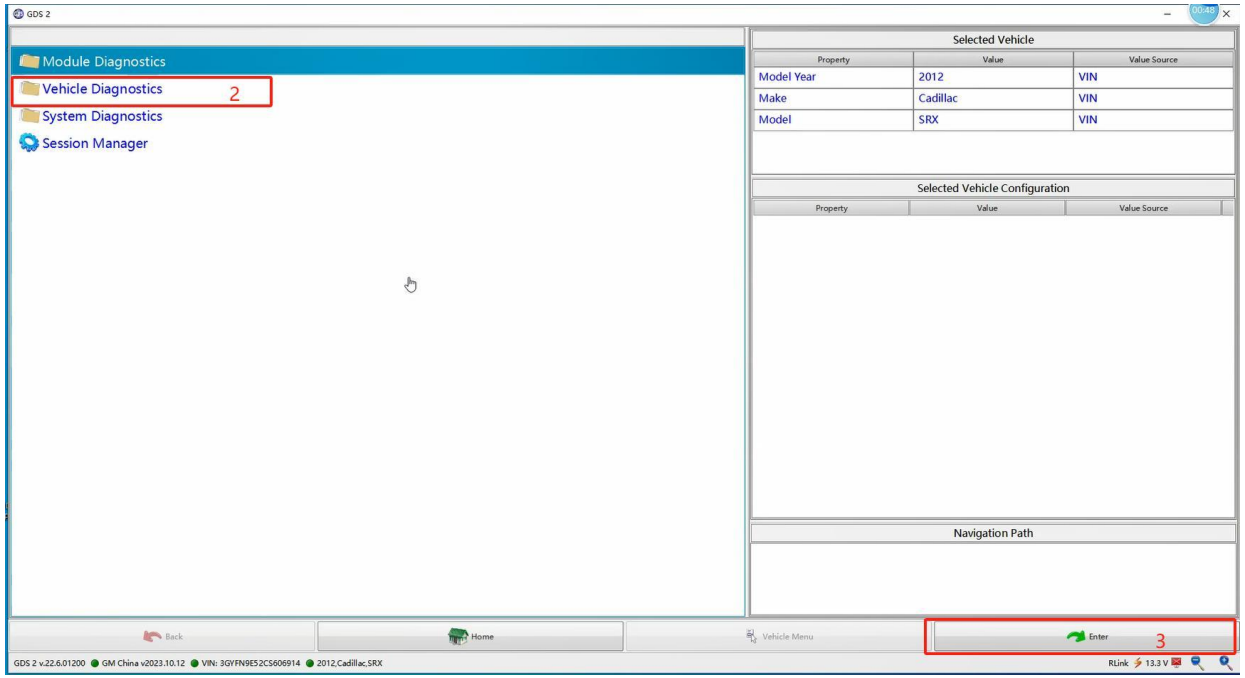
2. Open the GDS2 diagnostic software. Choose RLink for diagnostics.



Tips: The first time you use the GM OEM software, select VCI for diagnostics. Subsequently, the last VCI will be recognized automatically.

3. Connect the device. The vehicle will be automatically recognized. Follow the prompts to select the information for diagnostics.





Troubleshooting

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Troubleshooting

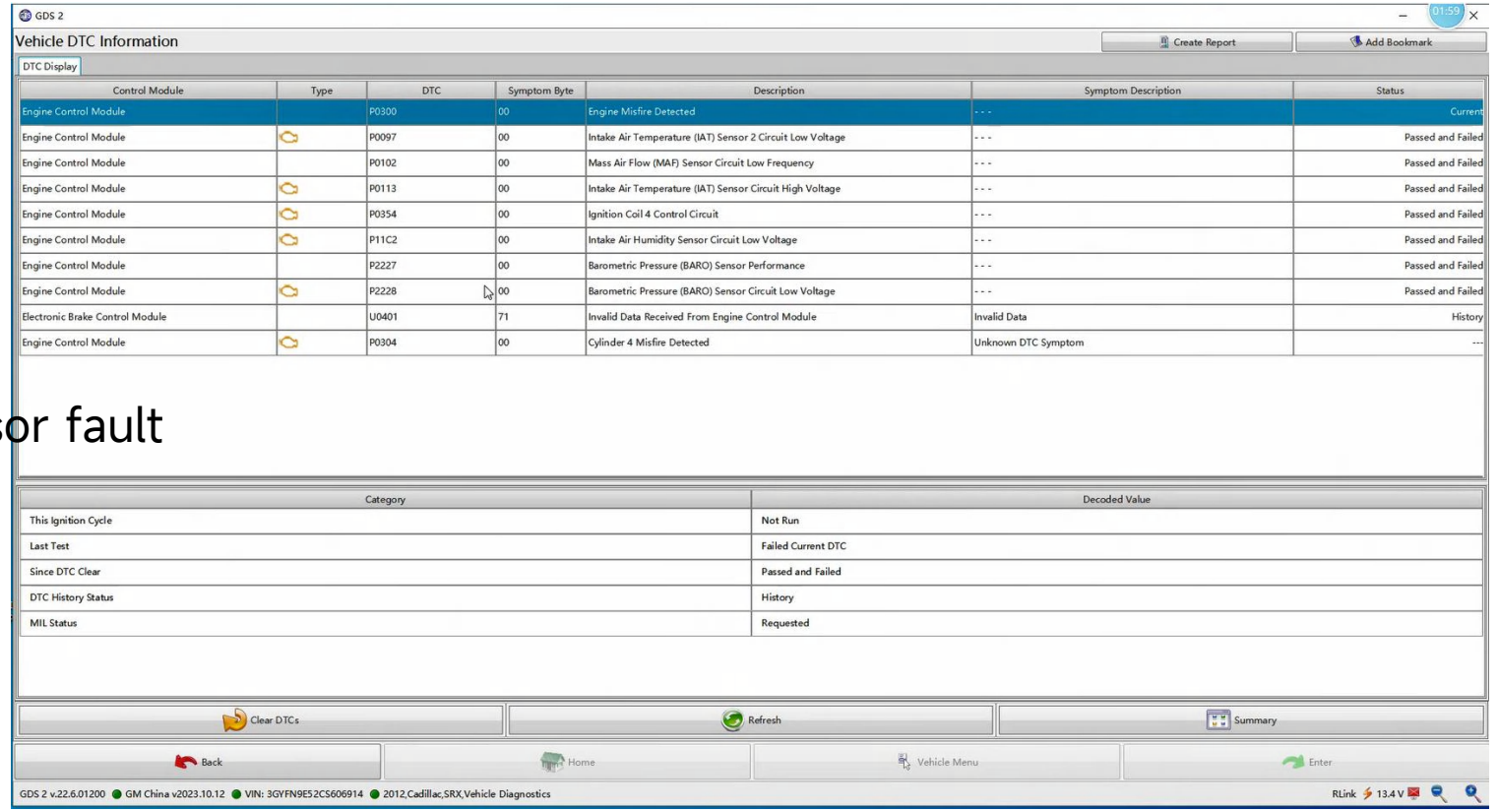
I. After the diagnostics are completed, an air quality sensor fault and a Cylinder 4 engine misfire fault are detected.
II. Fault Cause Analysis

Analysis of Air Quality Sensor Fault

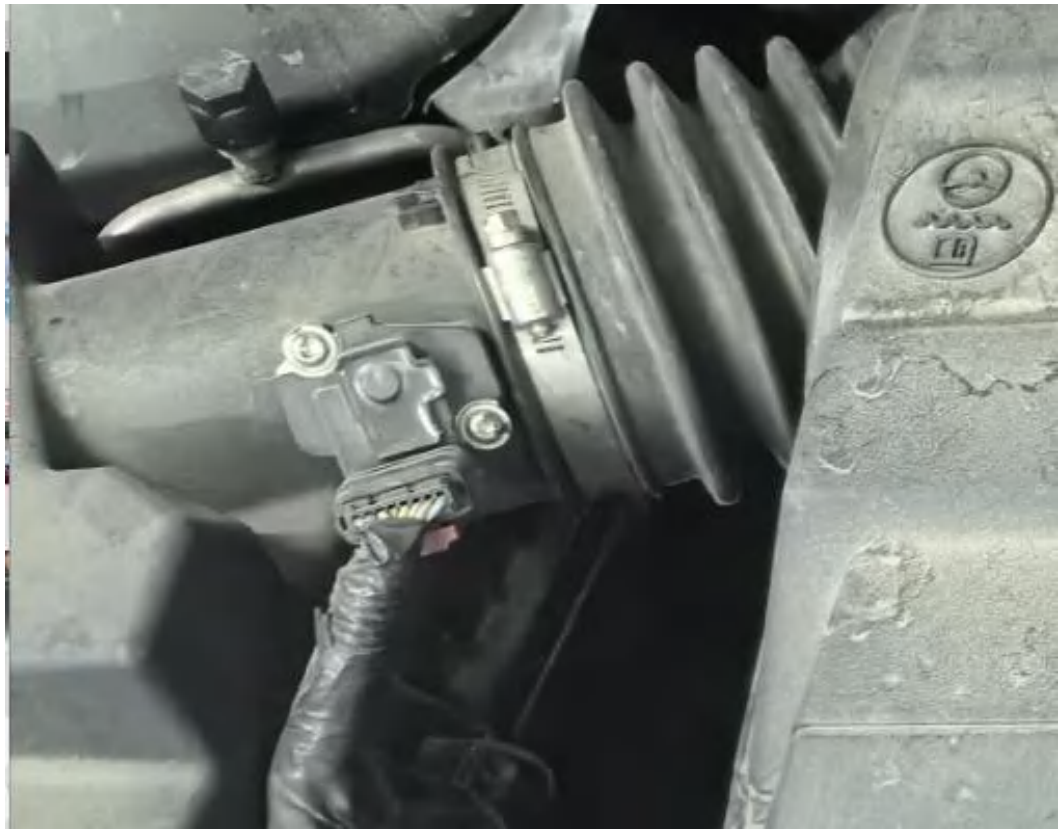
① Air flow meter damaged
② Wiring damaged
③ Engine computer damaged

Analysis of Misfire Fault

① Chain fault caused by air quality sensor fault
② Spark plug or ignition coil damaged
③ Fuel injector damaged



III. Check that the power supply, bond strap, and signal of the air flow meter are all normal. When checking, the pins of the air quality sensor plug are found to be loose. Simply handle the air quality sensor plug, and conduct vehicle test, the fault no longer recur. Confirm that the air quality sensor plug is an important cause of the fault.
IV. For the four-cylinder misfire fault, the spark plug is aging. The spark plug needs to be replaced.



Conclusion after Diagnostics

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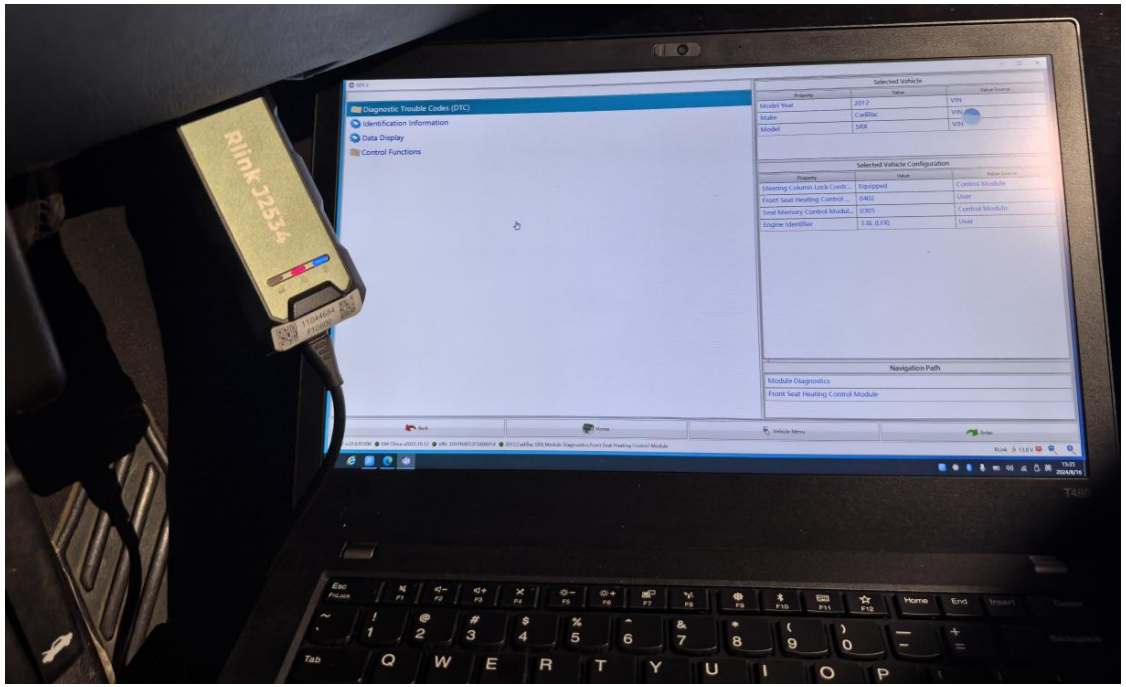
Conclusion after Diagnostics

Replace the air quality sensor plug and pins. Clear the fault code and conduct vehicle test. The fault does not reoccur, confirming that the fault is resolved.
When disassembling and installing all plugs, be careful not to damage the plug pins. When testing the pins, it is recommended to use an adapter.
After checking the engine fault, pay attention to check whether the regular maintenance parts are aging (such as spark plugs, air filters, gasoline filters, etc.) to avoid secondary faults.



Using TOPDON RLink J2534 and Computer with GM OEM Software to Perform Diagnostics

THANKS