

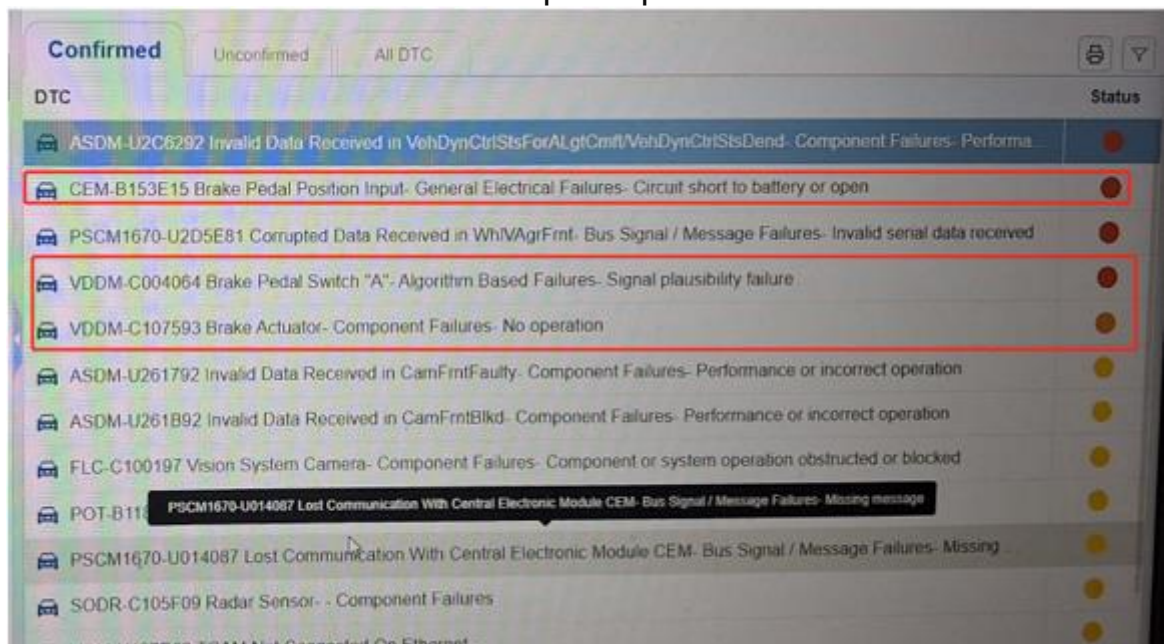
■ Fault symptom

Customer complained that Auto Hold service required alarm message prompted on the IPC screen, but all vehicle functions were normal while driving.



■ Fault diagnosis process

1. Use GLDS2.0 to read the fault codes and got the following fault codes. Three of them involved the brake pedal position switch



2. Technician checked the circuit of the brake light switch, especially the power supply and ground circuits, and it was normal.

Connector	Pins	Terminal Definition	Signal Type	Direction	To	Pins
7/124	1	wake_up	V6304B		connector, engine bay harness - floor harness	44
7/124	2	Dout	Sensor + V7062A		4/56 ENG Central Electronic Module (CEM), Default	13
7/124	3	Signal_output	Sensor signal VA5066B		94/303 Cable harness connector, engine bay harness - floor harness	43
7/124	4	Supply	Supply voltage S8523A		15/49 EJB1_B Fuse box, engine, Default	28
7/124	5	Ground	Ground G0550C		SP0550B	junction

3. Reading the data stream of VDDM parameter, it was found that one of the signal data of the brake pedal position sensor was abnormal. When pressing and releasing the brake pedal, the data always displayed FALSE.

According to the status description of this signal, the signal should change between TRUE and FALSE as the brake pedal is depressed and released.



Parameter	DID	Show Value
Brake pedal sensor, status - VDDM	2900	Inactive
Brake pedal sensor, footbrake is applied - switch A - VDDM	2980	True
Brake pedal sensor, footbrake is applied - switch B - VDDM	2980	False

<input checked="" type="checkbox"/>	Brake pedal sensor, footbrake is applied - switch B - VDDM	2980
<input type="checkbox"/>	Wheel speed, front left - VDDM	2980

Brake pedal sensor, footbrake is applied - switch B - VDDM

Parameter Usage:

The parameter shows if the brake pedal is depressed.

Parameter Origin:

The parameter value originates from the brake light switch signal sent by the Central Electronic Module (CEM). The Central Electronic Module is directly connected to the Vehicle Dynamics Domain Master (VDDM) via FlexRay.

StatusDescription:

The parameter can have the following statuses: False: The brake pedal is not depressed. True: The brake pedal is depressed.

Parameter Values:

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Maximum And Minimum:

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Code: 0000000004

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4. Compared to other normal vehicles, it was found that the signal of the faulty vehicle was indeed abnormal.

Because the brake light signal is transmitted to the CEM module through sensors, and then to the VDDM through Flexray from CEM module, so technician further checked that the wiring from the sensor to the CEM module, and it was found normal.

5. Replaced the brake light switch and retested. It was found that the brake pedal signals data stream returned to normal, and the prompt alarm was eliminated. Problem solved.

■ **Fault analysis**

Brake pedal sensor malfunction abnormal problem occurred.

■ **Fault solution**

Replaced the brake pedal sensor and problem was solved

■ **Quality inspection & repair confirmation**

Recheck again and confirm problem is solved.