

■ Fault symptom

There was a warning light for EPB in the cluster and the red light would always blink whenever the car would be unlocked after parking for 3 to 4 hours.



■ Fault diagnosis process

1. The health report was taken, and it was noticed that VDDM had many faults, all were related to the EPB. The EPB switch was checked with meter for abnormal continuation, and it was found normal.

VDDM-P056200 System Voltage Low. General Failure Information.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-C103444 Parking Brake. System Internal Failures. Data memory failure.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-C103493 Parking Brake. Component Failures. No operation.	Confirmed. Long duration fault detected many times by the in-vehicle DTC test.
VDDM-C103497 Parking Brake. Component Failures. Component or system operation obstructed or blocked.	Confirmed. Long duration fault detected many times by the in-vehicle DTC test.
VDDM-C107593 Brake Actuator. Component Failures. No operation.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-B11114B Electric park brake enable. System Internal Failures. Over-temperature.	Confirmed. Long duration fault detected many times by the in-vehicle DTC test.
VDDM-B111181 Electric park brake enable. Bus Signal / Message Failures. Invalid serial data received.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-U200297 Switch. Component Failures. Component or system operation obstructed or blocked.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-U262183 Invalid Data Received In Parking Speed Control Safe. Bus Signal / Message Failures. Value of signal protection calculation incorrect.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-U262283 Invalid Data Received In Active Safety Longitudal Mode Request. Bus Signal / Message Failures. Value of signal protection calculation incorrect.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-U2D5383 Corrupted signal received from another control module. Bus Signal / Message Failures. Value of signal protection calculation incorrect.	Long duration fault detected one time by the in-vehicle DTC test.
VDDM-U2D7792 Corrupted signal received from another control module. Component Failures. Performance or incorrect operation.	Long duration fault detected one time by the in-vehicle DTC test.

2. CAN connections were checked for VDDM, and they were found normal.

3. The wiring harness for power and ground were checked for loose connection, they were also found normal.

■ Fault analysis

After confirmation of normal behavior of wiring, brake switch, EPB switch and EPB actuators, it was concluded that the problem may be from inside the VDDM, that becomes unable to normalize EPB functionality.

■ Fault solution

VDDM was replaced to resolve the issue.

■ Quality inspection & repair confirmation

The vehicle was driven for more than 2 days in different conditions i.e. parking in sun, parking for long after driving short and parking for short after driving long. Conclusively, the vehicle was found normal.