

Troubleshooting Precautions

System Indicators

- If the system is OK, the ABS indicator goes off once after turning the ignition switch ON (II) without starting the engine, and then come on again and go off several seconds later after starting the engine. This occurs because the VSA control unit is turned on by the IG2 power source.
- The ABS indicator or VSA system indicator comes on when the VSA control unit detects a problem in the system.
- The ABS indicator or VSA system indicator will also come on under these conditions, even though the system is operating properly:
 - The vehicle goes into a spin
 - The ABS continues to operate for a long time
 - The vehicle is subjected to an electrical signal disturbance

If there is a fault in the PGM-FI system, only the VSA system indicator comes on.

- The VSA Activation Indicator will flash when only the drive wheels rotate or one of the drive wheels is stuck. When this occurs, the ABS indicator and VSA system indicator do not come on.

To determine the actual cause of the problem, question the customer about the problem, taking these conditions into consideration.

- When a problem is detected and the ABS or VSA indicator comes on, there are cases when the indicator stays on until the ignition switch is turned OFF, and cases when the indicator goes off automatically when the system returns to normal. For DTC 61 and 62, the indicator goes off automatically when the system returns to normal. For all other codes, the indicator stays on until the ignition switch is turned OFF.
- For DTCs 12, 14, 16, 18, 51, 52, 53, 66, 68 and 84, the ABS indicator goes off when the vehicle is driven again and the system is OK after the ignition switch is turned from OFF to ON (II). However, if the DTC is cleared, the CPU resets and the indicator goes off right after the engine is started if the system is OK.
- The ABS is not operational when the ABS indicator is ON; the VSA is not operational when the VSA indicator is ON.
- When the VSA indicator and MIL are both ON, troubleshoot the PGM-FI system first.

Diagnostic Trouble Code (DTC)

- The memory can hold any number of DTCs. However, when the same DTC is detected more than once, the more recent DTC is written over the earlier one. Therefore, when the same problem is detected repeatedly, it is memorized as a single DTC.
- The DTCs are indicated in ascending number order, not in the order they occur.
- The DTCs are memorized in the EEPROM (non-volatile memory). Therefore, the memorized DTCs cannot be canceled by disconnecting the battery. Perform the specified procedures to clear the DTCs.

Self-diagnosis

- Self-diagnosis can be classified into two categories:
 - Initial diagnosis: Performed right after the engine starts and until the ABS or VSA indicator goes off.
 - Regular diagnosis: Performed right after the initial diagnosis until the ignition switch is turned OFF.
- When a problem is detected by self-diagnosis, the VSA control unit shifts to fail-safe mode.

Kickback

The pump motor operates when the ABS is functioning, and the fluid in the reservoir is forced out to the master cylinder, causing kickback at the brake pedal.

Pump Motor

- The pump motor operates when the ABS is functioning.
- The VSA control unit checks the pump motor operation during initial diagnosis when the vehicle is started. You may hear the motor operate at this time, but it is normal.

Brake Fluid Replacement/Air Bleeding

Brake fluid replacement and air bleeding procedures are identical to the procedures use on vehicles not equipped with VSA. To ease bleeding, start with the front wheels.



Troubleshooting

The troubleshooting flowchart procedures assume that the cause of the problem is still present and the ABS indicator and/or VSA system indicator is still on. Following the flowchart when the ABS indicator and/or VSA system indicator does not come on can result in incorrect diagnosis.

The connector illustrations show the female terminal connectors with a single outline and the male terminal connectors with a double outline.

1. Question the customer about the conditions when the problem occurs, and try to reproduce the same conditions for troubleshooting. Find out when the ABS indicator and/or VSA system indicator came on, such as during ABS control, after ABS control, when vehicle speed was at a certain speed, etc.
2. When the ABS indicator or VSA system indicator does not come on during the test drive, but troubleshooting is performed based on the DTC, check for loose connectors, poor contact of the terminals, etc. before you start troubleshooting.
3. After troubleshooting, clear the DTC, and test drive the vehicle. Make sure the ABS indicator and VSA system indicator do not come on.