



Troubleshooting Precautions

ABS Indicator

1. If the system is OK, the ABS indicator goes off 2 seconds after turning the ignition switch ON (II) without starting the engine, and then comes on again and goes off after 2 seconds. This occurs because the ABS control unit is turned on by the IG2 power source.
2. The ABS indicator comes on when the ABS control unit detects a problem in the system. However, even though the system is operating properly, the ABS indicator will come on, under the following conditions.
 - Only drive wheels rotate
 - One drive wheel is stuck
 - Vehicle spin
 - ABS continues to operate for a long time
 - Signal disturbanceTo determine the actual cause of problem, question the customer about the problem, taking these conditions into consideration.
3. When a problem is detected and the ABS 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 DTCs 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.
4. For DTCs 12, 14, 16, 18, 21, 22, 23, 24, 51, 52 and 53, the 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 erased, the CPU is reset and the indicator goes off right after the engine is started if the system is OK.

Diagnostic Trouble Code (DTC)

1. If the CPU cannot be activated and the indicator comes on, the DTC is not memorized.
2. The memory can hold any number of DTCs. However, when the same DTC is detected more than once, the later one is written over the old one. Therefore, when the same problem is detected repeatedly, it is memorized as 1 DTC.
3. The DTCs are indicated in the order of ascending number, not in the order they occur.
4. 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 erase the DTCs.

Self-diagnosis

1. Self-diagnosis can be classified into 2 categories.
 - Initial diagnosis: Performed right after the engine starts and until the ABS indicator goes off.
 - Regular diagnosis: Performed right after the initial diagnosis until the ignition switch is turned OFF.
2. When a problem is detected by self-diagnosis, the system.
 - Turns the fail-safe relay OFF
 - Turns the solenoid valve OFF
 - Turns the pump motor OFF
 - Turns the ABS indicator ON

Troubleshooting Precautions

Kickback

1. The 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

1. The pump motor operates when the ABS is functioning.
2. The ABS 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

1. Brake fluid replacement and air bleeding procedures are the same as vehicles without ABS. To ease bleeding, start with the front wheels.

Troubleshooting

1. The troubleshooting flowcharts procedures assume that the cause of the problem is still present and the ABS indicator is still on. Following the flowchart when the ABS indicator does not come on can result in incorrect diagnosis.
2. Question the customer about the conditions when the problem occurred, and try to reproduce the same conditions for troubleshooting.
Find out when the ABS indicator came on, such as during initial diagnosis, during ABS control, after ABS control, when vehicle speed was at a certain speed, etc.
3. When the ABS indicator does not come on during the test-drive, but troubleshooting is performed based on the DTC, check for loose connectors, poor contact at the terminals, etc. before you start troubleshooting.
4. After troubleshooting, erase the DTC and test-drive the vehicle. Be sure the ABS indicator does not come on.
5. The connector illustrations show the female terminals with a single outline and the male terminals with a double outline.