05D33–02

SYSTEM DESCRIPTION

1. AIR SUSPENSION SYSTEM DESCRIPTION

(a) The suspension control ECU operates the compressor & motor with the dryer and uses the solenoid valves to control the vehicle height by analyzing the information based on the switches, sensors and input signals.

(b) Through the 4 height control sensors, the suspension control ECU detects the changes in the vehicle height that results from the number of occupants or the amount of the load. Then, the suspension control ECU controls the height control solenoid valves and the compressor & motor with the dryer in order to automatically adjust the vehicle height to a constant (normal) level.

(c) Furthermore, two vehicle heights can be selected by operating the height control switch: HI and Normal.

(d) In cases such as when the vehicle is jacked up, the auto leveling function is prohibited by turning the ignition switch off.

If the vehicle is raised with its engine running, connect terminals OPB and CG of the DLC3 so the vehicle height control is not carried out.

(e) The absorber control switch selects the shock absorber damping force (normal or sport).

2. FUNCTION OF COMPONENTS

Component	Function
Suspension Control Actuators	Changes the damping force.
AIR SUS Relay	Supplies electricity to the compressor motor.
Height Control Solenoid Valves	Supplies and discharges compressed air to and from air chambers in 4 pneumatic cylinders (front left and right, rear left and right).
Height Control Compressor	Supplies compressed air to increase the vehicle height.
Exhaust Solenoid Valve	Discharges compressed air to the atmosphere from pneumatic cylinders to lower the vehicle.
Height Control Sensors	Detects the vehicle height, and displacement volume of the suspension caused by unevenness of the road.
Front Right Acceleration Sensor	Detects the front right body vertical accelerated motion.
Rear Acceleration Sensor	Detects the rear body vertical accelerated motion.
Height Control Indicator	Displayed on the multi–information display when the height control switch position is on ”HIGH”.
Height Control Switch	Selects the vehicle height (NORMAL/HIGH).
Absorber Control Indicator Lamp	Comes on indicating that damping force is in ”SPORT” mode by the damping mode select switch, and warns that a malfunction has occurred in the suspension control system.
Absorber Control Switch	Selects the damping force (NORMAL/SPORT).
Skid Control ECU	Receives the signals of the stop lamp switch and speed sensor, and sends them to the suspension control ECU.
ECM	Receives the signals of the throttle opening angle, shift lever position, and IC regulator, and sends them to the suspension control ECU.
Suspension Control ECU	• Controls the damping force and vehicle height according to the operation modes. • Blinks the damping mode indicator light to warn the driver when the ECU detects a malfunction in the suspension control system. • When changed to the diagnostic mode, indicates any malfunction by DTCs (Diagnostic Trouble Codes). • Detects the front left body vertical accelerated motion.