

SD253-1



SD253-2



Cooling System

Service Tips (1)

Circuit Description

Constant power is supplied to RLY.3 via an F39 30A fuse in EMS Box , and the RLY.3 is controlled by ECM/PCM. When the ignition switch turns on, the RLY.3 coil is energized by ECM/PCM (No. 64, 53, 47), then the constant power is passes through the RLY. 3 switch to the terminal coil of the RLY. 4(LO)/RLY. 3(HI) in E/R Fuse & Relay Box.

Depending on the engine coolant temperature sensor and air conditioner operation, ECM/PCM controls RLY. 4(LO) or RLY. 3(HI) and it supply the power to the cooling fan motor.

• Cooling Fan In Low Speed

In Cooling Fan low-speed operating conditions, terminal No.5 of RLY. 4(LO) in the E/R Fuse & Relay Box is grounded through the terminal No.65, 33, 94 of the ECM/PCM. The relay coil is magnetized to pull the relay switch (No. 1 and 2). Then constant power passes through the relay and it supply the power to the cooling fan motor (No. 2).

As the power is supplied to the motor via the internal resistance of the cooling fan motor, the motor is operated at low speed due to voltage drop.

• Cooling Fan In High Speed

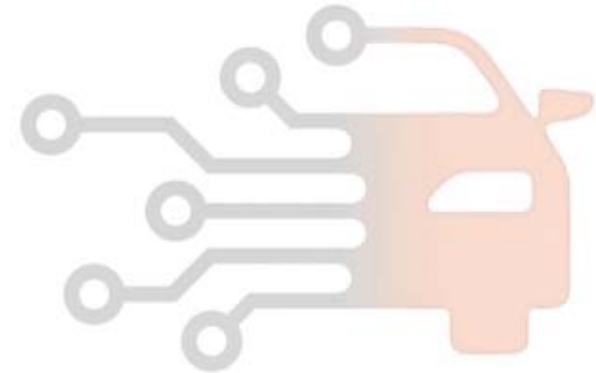
In Cooling Fan high-speed operating conditions, terminal No.5 of RLY. 3(HI) in the E/R Fuse & Relay Box is grounded through the terminal No.88, 18, 93 of the ECM/PCM. The relay coil is magnetized to pull the relay switch (No. 1 and 2). Then constant power passes through the relay and it supply the power to the cooling fan motor (No. 1).

Since the cooling fan motor receives power without any resistance, it is operated at high speed.

• Engine Coolant Temperature Sensor (ECTS)

The Engine Coolant Temperature Sensor (ECTS) detects the engine coolant temperature. The ECTS uses a thermistor whose resistance changes with the temperature. When the resistance value of the thermistor in the ECTS changes according to the engine coolant temperature, the output voltage also changes.

During cold engine operation the ECM/PCM increases the fuel injection duration and controls the ignition timing using the information of engine coolant temperature to avoid engine stalling and improve driveability.



Cooling System

Service Tips (2)

MEMO

دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران

