

PRESSURE SWITCH

ON-VEHICLE INSPECTION

1. INSPECT PRESSURE SWITCH

HINT:

- The pressure switch is installed onto the air conditioning pipe on the high pressure side.
- The switch detects drops in refrigerant pressure, such as from refrigerant leakage, and turns the magnet clutch off (*1) to prevent damage to the compressor.
- The switch detects abnormally high pressure in the air conditioning cycle and turns the magnet clutch off (*1) to prevent damage to parts of the air conditioning cycle.

(*1): The ECM turns the magnet clutch on or off upon receiving the signal from the pressure switch.

- As the pressure switch operates when there is a malfunction with the refrigerant pressure, its function cannot be inspected on-vehicle. Follow the procedures below to inspect it.

- Inspect the refrigerant pressure in the air conditioning cycle.
- Read the manifold gauge pressure when the conditions below are established. (*2)

Test conditions:

- Engine running at 1,500 rpm
- Blower speed control knob in HI position
- Temperature control knob in COOL position
- Air conditioning switch ON
- Recirculation mode
- Doors fully open

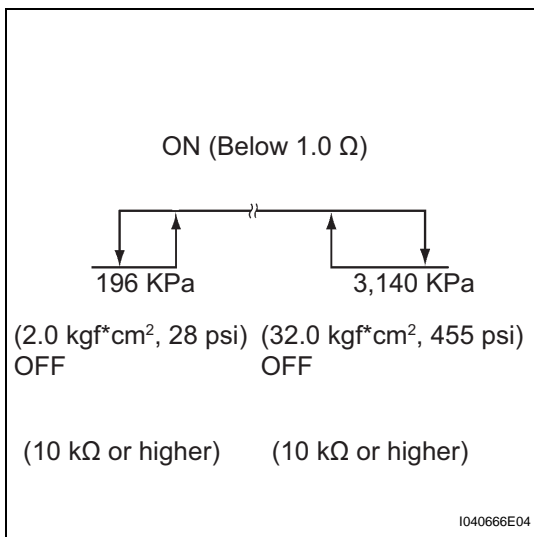
Standard:

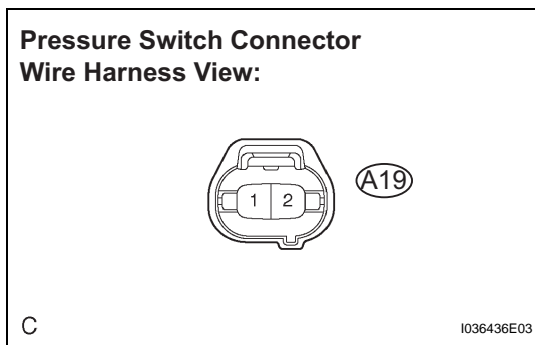
Pressure on high pressure side:

1.37 to 1.57 MPa (13.9 to 16.0 kgf*cm², 198 to 228 psi)

HINT:

- If the refrigerant pressure is not within the standard range, inspect and repair the air conditioning cycle.
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- Proceed to step (*2) if the refrigerant pressure is within the specified range.
- If the refrigerant pressure is below 196 KPa (2.0 kgf*cm², 28 psi), the refrigerant amount in the air conditioning cycle may have decreased significantly for reasons such as a gas leakage.





- (c) Check the air conditioning operation.
- (1) Disconnect the pressure switch connector.
 - (2) Connect terminals 1 and 2 of the pressure switch connector on the vehicle wire harness side using a service wire.
 - (3) Start the engine.
 - (4) Turn the air conditioning switch on and check that the magnet clutch is turned on.
 - (5) Check that the magnet clutch is turned off when disconnecting terminals 1 and 2 (those connected in the prior step).

Standard:

Terminals 1 and 2 connected: Magnet clutch is ON

Terminals 1 and 2 disconnected: Magnet clutch is OFF

Replace the pressure switch if the magnet clutch operates normally.

Inspect and repair the wire harness between the pressure switch and the ECM.