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.

(a) Inspect the refrigerant pressure in the air conditioning cycle.

(b) 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/cm\(^2\), 198 to 228 psi)

HINT:
- If the refrigerant pressure is not within the standard range, inspect and repair the air conditioning cycle.
  (See Page AC-12)
- Proceed to step (\(^2\)) if the refrigerant pressure is within the specified range.
- If the refrigerant pressure is below 196 KPa (2.0 kgf/cm\(^2\), 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.