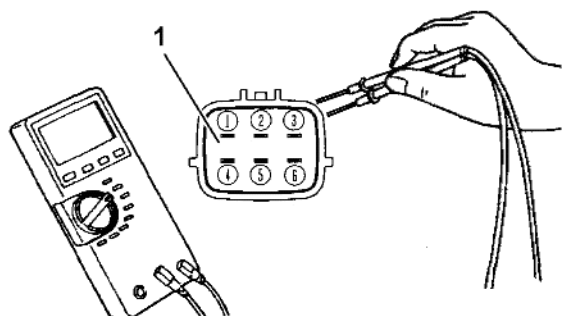


Inspecting/Cleaning EGR Related Components

■ EGR valve

Each EGR valve has four built-in coils. The power to each of the four coil is either ON or OFF at any given time. Depending on which coil is ON and which coil is OFF, the step motor rotates to determine the valve lift. The power to each coil is turned ON/OFF by the E-ECU based on the engine speed and fuel injection rate. The resistances of these coils should be as specified below when measured between each pair of pins shown. If any of the actually measured values is beyond the standard range, replace the entire EGR valve assembly.



1 – EGR valve connectors

Figure 6-157

Standard value

Terminal	Resistance (Ω)
① - ②	15 $\pm$ 2 at 20 °C
② - ③	
④ - ⑤	
⑤ - ⑥	

Note: The higher the temperature, the higher the coil resistance. Therefore, wait for the EGR valve to return to normal state before measuring the resistances.

■ EGR valve operation checks

1. After removing each EGR valve from the engine, connect the valve with the connector.
2. Connect the valve to the battery's minus (-) terminal.
3. Turn on the key switch. (Note that turning on the key switch causes the E-ECU to check whether the valve functions properly by opening and shutting it.)
4. From the exhaust gas inlet, visually check whether the valve operates correctly.

Note:

- If the EGR valve fails to smoothly operate, replace the entire valve assembly with new one.
- If the EGR valve does not respond at all, check whether there exists a voltage (EGR valve signal) between the connector pins. If the voltage is within the standard range, then replace the entire valve assembly with new one.

NOTICE

Alternatively, you can remove the EGR pipe from the engine and check the valve operation through the gas inlet window, instead of removing the EGR valve from the engine.