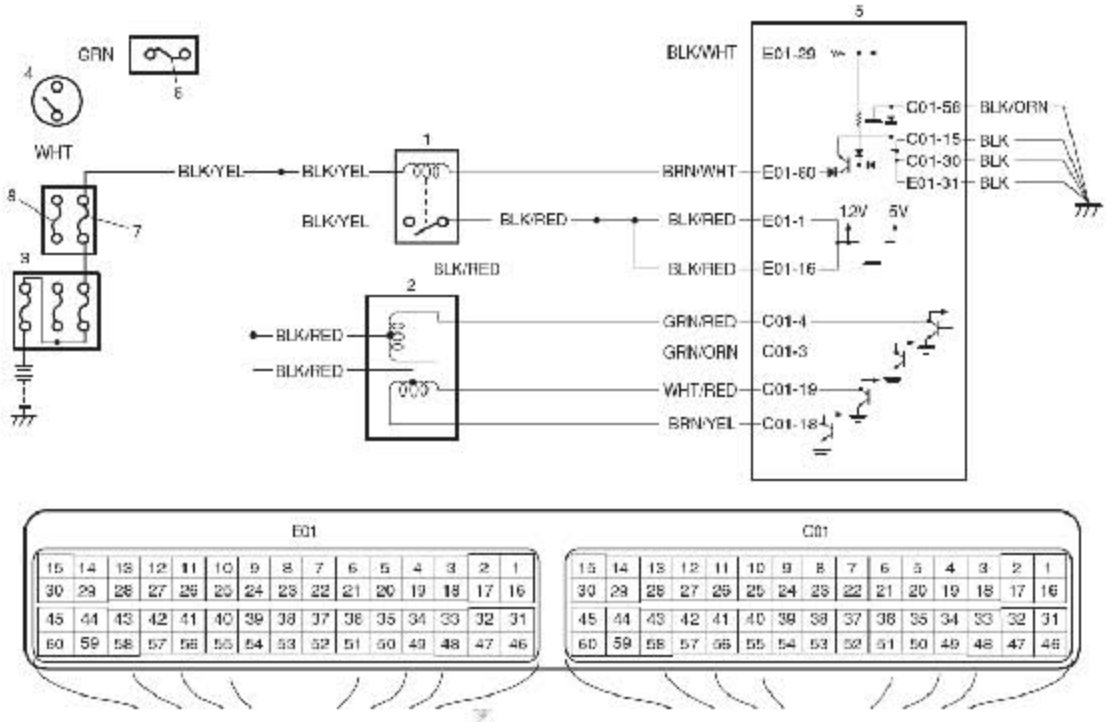
P0403: Exhaust Gas Recirculation Control Circuit

Wiring Diagram



1. Main relay	3. Main fuse box	5. ECM	7. "FI" fuse
2. EGR valve	4. Ignition switch	6. "IG COIL" fuse	8. "IGN" fuse

DTC Confirmation Procedure

1) With ignition switch turned OFF, connect scan tool to DLC.
2) Turn ON ignition switch and clear DTC using scan tool.
3) Start engine and warm it up to normal operating temperature.
4) Drive vehicle in 2000 – 3500 rpm of engine speed.
5) Keep above vehicle speed for 1 min. (Throttle valve opening is kept constant in this step.)
6) Stop vehicle and check DTC and pending DTC.

DTC Troubleshooting

Step	Action	Yes	No
1	Was "Engine and Emission Control System Check" performed?	Go to Step 2.	Go to "Engine and Emission Control System Description".
2	EGR valve power supply circuit check 1) Remove air intake pipe. 2) With ignition switch turned OFF, disconnect EGR valve connector. 3) With ignition switch turned ON, measure voltage between "BLK/RED" wire terminal of EGR valve connector and vehicle body ground. Is check voltage 10 – 14 V?	Go to Step 3.	"BLK/RED" wire is open circuit.
3	Wire circuit check 1) Disconnect connectors from ECM with ignition switch turned OFF. 2) Turn ON ignition switch. 3) Measure voltage between engine ground and each "GRN/RED", "GRN/ORN", "WHT/RED", "BRN/YEL" wire terminals of EGR valve connector. Is each voltage 0 V?	Go to Step 4.	Faulty wire(s) are shorted to other circuit. If wires are OK, substitute a known-good ECM and recheck.
4	Wire circuit check 1) With ignition switch turned OFF, measure resistance between engine ground and each "GRN/RED", "GRN/ORN", "WHT/RED", "BRN/YEL" wire terminals of EGR valve connector. Is resistance infinity?	Go to Step 5.	Faulty wire(s) are shorted to ground circuit. If wires are OK, substitute a known-good ECM and recheck.

Step	Action	Yes	No
5	Short circuit check for EGR valve control circuit 1) With ignition turned OFF, measure resistance between each EGR valve control circuit wire ("GRN/RED", "GRN/ORN", "WHT/RED" and "BRN/YEL" wire) and each EGR valve control circuit wire. Is each resistance infinity?	Go to Step 6.	Faulty wire(s) are short circuit.
6	EGR valve stepper motor coil circuit check 1) With ignition switch turned OFF, connect EGR valve connector. 2) Measure resistance between "E01-1/16" and each "C01-4", "C013", "C01-19", "C01-18" terminals of ECM connector. Is each resistance 20 – 31 Ω at 20 °C, 68 °F?	Faulty ECM. Substitute a known-good ECM and recheck.	Go to Step 7.
7	EGR valve check 1) Check EGR valve resistance referring to "EGR Valve Inspection (If Equipped) in Section 1B". Is resistance within specified value?	Faulty wire(s) are open or high resistance circuit. If wires are OK, substitute a known-good ECM and recheck.	Faulty EGR valve.