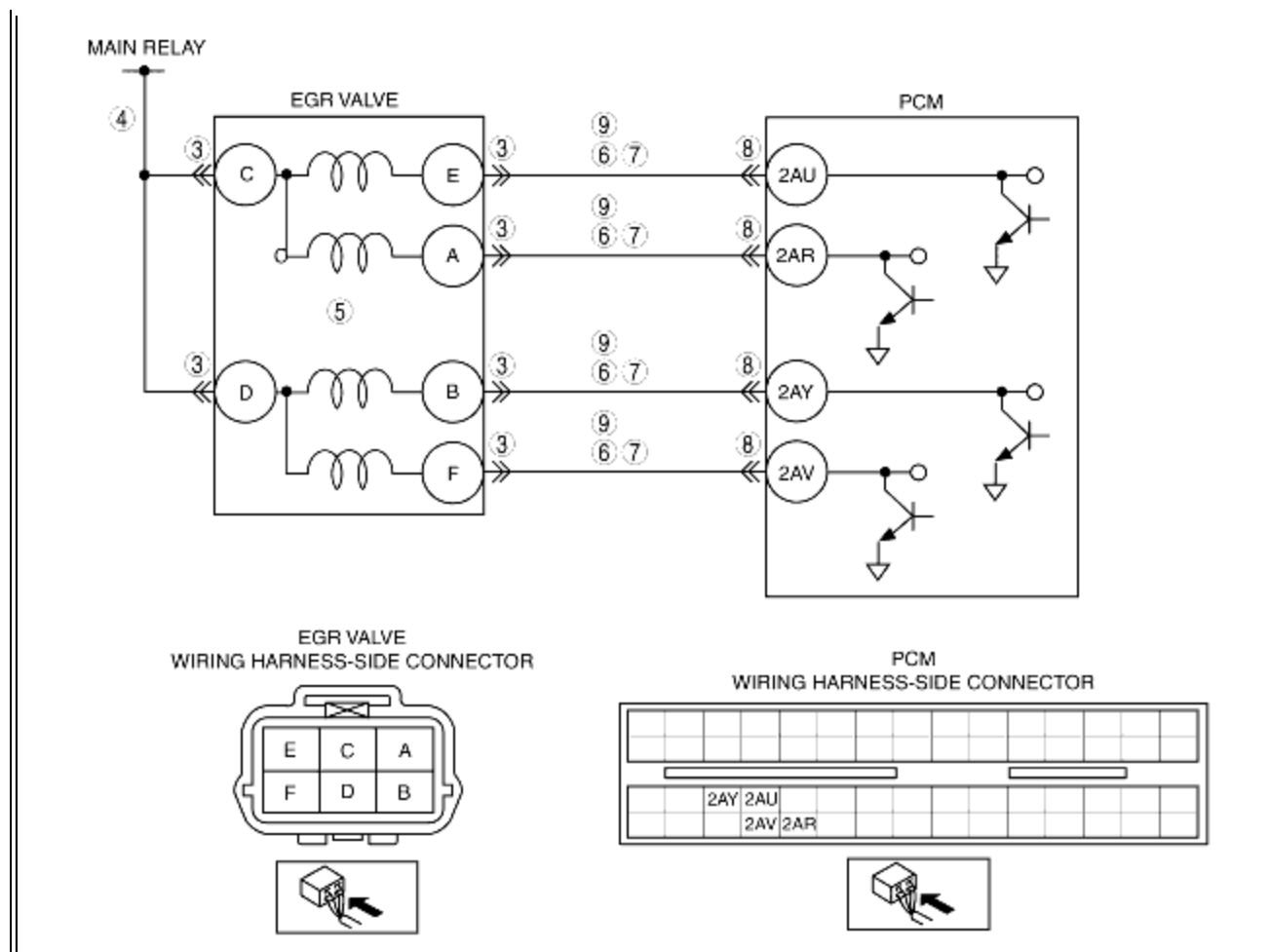


DTC P0403 [LF]

B3E010201086W01

DTC P0403	EGR valve (stepper motor) circuit problem
DETECTION CONDITION	<ul style="list-style-type: none"> • The PCM monitors the input voltage from EGR valve. If voltage at PCM terminals 2AU, 2AR, 2AY and/or 2AV remain low or high, the PCM determines that the EGR valve circuit has malfunction. <p>Diagnostic support note</p> <ul style="list-style-type: none"> • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction conditions in two consecutive drive cycles or in one drive cycle while the DTC for the same malfunction has been stored in the PCM. • PENDING CODE is available if the PCM detects the above malfunction condition during first drive cycle. • FREEZE FRAME DATA is available. • The DTC is stored in the PCM memory.
POSSIBLE CAUSE	<ul style="list-style-type: none"> • EGR valve malfunction • Connector or terminal malfunction • Short to power supply in wiring harness between EGR valve terminal E and PCM terminal 2AU • Short to power supply in wiring harness between EGR valve terminal A and PCM terminal 2AR • Short to power supply in wiring harness between EGR valve terminal B and PCM terminal 2AY • Short to power supply in wiring harness between EGR valve terminal F and PCM terminal 2AV • Short to ground circuit in wiring harness between EGR valve terminal E and PCM terminal 2AU • Short to ground circuit in wiring harness between EGR valve terminal A and PCM terminal 2AR • Short to ground circuit in wiring harness between EGR valve terminal B and PCM terminal 2AY • Short to ground circuit in wiring harness between EGR valve terminal F and PCM terminal 2AV • Open circuit in wiring harness between EGR valve terminal E and PCM terminal 2AU • Open circuit in wiring harness between EGR valve terminal A and PCM terminal 2AR • Open circuit in wiring harness between EGR valve terminal B and PCM terminal 2AY • Open circuit in wiring harness between EGR valve terminal F and PCM terminal 2AV • Open circuit in wiring harness between main relay terminal D and EGR valve terminal C • Open circuit in wiring harness between main relay terminal D and EGR valve terminal D • PCM malfunction



Diagnostic procedure

STEP	INSPECTION		ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED • Has FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY • Verify related service repair information availability. • Is any related repair information available?	Yes	Perform repair or diagnosis according to the available repair information. • If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT POOR CONNECTION OF EGR VALVE • Turn the ignition switch off. • Disconnect EGR valve connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminals and/or connector, then go to Step 10.
		No	Go to the next step.
4	INSPECT POWER CIRCUIT FOR OPEN CIRCUIT • Turn the ignition switch to the ON position (Engine off). • Measure the voltage following terminal and body ground. - EGR valve terminal C - EGR valve terminal D	Yes	Go to the next step.
		No	Repair or replace harness for open circuit then go to Step 10.

	• Is the voltage B+ ?		
5	INSPECT EGR VALVE • Perform EGR valve inspection. (See EGR VALVE INSPECTION [ZJ, Z6, LF] .) • Is EGR valve normal?	Yes	Go to the next step.
		No	Replace the EGR valve, then go to Step 10.
6	INSPECT FOR CONTROL CIRCUIT FOR SHORT TO GROUND • Turn the ignition switch off. • Inspect for continuity following terminal and body ground: - EGR valve terminal E - EGR valve terminal A - EGR valve terminal B - EGR valve terminal F • is there continuity?	Yes	Repair or replace wiring harness for short to ground, then go to Step 10.
		No	Go to the next step.
7	INSPECT FOR CONTROL CIRCUIT FOR SHORT TO POWER • Turn the ignition switch to the ON position (Engine off). • Measure the voltage following terminal and body ground: - EGR valve terminal E - EGR valve terminal A - EGR valve terminal B - EGR valve terminal F • Is the voltage B+ ?	Yes	Repair or replace wiring harness for short to power supply, then go to Step 10.
		No	Go to the next step.
8	INSPECT POOR CONNECTION OF PCM • Turn the ignition switch off. • Disconnect the PCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion). • Is there any malfunction?	Yes	Repair or replace the terminals and/or connector, then go to Step 10.
		No	Go to the next step.
9	INSPECT CONTROL CIRCUIT FOR OPEN CIRCUIT • Inspect for continuity following terminals: - Between EGR valve terminal E and PCM terminal 2AU - Between EGR valve terminal A and PCM terminal 2AR - Between EGR valve terminal B and PCM terminal 2AY - Between EGR valve terminal F and PCM terminal 2AV • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for open circuit then go to the next step.
10	VERIFY TROUBLESHOOTING OF DTC P0403 COMPLETED • Make sure to reconnect all disconnected connectors. • Clear The DTC from the PCM memory using the WDS or equivalent. • Start the engine. • Is the PENDING CODE for this DTC present?	Yes	Replace the PCM, then go to the next step. (See PCM REMOVAL/INSTALLATION [LF] .)
		No	Go to the next step.

11	VERIFY AFTER REPAIR PROCEDURE <ul style="list-style-type: none">• Perform the "After Repair Procedure". (See AFTER REPAIR PROCEDURE [LF].)• Are any DTC present?	Yes	Go to the applicable DTC troubleshooting. (See DTC TABLE [LF] .)
		No	Troubleshooting completed.