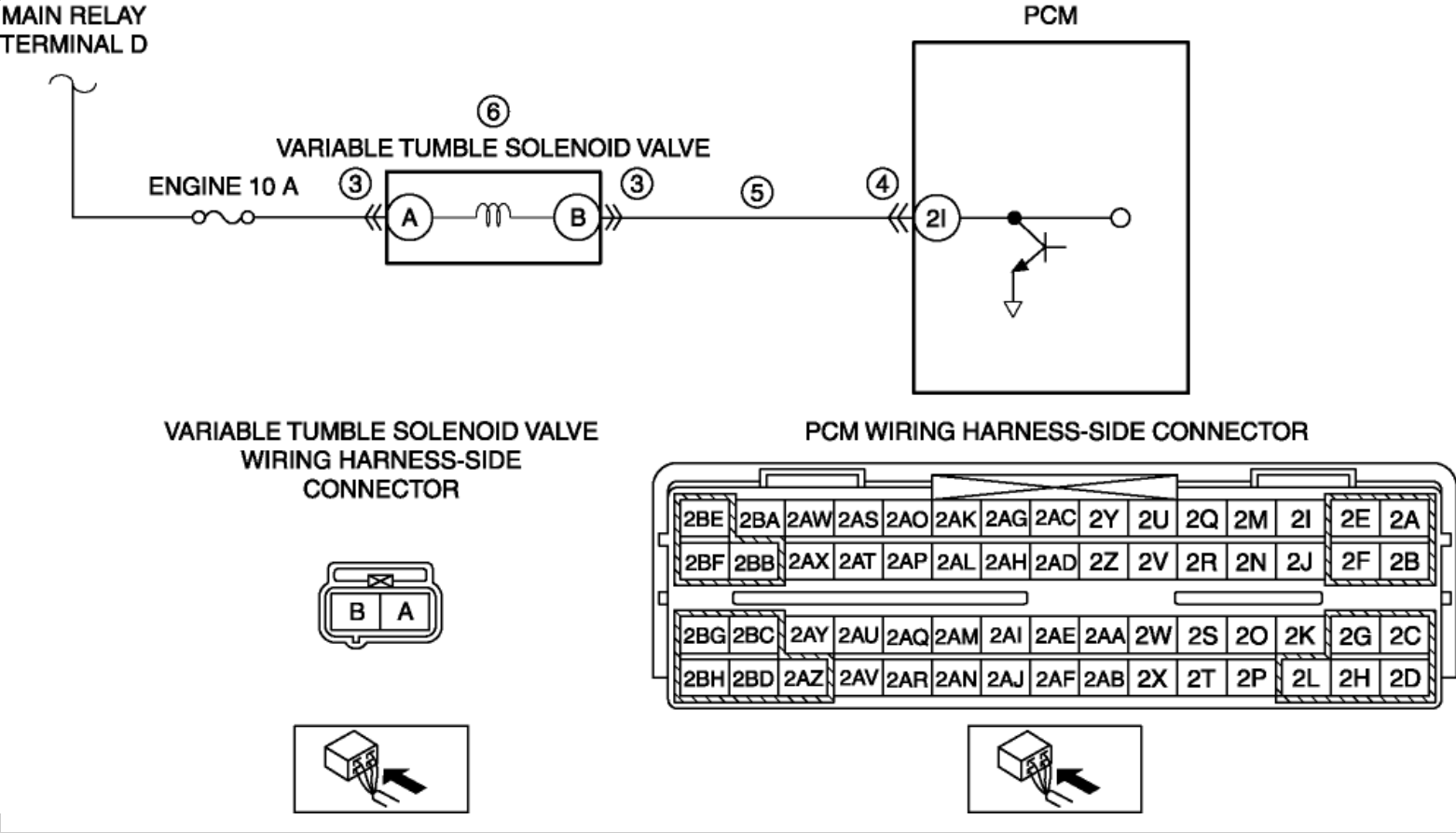


2012 - Mazda6 - Engine

DTC P2010:00 [MZR 2.5]

DTC P2010:00	Variable tumble solenoid valve circuit high input
DETECTI ON CONDIT ION	• The PCM monitors the variable tumble solenoid valve control signal. If the PCM turns variable tumble solenoid valve on but the current still remains high, the PCM determines that the variable tumble solenoid valve circuit has malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition 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 the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot is available. • The DTC is stored in the PCM memory.
POSSI BLE CAUSE	• Variable tumble solenoid valve connector or terminal malfunction • PCM connector or terminal malfunction • Short to power supply in wiring harness between variable tumble solenoid valve terminal B and PCM terminal 2I • Variable tumble solenoid valve malfunction • PCM malfunction



Diagnostic procedure

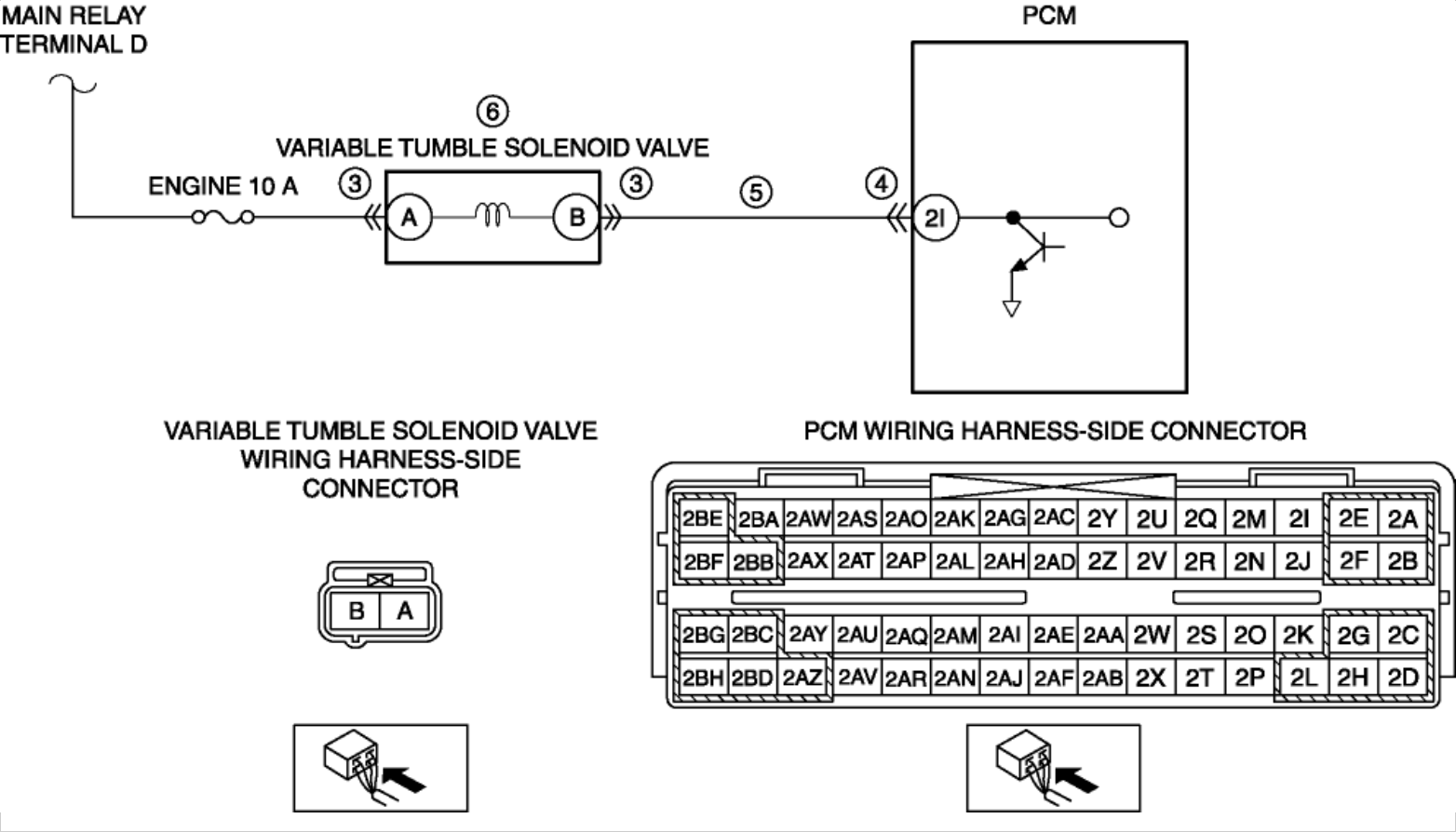
STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	YesGo to the next step.
		NoRecord the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	YesPerform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		NoGo to the next step.
3	INSPECT VARIABLE TUMBLE SOLENOID VALVE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the variable tumble solenoid valve connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	YesRepair or replace the terminal and/or connector, then go to Step 7.
		NoGo to the next step.
4	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion).	YesRepair or replace the terminal and/or connector, then go to Step 7.
		NoGo to the next step.

	Is there any malfunction?		
5	INSPECT VARIABLE TUMBLE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY - Variable tumble solenoid valve and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between variable tumble solenoid valve terminal B (wiring harness-side) and body ground. - Is there any voltage?	Yes Repair or replace the wiring harness for a possible short to power supply, then go to Step 7.	
		No Go to the next step.	
6	INSPECT VARIABLE TUMBLE SOLENOID VALVE - Inspect the variable tumble solenoid valve. (See VARIABLE TUMBLE SOLENOID VALVE INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes Replace the variable tumble solenoid valve, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5].)	
		No Go to the next step.	
7	VERIFY DTC TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Perform the KOEO or KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) - Is the PENDING CODE for this DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.	
		No Go to the next step.	
8	VERIFY AFTER REPAIR PROCEDURE - Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5].)	
		No DTC troubleshooting completed.	

2012 - Mazda6 - Engine

DTC P2010:00 [MZR 2.5]

DTC P2010:00	Variable tumble solenoid valve circuit high input
DETECTI ON CONDIT ION	• The PCM monitors the variable tumble solenoid valve control signal. If the PCM turns variable tumble solenoid valve on but the current still remains high, the PCM determines that the variable tumble solenoid valve circuit has malfunction. Diagnostic support note • This is a continuous monitor (CCM). • The MIL illuminates if the PCM detects the above malfunction condition 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 the first drive cycle. • FREEZE FRAME DATA (Mode 2)/Snapshot is available. • The DTC is stored in the PCM memory.
POSSI BLE CAUSE	• Variable tumble solenoid valve connector or terminal malfunction • PCM connector or terminal malfunction • Short to power supply in wiring harness between variable tumble solenoid valve terminal B and PCM terminal 2I • Variable tumble solenoid valve malfunction • PCM malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA (MODE 2)/ SNAPSHOT DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA (Mode 2)/snapshot data been recorded?	YesGo to the next step.
		NoRecord the FREEZE FRAME DATA (Mode 2)/snapshot data on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related repair information available?	YesPerform repair or diagnosis according to the available repair information. If the vehicle is not repaired, go to the next step.
		NoGo to the next step.
3	INSPECT VARIABLE TUMBLE SOLENOID VALVE CONNECTOR CONDITION - Switch the ignition to off. - Disconnect the variable tumble solenoid valve connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	YesRepair or replace the terminal and/or connector, then go to Step 7.
		NoGo to the next step.
4	INSPECT PCM CONNECTOR CONDITION - Disconnect the PCM connector. - Inspect for poor connection (such as damaged/pulled-out pins, corrosion).	YesRepair or replace the terminal and/or connector, then go to Step 7.
		NoGo to the next step.

	Is there any malfunction?		
5	INSPECT VARIABLE TUMBLE SOLENOID VALVE CONTROL CIRCUIT FOR SHORT TO POWER SUPPLY - Variable tumble solenoid valve and PCM connectors are disconnected. - Switch the ignition to ON (engine off). - Measure the voltage between variable tumble solenoid valve terminal B (wiring harness-side) and body ground. - Is there any voltage?	Yes Repair or replace the wiring harness for a possible short to power supply, then go to Step 7.	
		No Go to the next step.	
6	INSPECT VARIABLE TUMBLE SOLENOID VALVE - Inspect the variable tumble solenoid valve. (See VARIABLE TUMBLE SOLENOID VALVE INSPECTION [MZR 2.5].) - Is there any malfunction?	Yes Replace the variable tumble solenoid valve, then go to the next step. (See INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION [MZR 2.5].)	
		No Go to the next step.	
7	VERIFY DTC TROUBLESHOOTING COMPLETED - Make sure to reconnect all disconnected connectors. - Clear the DTC from the PCM memory using the M-MDS. (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Perform the KOEO or KOER self test. (See KOEO/ KOER SELF TEST [MZR 2.5].) - Is the PENDING CODE for this DTC present?	Yes Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM. (See PCM REMOVAL/ INSTALLATION [MZR 2.5].) Go to the next step.	
		No Go to the next step.	
8	VERIFY AFTER REPAIR PROCEDURE - Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAIR PROCEDURE [MZR 2.5].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See DTC TABLE [MZR 2.5].)	
		No DTC troubleshooting completed.	