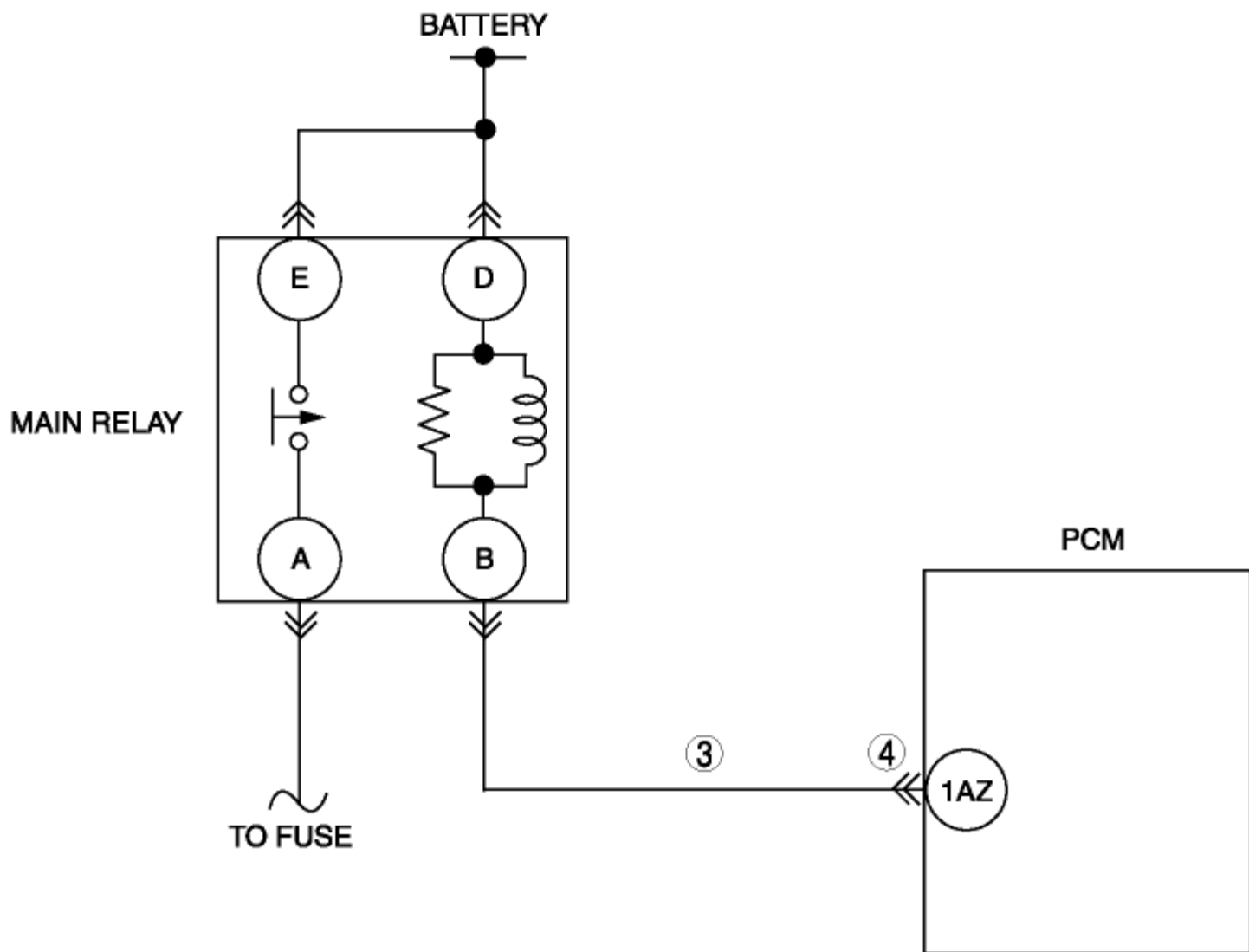


2012 - Mazda6 - Engine

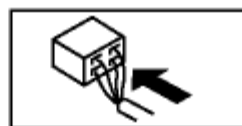
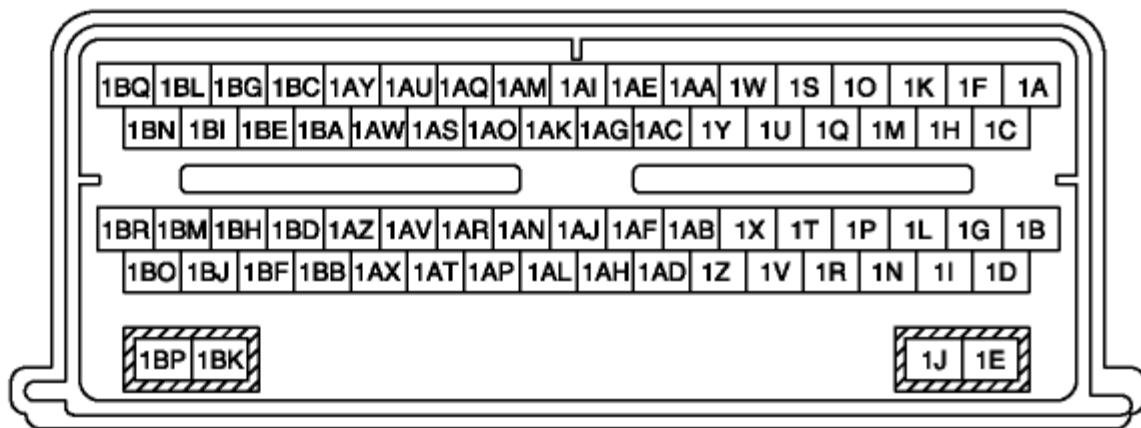
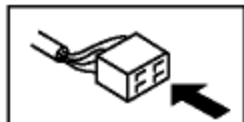
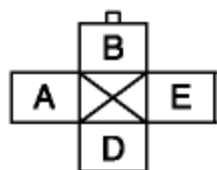
DTC P0685:00 [MZI 3.7 V6]

DTC P0685:00	ECM/PCM power relay control circuit/open
DETECTION CONDITION	• This DTC sets when the ignition switch position run circuit indicates the key is in the off, ACC, or LOCK position, and the amount of time the PCM remains powered through the PCM power relay exceeds a predetermined amount of time.
POSSIBLE CAUSE	• Short to ground circuit between main relay terminal B and PCM terminal 1AZ • Main relay malfunction • PCM malfunction



**PCM
WIRING HARNESS-SIDE CONNECTOR**

MAIN RELAY



Diagnostic procedure

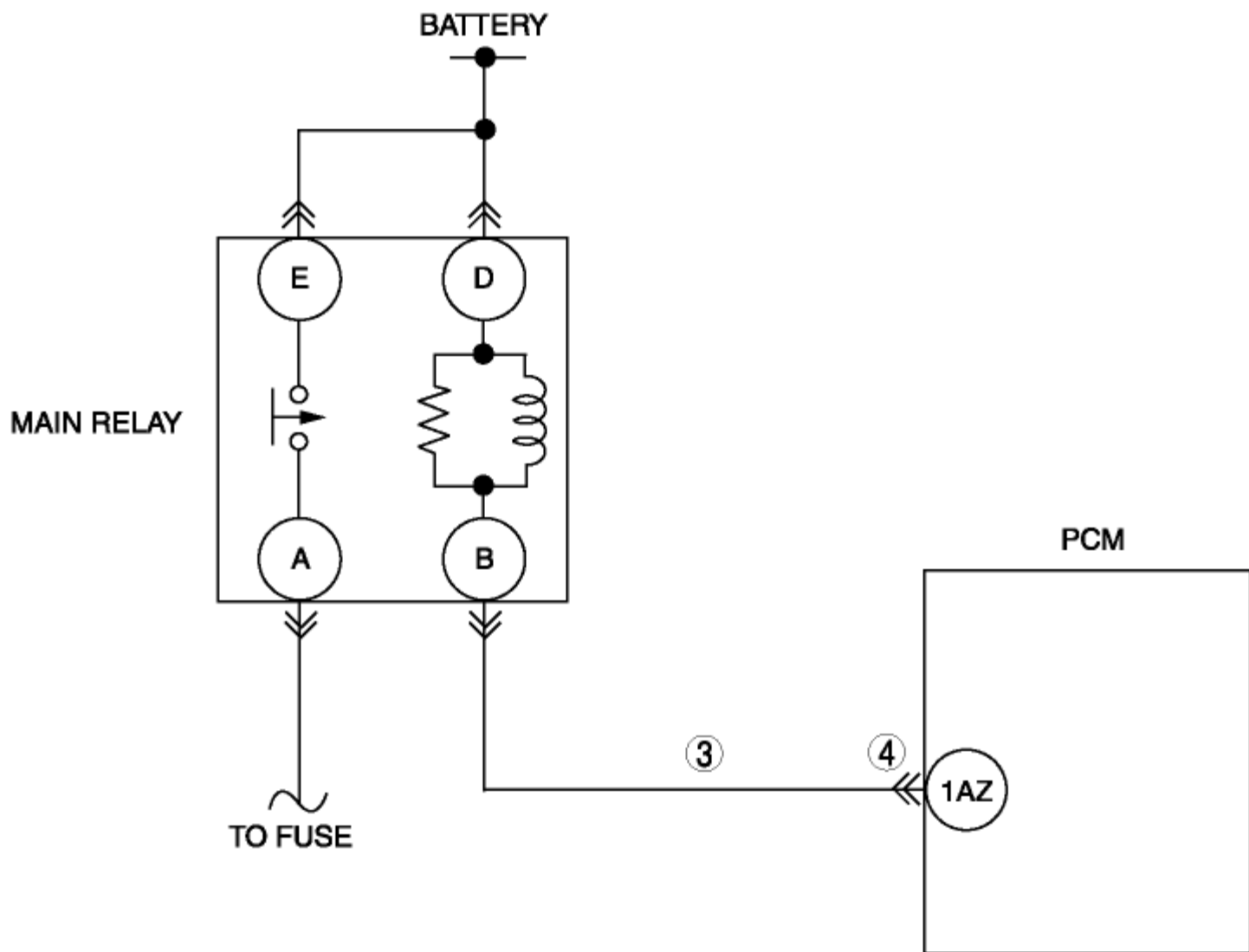
STEP	INSPECTION	ACTION	
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has FREEZE FRAME DATA been recorded?	Yes	Go to the next step.
		No	Record FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line repair information availability. - Is any related Service Bulletins available?	Yes	Perform repair or diagnosis according to the available Service Bulletins. If the vehicle is not repaired, go to the next step.
		No	Go to the next step.
3	INSPECT MAIN RELAY NO.1 CONTROL CIRCUIT FOR SHORT TO GROUND - Switch the ignition off. - Inspect for continuity between main relay terminal B (wiring harness-side) and body ground. - Is there continuity?	Yes	Repair or replace suspected part, then go to Step 5.
		No	Go to the next step.
4	INSPECT FOR CORRECT PCM OPERATION - Disconnect all the PCM connectors. - Visually inspect for: - Pushed out pins - Corrosion - Connect all the PCM connectors and verify that they seat correctly. - Retrieve DTCs using the M-MDS. - Is the PENDING CODE for this DTC present?	Yes	Go to the next step.
		No	The system is correctly. Go to the next step.
5	VERIFY TROUBLESHOOTING OF DTC P0685:00 HAS BEEN COMPLETED Verify that all disconnected connectors	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM.

	reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6].) • Is the PENDING CODE for the DTC present?		(See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6].) Go to the next step.
		No	Go to the next step.
6	VERI FY AFTER REPAI R PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAI R PROCEDURE [MZI 3.7 V6].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection.
		No	Troubleshooting completed.

2012 - Mazda6 - Engine

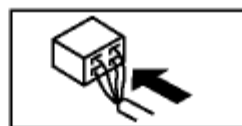
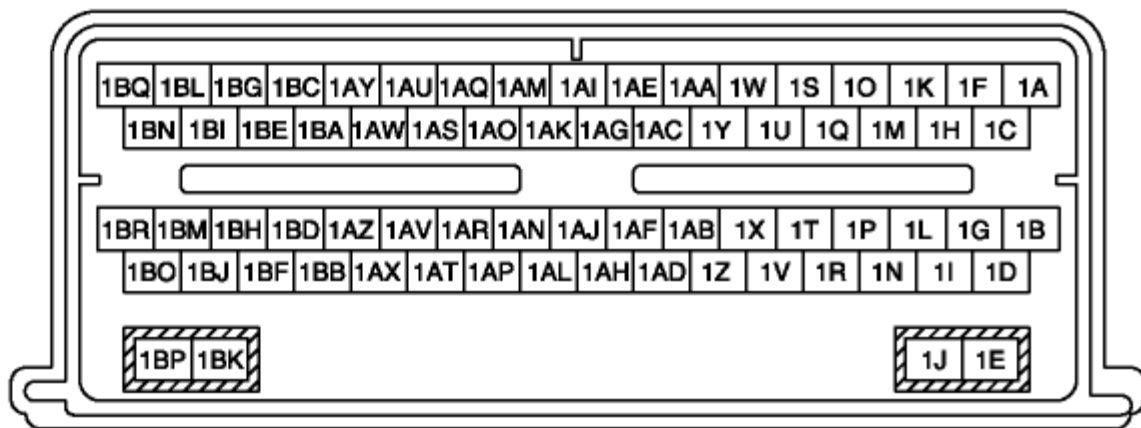
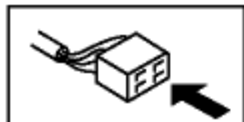
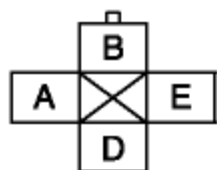
DTC P0685:00 [MZI 3.7 V6]

DTC P0685:00	ECM/PCM power relay control circuit/open
DETECTION CONDITION	• This DTC sets when the ignition switch position run circuit indicates the key is in the off, ACC, or LOCK position, and the amount of time the PCM remains powered through the PCM power relay exceeds a predetermined amount of time.
POSSIBLE CAUSE	• Short to ground circuit between main relay terminal B and PCM terminal 1AZ • Main relay malfunction • PCM malfunction



**PCM
WIRING HARNESS-SIDE CONNECTOR**

MAIN RELAY



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 FREEZE FRAME DATA on the repair order, then go to the next step.
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		No	The system is correctly. Go to the next step.
5	VERIFY TROUBLESHOOTING OF DTC P0685:00 HAS BEEN COMPLETED Verify that all disconnected connectors	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the PCM.

	reconnected. • Clear the DTC from the PCM memory using the M-MDS. • Perform the KOEO or KOER self-test. (See KOEO/ KOER SELF TEST [MZI 3.7 V6].) • Is the PENDING CODE for the DTC present?		(See PCM REMOVAL/ INSTALLATION [MZI 3.7 V6].) Go to the next step.
		No	Go to the next step.
6	VERI FY AFTER REPAI R PROCEDURE • Perform the "AFTER REPAIR PROCEDURE". (See AFTER REPAI R PROCEDURE [MZI 3.7 V6].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection.
		No	Troubleshooting completed.