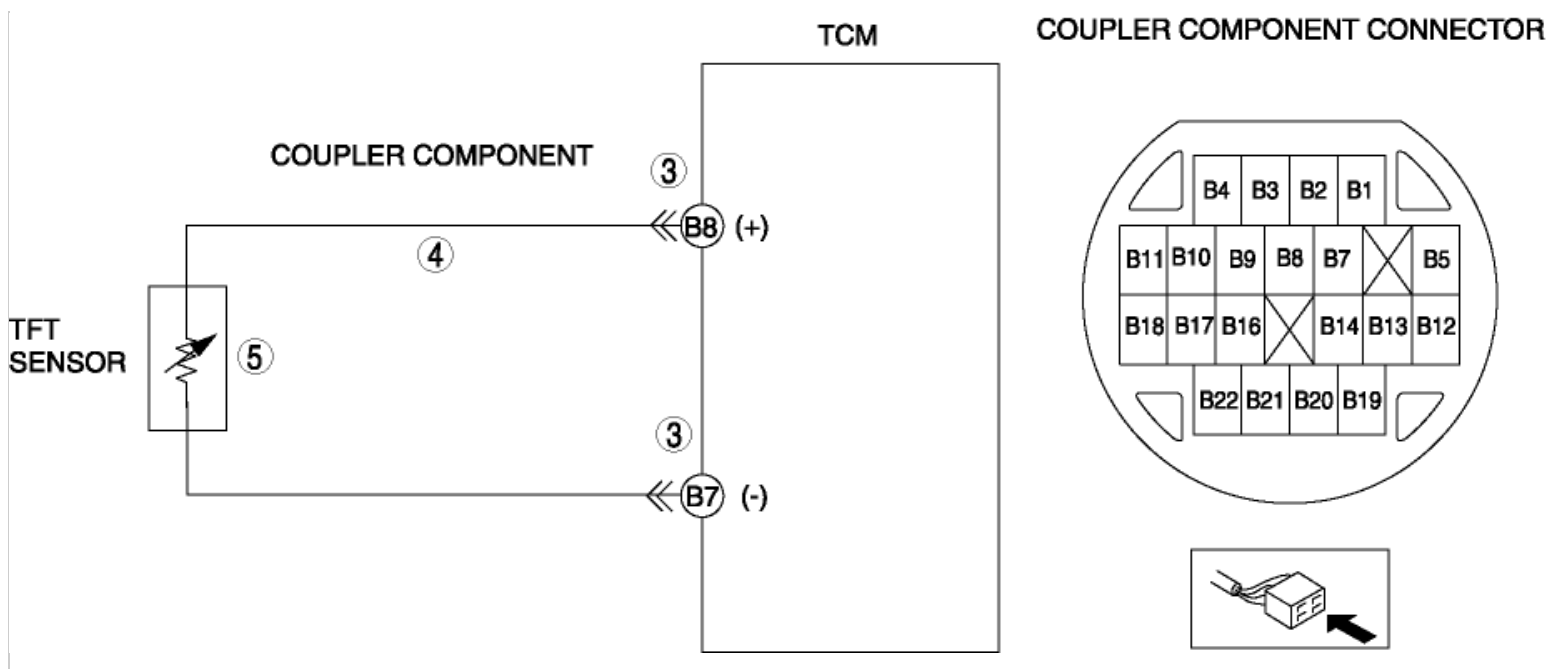


2012 - Mazda6 - Transmission/ Transaxle

DTC P0712:00 [AY6A-EL]

DTC P0712:00	TFT sensor circuit low
DETECTION CONDITION	• Conditions: TCM communication normal • Circumstances: ATF temperature of 200 °C {392 °F} or above detected • Time period: Determined after 6 times lasting 10 or more seconds Diagnostic support note: • The MIL illuminates if the TCM detects the above malfunction condition during the first drive cycle. • The AT warning light illuminates. • PENDING CODE is not available. • FREEZE FRAME DATA is available. • The DTC is stored in the TCM memory.
FAIL-SAFE FUNCTION	• Inhibits learning control • Inhibits slip control • Fixes ATF temperature value at 80 °C {176 °F}
POSSIBLE CAUSE	• Coupler component connector or terminal malfunction • Short to GND in wiring harness between TFT sensor and TCM terminal B8 • TFT sensor malfunction • TCM malfunction



Diagnostic procedure

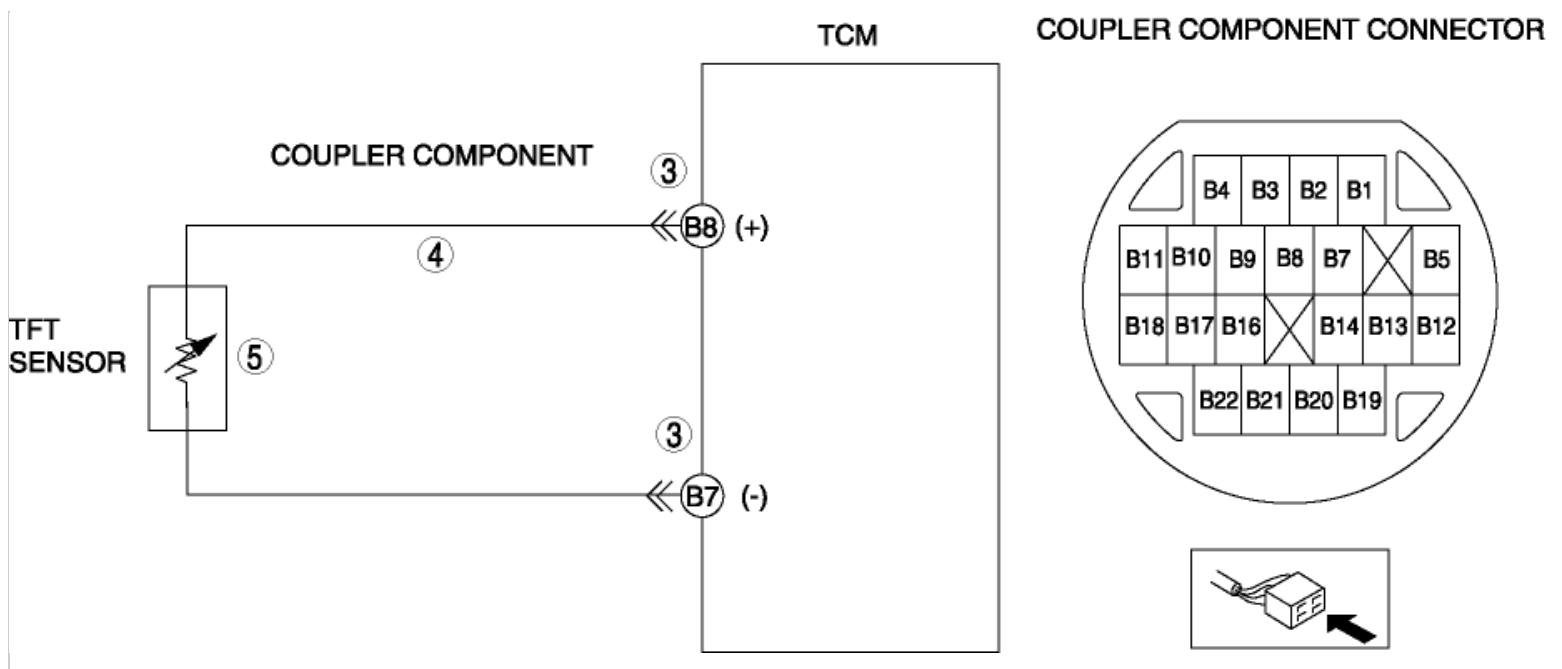
STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA been recorded on the repair order?	Yes Go to the next step.
		No Record the FREEZE FRAME DATA on the repair order, then go to the next step.
2	VERIFY RELATED REPAIR INFORMATION AVAILABILITY - Verify related Service Bulletins and/or on-line 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 COUPLER COMPONENT CONNECTOR FOR POOR CONNECTION - Switch the ignition OFF (LOCK). - Remove the TCM. (See TCM REMOVAL/ INSTALLATION [AY6A-EL] .) - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal, then go to Step 6.
		No Go to the next step.
4	INSPECT TFT SENSOR SIGNAL CIRCUIT FOR SHORT TO GND - Switch the ignition OFF (LOCK). - Inspect for continuity between coupler component terminal B8 and body GND. - Is there continuity?	Yes Repair or replace the wiring harness for a possible short to GND, then go to Step 6.
		No Go to the next step.
5	INSPECT TFT SENSOR	Yes Replace the TFT sensor, then go to the next step.

	- Inspect the TFT sensor. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR INSPECTION [AY6A-EL].) - Is there any malfunction?	(See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/ INSTALLATION [AY6A-EL].) No Go to the next step.
6	VERIFY DTC TROUBLESHOOTING COMPLETED - Make sure to reconnect all the disconnected connectors. - Clear the DTC using the M-MDS. - Perform the following procedure to ensure that the DTC has been resolved: - Start the engine. - Warm up the engine to normal operating temperature. - Drive the vehicle in D position for 150 s or more. - Is the same DTC present?	Yes Replace the TCM, then go to the next step. (See TCM REMOVAL/ INSTALLATION [AY6A-EL].) No Go to the next step.
7	VERIFY NO DTCs ARE PRESENT - Perform the "Reading DTCs Procedure". (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [AY6A-EL].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [AY6A-EL].) No DTC troubleshooting completed.

2012 - Mazda6 - Transmission/ Transaxle

DTC P0712:00 [AY6A-EL]

DTC P0712:00	TFT sensor circuit low
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FAIL-SAFE FUNCTION	• Inhibits learning control • Inhibits slip control • Fixes ATF temperature value at 80 °C {176 °F}
POSSIBLE CAUSE	• Coupler component connector or terminal malfunction • Short to GND in wiring harness between TFT sensor and TCM terminal B8 • TFT sensor malfunction • TCM malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY FREEZE FRAME DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA been recorded on the repair order?	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 Bulletins and/or on-line 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 COUPLER COMPONENT CONNECTOR FOR POOR CONNECTION - Switch the ignition OFF (LOCK). - Remove the TCM. (See TCM REMOVAL/ INSTALLATION [AY6A-EL] .) - Inspect for poor connection (such as damaged/pulled-out pins, corrosion). - Is there any malfunction?	Yes Repair or replace the terminal, then go to Step 6.
		No Go to the next step.
4	INSPECT TFT SENSOR SIGNAL CIRCUIT FOR SHORT TO GND - Switch the ignition OFF (LOCK). - Inspect for continuity between coupler component terminal B8 and body GND. - Is there continuity?	Yes Repair or replace the wiring harness for a possible short to GND, then go to Step 6.
		No Go to the next step.
5	INSPECT TFT SENSOR	Yes Replace the TFT sensor, then go to the next step.

	- Inspect the TFT sensor. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR INSPECTION [AY6A-EL].) - Is there any malfunction?	(See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/ INSTALLATION [AY6A-EL].) No Go to the next step.
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7	VERIFY NO DTCs ARE PRESENT - Perform the "Reading DTCs Procedure". (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [AY6A-EL].) - Are any DTCs present?	Yes Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [AY6A-EL].) No DTC troubleshooting completed.