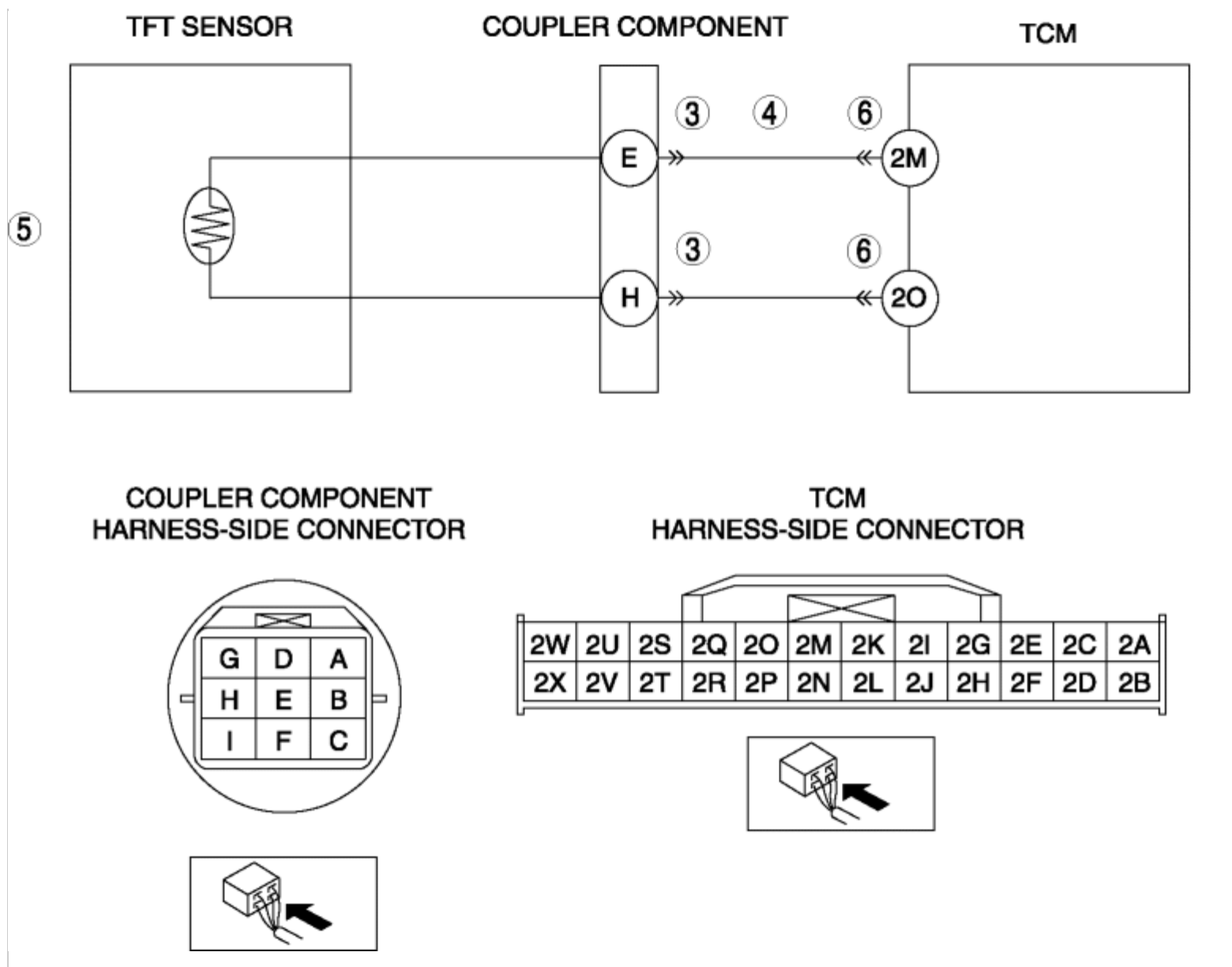


2012 - Mazda6 - Transmission/ Transaxle

DTC P0712:00 [FS5A-EL]

DTC P0712:00	TFT sensor circuit low input
DETECTION CONDITION	• The TCM detects that input voltage from the TFT sensor is 0.12 V or less for 150 s. 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 available. • FREEZE FRAME DATA is available. • The DTC is stored in the TCM memory.
POSSIBLE CAUSE	• Coupler component connector or terminal malfunction • Short to GND in wiring harness between TFT sensor and TCM terminal 2M • TFT sensor malfunction • TCM connector or terminal 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.

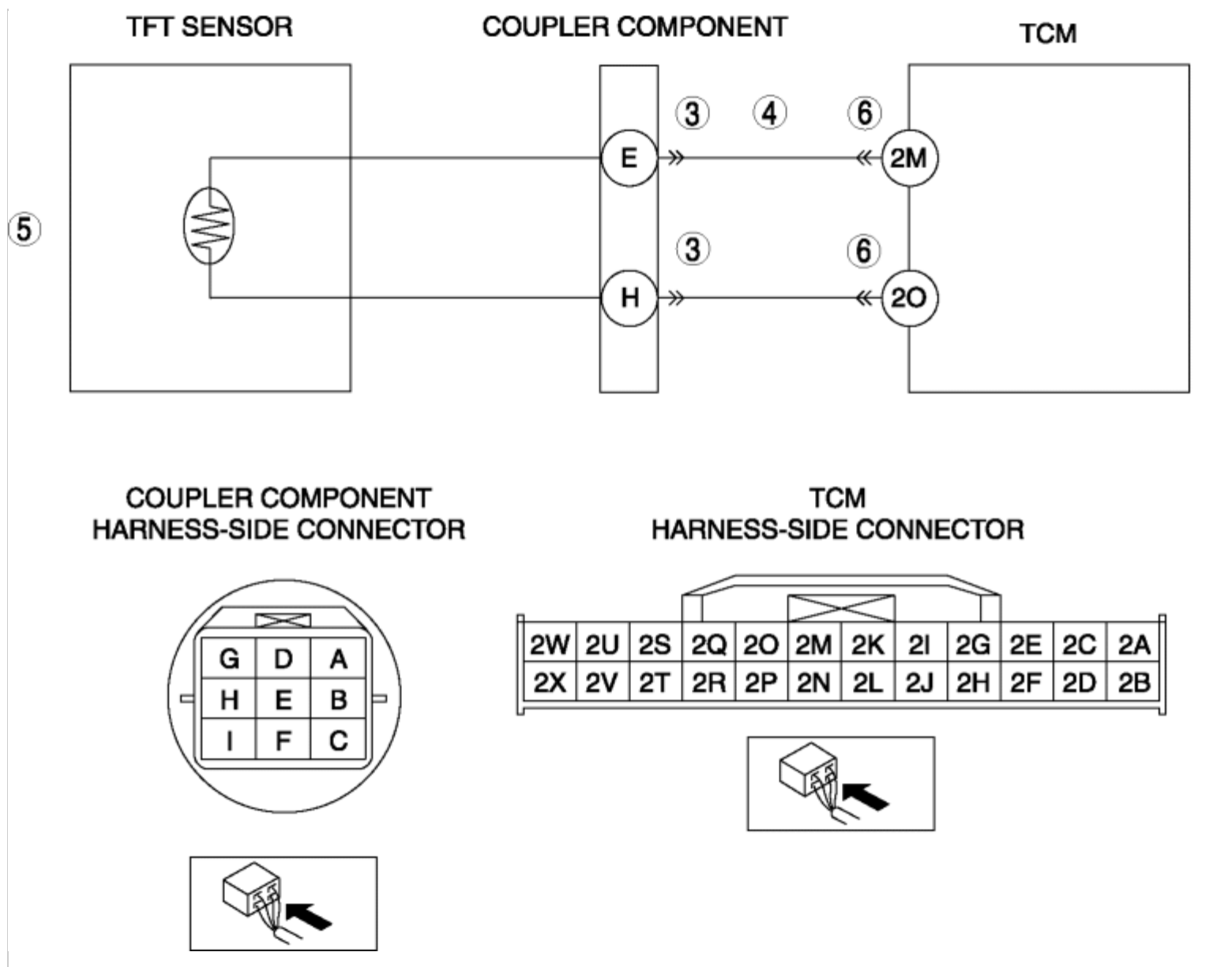
3	INSPECT COUPLER COMPONENT CONNECTOR FOR POOR CONNECTION • Switch the ignition off. • Disconnect the coupler component connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion) • Is there any malfunction?	Yes	Repair or replace the terminal, then go to Step 7.
		No	Go to the next step.
4	INSPECT TFT SENSOR SIGNAL CIRCUIT FOR SHORT TO GND • Switch the ignition off. • Inspect for continuity between coupler component terminal E (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 7.
		No	Go to the next step.
5	INSPECT TFT SENSOR • Inspect the TFT sensor. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR INSPECTION [FS5A-EL].) • Is there any malfunction?	Yes	Replace the coupler component, then go to Step 7. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
6	INSPECT TCM CONNECTOR FOR POOR CONNECTION • Switch the ignition off. • Disconnect the TCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion) • Is there any malfunction?	Yes	Repair or replace the terminal, then go to the next step.
		No	Go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P0712:00 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. ◦ Idle the engine for 150 s or more.	Yes	Replace the TCM, then go to the next step. (See TCM REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.

	• Is the same DTC present?		
8	VERIFY NO DTCs ARE PRESENT • Perform the “Reading DTCs Procedure”. (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FS5A-EL].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [FS5A-EL] .)
		No	DTC troubleshooting completed.

2012 - Mazda6 - Transmission/ Transaxle

DTC P0712:00 [FS5A-EL]

DTC P0712:00	TFT sensor circuit low input
DETECTION CONDITION	• The TCM detects that input voltage from the TFT sensor is 0.12 V or less for 150 s. 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 available. • FREEZE FRAME DATA is available. • The DTC is stored in the TCM memory.
POSSIBLE CAUSE	• Coupler component connector or terminal malfunction • Short to GND in wiring harness between TFT sensor and TCM terminal 2M • TFT sensor malfunction • TCM connector or terminal 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. • Disconnect the coupler component connector. • 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 7.
		No	Go to the next step.
4	INSPECT TFT SENSOR SIGNAL CIRCUIT FOR SHORT TO GND • Switch the ignition off. • Inspect for continuity between coupler component terminal E (wiring harness-side) and body GND. • Is there continuity?	Yes	Repair or replace the wiring harness for a possible short to GND, then go to Step 7.
		No	Go to the next step.
5	INSPECT TFT SENSOR • Inspect the TFT sensor. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR INSPECTION [FS5A-EL].) • Is there any malfunction?	Yes	Replace the coupler component, then go to Step 7. (See TRANSAXLE FLUID TEMPERATURE (TFT) SENSOR REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
6	INSPECT TCM CONNECTOR FOR POOR CONNECTION • Switch the ignition off. • Disconnect the TCM connector. • Inspect for poor connection (such as damaged/pulled-out pins, corrosion) • Is there any malfunction?	Yes	Repair or replace the terminal, then go to the next step.
		No	Go to the next step.
7	VERIFY TROUBLESHOOTING OF DTC P0712:00 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. ◦ Idle the engine for 150 s or more.	Yes	Replace the TCM, then go to the next step. (See TCM REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.

	• Is the same DTC present?		
8	VERIFY NO DTCs ARE PRESENT • Perform the "Reading DTCs Procedure". (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FS5A-EL].) • Are any DTCs present?	Yes	Go to the applicable DTC inspection. (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [FS5A-EL] .)
		No	DTC troubleshooting completed.