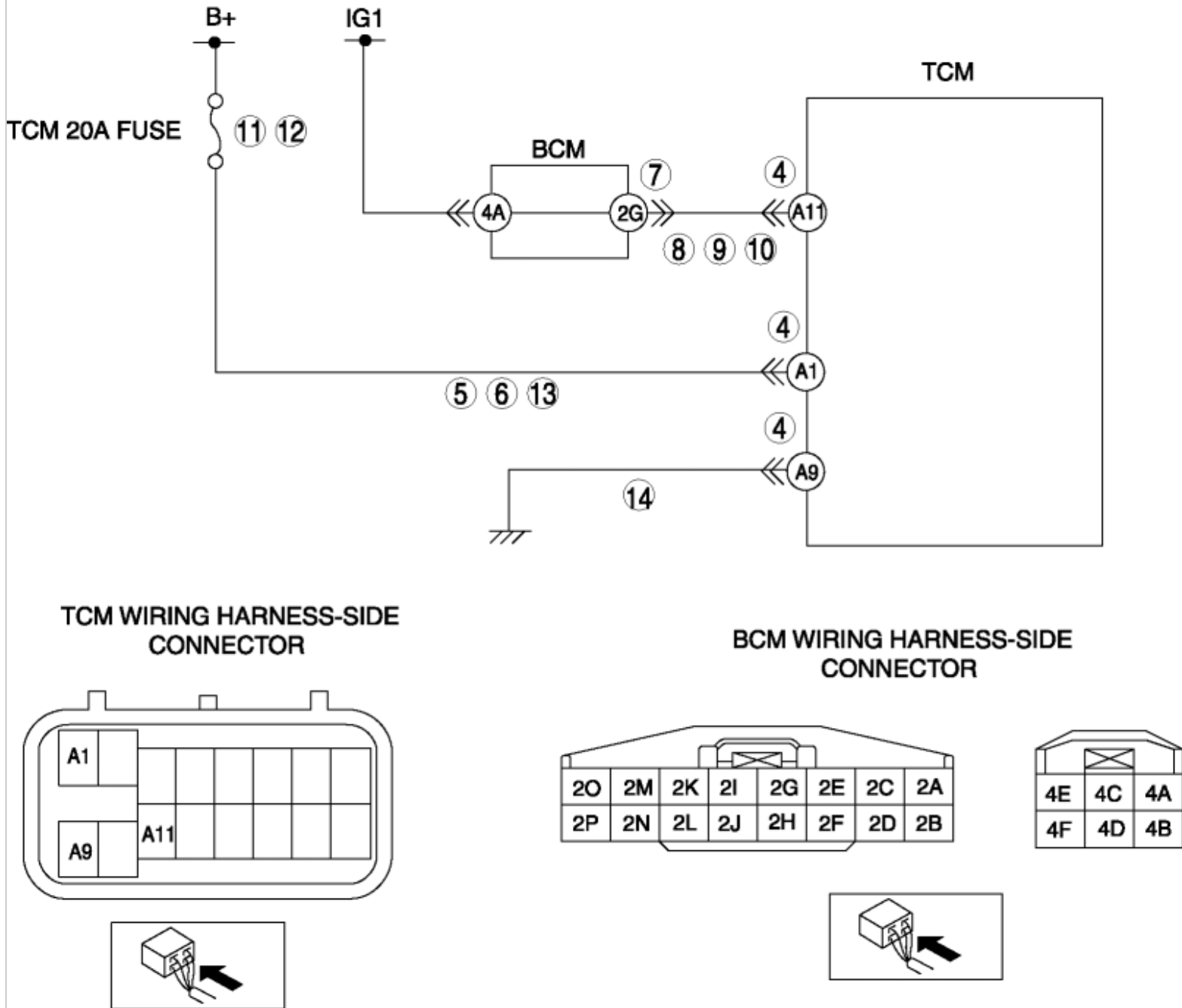


2012 - Mazda6 - Transmission/ Transaxle

DTC P0882:00 [AY6A-EL]

DTC P0882:00	TCM B+ low
DETECTION CONDITION	• Conditions: Engine idling and TCM communication normal • Circumstances: Ignition terminal voltage under 9V detected • Time period: Determined after 20 times lasting 1 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	• Emergency mode 5
POSSI BLE CAUSE	• BCM malfunction • TCM connector or terminal malfunction • Short to GND in wiring harness between BCM terminal 2G and TCM terminal A11 • BCM connector or terminal malfunction • Open circuit in wiring harness between BCM terminal 2G and TCM terminal A11 • Short to GND in wiring harness between battery positive terminal and TCM terminal A1 • Melt down TCM 20A fuse • TCM 20A fuse connector or terminal malfunction • Open circuit in wiring harness between battery positive terminal and TCM terminal A1 • Open circuit in wiring harness between TCM terminal A9 and body GND

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	Yes Perform repair or diagnosis according

	• Verify related Service Bulletins and/or on-line repair information availability. • Is any related repair information available?	to the available repair information. • If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	VERIFY DTC IS PRESENT • Switch the ignition OFF (LOCK), then switch it ON (Engine off). • Read the DTC in the BCM. • Is the DTC U3003:16 output?	Yes Perform the "DTC U3003:16 Troubleshooting". (See DTC U3003:16/ U3003:17 [BCM].)
		No Go to the next step.
4	INSPECT TCM CONNECTOR FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • 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 Step 15.
		No Go to the next step.
5	INSPECT B+ CIRCUIT • Disconnect the TCM connector. • Switch the ignition ON (Engine off). • Measure the voltage between the TCM terminal A1 (wiring harness-side) and body GND. • Is the voltage B+?	Yes Go to go to Step 9.
		No Go to the next step.
6	INSPECT B+ CIRCUIT FOR SHORT TO GND • Switch the ignition OFF (LOCK). • Disconnect both battery cables. • Inspect for continuity between TCM terminal A1 (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 15.
		No Go to the next step.
7	INSPECT BCM CONNECTOR FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • Disconnect the BCM 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 15.
		No Go to the next step.
8	INSPECT IG1 CIRCUIT FOR OPEN CIRCUIT	Yes Go to the next step.

	• Switch the ignition OFF (LOCK). • Inspect for continuity between BCM terminal 2G (wiring harness-side) and TCM terminal A11 (wiring harness-side). • Is there continuity?			No	Repair or replace the wiring harness for a possible open circuit, then go to Step 15.
9	INSPECT IG1 CIRCUIT • Disconnect the TCM connector. • Switch the ignition ON (Engine off). • Measure the voltage between the TCM terminal A11 (wiring harness-side) and body GND. • Is the voltage B+?			Yes	Go to go to Step 14.
				No	Go to the next step.
10	INSPECT IG1 CIRCUIT FOR SHORT TO GND • Switch the ignition OFF (LOCK). • Disconnect both battery cables. • Inspect for continuity between TCM terminal A11 (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 15.
				No	Go to the next step.
11	INSPECT TCM 20A FUSE • Switch the ignition OFF (LOCK). • Inspect the TCM 20A fuse for proper installation and failure. • Is it normal?			Yes	Go to the next step.
				No	• If the fuse is not installed correctly, install it correctly, then go to Step 15. • If fuse has been melted, replace it, then go to Step 15.
12	INSPECT TCM 20A FUSE TERMINAL FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • Inspect for poor connection (such as damaged, corrosion) • Is there any malfunction?			Yes	Repair or replace the terminal, then go to Step 15.
				No	Go to the next step.
13	INSPECT B+ CIRCUIT FOR OPEN CIRCUIT • Switch the ignition OFF (LOCK). • Inspect for continuity between battery positive terminal (wiring harness-side) and TCM terminal A1 (wiring harness-side). • Is there continuity?			Yes	Go to the next step.
				No	Repair or replace the wiring harness for a possible open circuit, then go to Step 15.

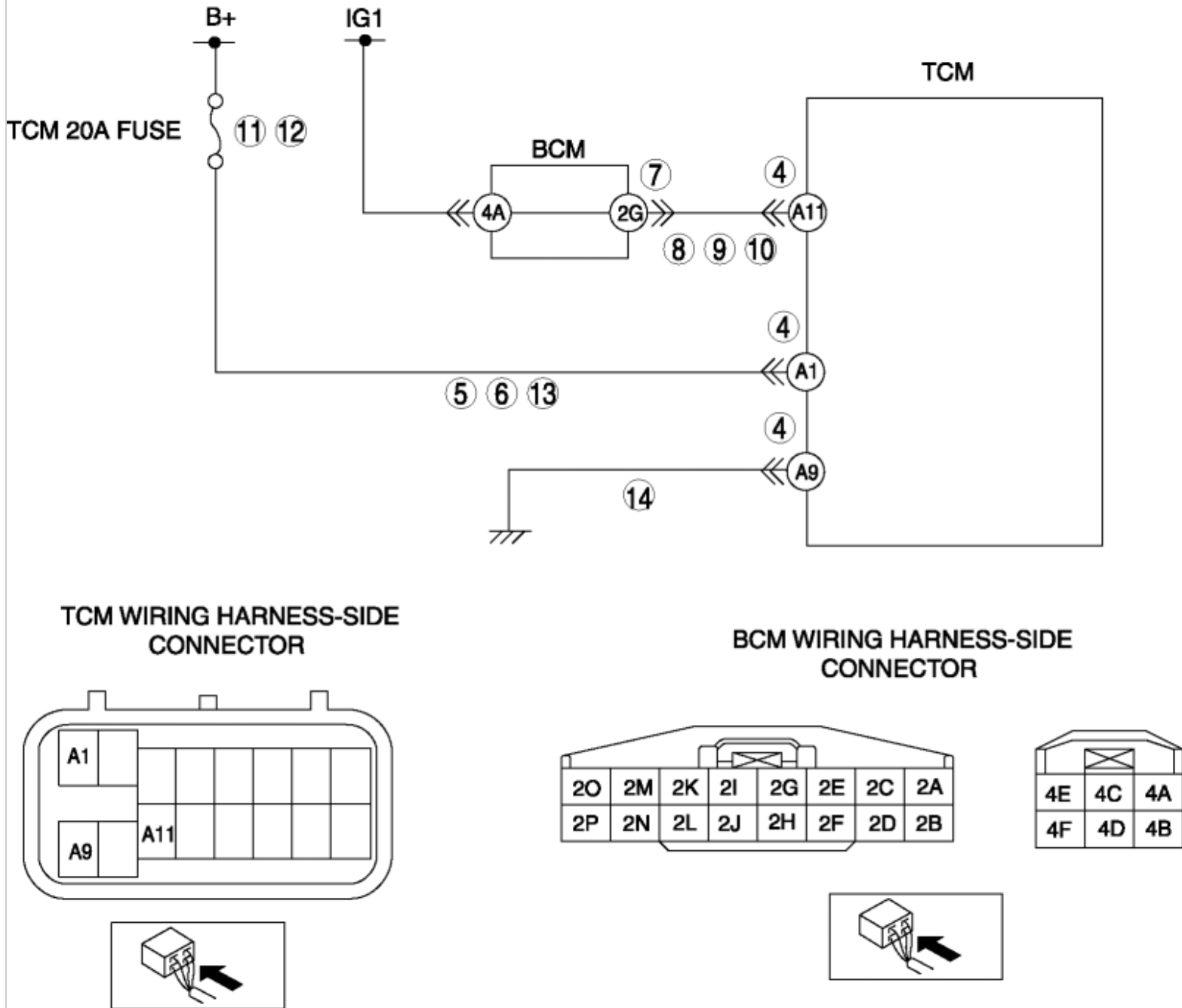
14	INSPECT GND CIRCUIT FOR OPEN CIRCUIT • Switch the ignition OFF (LOCK). • Inspect for continuity between TCM terminal A9 (wiring harness-side) and body GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
15	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 and transaxle. ◦ Drive the vehicle in D position and make sure that the gears shift smoothly from 1GR to 6GR. • 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.
16	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 P0882:00 [AY6A-EL]

DTC P0882:00	TCM B+ low
DETECTION CONDITION	• Conditions: Engine idling and TCM communication normal • Circumstances: Ignition terminal voltage under 9V detected • Time period: Determined after 20 times lasting 1 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	• Emergency mode 5
POSSIBLE CAUSE	• BCM malfunction • TCM connector or terminal malfunction • Short to GND in wiring harness between BCM terminal 2G and TCM terminal A11 • BCM connector or terminal malfunction • Open circuit in wiring harness between BCM terminal 2G and TCM terminal A11 • Short to GND in wiring harness between battery positive terminal and TCM terminal A1 • Melt down TCM 20A fuse • TCM 20A fuse connector or terminal malfunction • Open circuit in wiring harness between battery positive terminal and TCM terminal A1 • Open circuit in wiring harness between TCM terminal A9 and body GND

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	Yes Perform repair or diagnosis according

	• Verify related Service Bulletins and/or on-line repair information availability. • Is any related repair information available?	to the available repair information. • If the vehicle is not repaired, go to the next step.
		No Go to the next step.
3	VERIFY DTC IS PRESENT • Switch the ignition OFF (LOCK), then switch it ON (Engine off). • Read the DTC in the BCM. • Is the DTC U3003:16 output?	Yes Perform the "DTC U3003:16 Troubleshooting". (See DTC U3003:16/ U3003:17 [BCM].)
		No Go to the next step.
4	INSPECT TCM CONNECTOR FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • 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 Step 15.
		No Go to the next step.
5	INSPECT B+ CIRCUIT • Disconnect the TCM connector. • Switch the ignition ON (Engine off). • Measure the voltage between the TCM terminal A1 (wiring harness-side) and body GND. • Is the voltage B+?	Yes Go to go to Step 9.
		No Go to the next step.
6	INSPECT B+ CIRCUIT FOR SHORT TO GND • Switch the ignition OFF (LOCK). • Disconnect both battery cables. • Inspect for continuity between TCM terminal A1 (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 15.
		No Go to the next step.
7	INSPECT BCM CONNECTOR FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • Disconnect the BCM 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 15.
		No Go to the next step.
8	INSPECT IG1 CIRCUIT FOR OPEN CIRCUIT	Yes Go to the next step.

	• Switch the ignition OFF (LOCK). • Inspect for continuity between BCM terminal 2G (wiring harness-side) and TCM terminal A11 (wiring harness-side). • Is there continuity?		No	Repair or replace the wiring harness for a possible open circuit, then go to Step 15.
9	INSPECT IG1 CIRCUIT • Disconnect the TCM connector. • Switch the ignition ON (Engine off). • Measure the voltage between the TCM terminal A11 (wiring harness-side) and body GND. • Is the voltage B+?		Yes	Go to go to Step 14.
			No	Go to the next step.
10	INSPECT IG1 CIRCUIT FOR SHORT TO GND • Switch the ignition OFF (LOCK). • Disconnect both battery cables. • Inspect for continuity between TCM terminal A11 (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 15.
			No	Go to the next step.
11	INSPECT TCM 20A FUSE • Switch the ignition OFF (LOCK). • Inspect the TCM 20A fuse for proper installation and failure. • Is it normal?		Yes	Go to the next step.
			No	• If the fuse is not installed correctly, install it correctly, then go to Step 15. • If fuse has been melted, replace it, then go to Step 15.
12	INSPECT TCM 20A FUSE TERMINAL FOR POOR CONNECTION • Switch the ignition OFF (LOCK). • Inspect for poor connection (such as damaged, corrosion) • Is there any malfunction?		Yes	Repair or replace the terminal, then go to Step 15.
			No	Go to the next step.
13	INSPECT B+ CIRCUIT FOR OPEN CIRCUIT • Switch the ignition OFF (LOCK). • Inspect for continuity between battery positive terminal (wiring harness-side) and TCM terminal A1 (wiring harness-side). • Is there continuity?		Yes	Go to the next step.
			No	Repair or replace the wiring harness for a possible open circuit, then go to Step 15.

14	INSPECT GND CIRCUIT FOR OPEN CIRCUIT • Switch the ignition OFF (LOCK). • Inspect for continuity between TCM terminal A9 (wiring harness-side) and body GND. • Is there continuity?	Yes	Go to the next step.
		No	Repair or replace the wiring harness for a possible open circuit, then go to the next step.
15	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 and transaxle. ◦ Drive the vehicle in D position and make sure that the gears shift smoothly from 1GR to 6GR. • 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.
16	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.