

2012 - Mazda6 - Transmission/ Transaxle

DTC P0751:00 [FS5A-EL]

DTC P0751:00	Shift solenoid A stuck off
DETECTION CONDITION	- The TCM detects that revolution ratio of the input revolution to output revolution is between 0.91—1.09 when the following conditions are met. 4GR - Vehicle speed: 46 km/h {29 mph} or more - TCC operation: Off Diagnostic support note - The MIL illuminates if the TCM 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 TCM. - The AT warning light illuminates. - PENDING CODE is available. - FREEZE FRAME DATA is available. - The DTC is stored in the TCM memory.
POSSIBLE CAUSE	- Deteriorated ATF - ATF level low - Shift solenoid A malfunction - Line pressure malfunction - Primary control valve body malfunction - TCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERI FY FREEZE FRAME DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA been	YesGo to the next step.

	recorded on the repair order?	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 ATF CONDITION - Inspect the ATF condition. (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION [FS5A-EL].) - Is it normal?	Yes	Go to the next step.
		No	Replace the ATF, then go to Step 8. (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FS5A-EL] .)
4	INSPECT ATF LEVEL - Inspect the ATF level. (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION [FS5A-EL].) - Is it normal?	Yes	Go to the next step.
		No	Add ATF to the specified level, then go to Step 8. (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FS5A-EL] .)
5	INSPECT SHIFT SOLENOID A - Inspect the shift solenoid A. (See SOLENOID VALVE INSPECTION [FS5A-EL].) - Is there any malfunction?	Yes	Replace the shift solenoid A, then go to Step 8. (See SOLENOID VALVE REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
6	INSPECT LINE PRESSURE - Perform the "Line Pressures Test". (See MECHANICAL SYSTEM TEST [FS5A-EL].) - Is there any malfunction?	Yes	Repair or replace malfunctioning part according to test result, then go to Step 8.
		No	Go to the next step.
7	INSPECT PRIMARY CONTROL VALVE BODY - Remove the primary control valve body. (See CONTROL VALVE BODY REMOVAL/ INSTALLATION [FS5A-EL].) - Disassemble the primary control valve body.	Yes	Repair or replace malfunctioning part according to inspection result, then go to next step.
		No	Replace the transaxle, then go to the next step. (See AUTOMATIC TRANSAXLE

	• Inspect the following parts: ▪ Shift valve ▪ Return spring ▪ Hydraulic passage • Is there any malfunction?		REMOVAL/ INSTALLATION [FS5A-EL] .)
8	VERIFY TROUBLESHOOTING OF DTC P0751:00 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: ◦ Drive the vehicle under the following conditions. ▪ 4GR ▪ Vehicle speed: 46 km/h {29 mph} or more ▪ TCC operation: Off • Is the PENDING CODE same as the DTC present?	Yes	Replace the TCM, then go to the next step. (See TCM REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
9	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.

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POSSIBLE CAUSE	- Deteriorated ATF - ATF level low - Shift solenoid A malfunction - Line pressure malfunction - Primary control valve body malfunction - TCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERI FY FREEZE FRAME DATA HAS BEEN RECORDED Has the FREEZE FRAME DATA been	YesGo to the next step.

	recorded on the repair order?	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 ATF CONDITION - Inspect the ATF condition. (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION [FS5A-EL].) - Is it normal?	Yes	Go to the next step.
		No	Replace the ATF, then go to Step 8. (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FS5A-EL] .)
4	INSPECT ATF LEVEL - Inspect the ATF level. (See AUTOMATIC TRANSAXLE FLUID (ATF) INSPECTION [FS5A-EL].) - Is it normal?	Yes	Go to the next step.
		No	Add ATF to the specified level, then go to Step 8. (See AUTOMATIC TRANSAXLE FLUID (ATF) REPLACEMENT [FS5A-EL] .)
5	INSPECT SHIFT SOLENOID A - Inspect the shift solenoid A. (See SOLENOID VALVE INSPECTION [FS5A-EL].) - Is there any malfunction?	Yes	Replace the shift solenoid A, then go to Step 8. (See SOLENOID VALVE REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
6	INSPECT LINE PRESSURE - Perform the "Line Pressures Test". (See MECHANICAL SYSTEM TEST [FS5A-EL].) - Is there any malfunction?	Yes	Repair or replace malfunctioning part according to test result, then go to Step 8.
		No	Go to the next step.
7	INSPECT PRIMARY CONTROL VALVE BODY - Remove the primary control valve body. (See CONTROL VALVE BODY REMOVAL/ INSTALLATION [FS5A-EL].) - Disassemble the primary control valve body.	Yes	Repair or replace malfunctioning part according to inspection result, then go to next step.
		No	Replace the transaxle, then go to the next step. (See AUTOMATIC TRANSAXLE

	- Inspect the following parts: - Shift valve - Return spring - Hydraulic passage - Is there any malfunction?		REMOVAL/ INSTALLATION [FS5A-EL] .)
8	VERIFY TROUBLESHOOTING OF DTC P0751:00 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: - Drive the vehicle under the following conditions. 4GR - Vehicle speed: 46 km/h {29 mph} or more - TCC operation: Off - Is the PENDING CODE same as the DTC present?	Yes	Replace the TCM, then go to the next step. (See TCM REMOVAL/ INSTALLATION [FS5A-EL] .)
		No	Go to the next step.
9	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.