

2012 - Mazda6 - Transmission/ Transaxle

NO.1 VEHICLE DOES NOT MOVE IN D OR IN R POSITION [AY6A-EL]

1	Vehicle does not move in D or in R position
DESCRIPTION	Vehicle does not move when accelerator pedal is depressed.
POSSIBLE CAUSE	- If the vehicle does not move in D or R position, basically, the malfunction is in the ATX. (Vehicle will move even with a malfunction in the TCM.) Since a malfunction is in the sensor circuit or output circuit is the cause of the malfunction in the ATX, inspect the sensors, output circuit, and the related wiring harnesses. - Clutch slippage, worn (D position-C1 clutch, One-way clutch, R position-C3 clutch, B2 brake) - Line pressure low - Shift solenoid A malfunction - Shift solenoid B malfunction - Shift solenoid C malfunction - Shift solenoid E malfunction - Line pressure control solenoid malfunction - Shift solenoid F malfunction - Sensor ground malfunction - Body ground malfunction - Control valve body malfunction - Selector lever malfunction - Parking mechanism not operating properly - Torque converter malfunction - Coupler component malfunction - N position learning is not performed
	NOTE: Before following the troubleshooting steps, make sure that the Automatic

Transaxle On-Board Diagnostic and Automatic Transaxle Basic Inspection are conducted. (See [BASIC INSPECTION \[AY6A-EL\]](#) .)

Diagnostic procedure

STEP	INSPECTION	ACTION
1	INSPECT PARKING MECHANISM FOR MALFUNCTION When the vehicle is stopped on a flat, level road and the engine off, does the vehicle move when pushed? (in D or N, R positions with the brake pedal released)	Yes Go to the next step.
		No Inspect for parking mechanism.
2	INSPECT SELECTOR LEVER AND SELECTOR CABLE ADJUSTMENT FOR MALFUNCTION - Start the engine. - Does vehicle move when selector lever in between N position and D position?	Yes Inspect or adjust selector lever and cable. (See SELECTOR LEVER INSPECTION .) (See AUTOMATIC TRANSAXLE SHIFT MECHANISM REMOVAL/ INSTALLATION .) Perform N position learning. (See TCM NEUTRAL POSITION LEARNING [AY6A-EL] .)
		No Go to the next step.
3	INSPECT SHIFT SOLENOIDS FOR MALFUNCTION - Stop the engine. - Inspect following solenoid. - Shift solenoid A (See SHIFT SOLENOID A INSPECTION [AY6A-EL] .) - Shift solenoid B (See SHIFT SOLENOID B INSPECTION [AY6A-EL] .) - Shift solenoid C (See SHIFT SOLENOID C INSPECTION [AY6A-EL] .) - Shift solenoid E (See SHIFT SOLENOID E INSPECTION .)	Yes Go to the next step.
		No Inspect the coupler component. If normal, replace the control valve body. (See CONTROL VALVE BODY REMOVAL/ INSTALLATION [AY6A-EL] .)

	[AY6A-EL] .) ▪ Shift solenoid F (See SHIFT SOLENOID F INSPECTION [AY6A-EL] .) ▪ Line pressure control solenoid (See LINE PRESSURE CONTROL SOLENOID INSPECTION [AY6A-EL] .) • Are these normal?		
4	VERIFY IF MALFUNCTION CAUSE IS TORQUE CONVERTER OR TRANSAXLE • Perform the stall test. (See MECHANICAL SYSTEM TEST [AY6A-EL] .) • Is the stall speed within the specified?	Yes Replace the transaxle. (See AUTOMATIC TRANSAXLE REMOVAL/ INSTALLATION [AY6A-EL] .)	
		No Replace the torque converter. (See TORQUE CONVERTER REMOVAL/ INSTALLATION [AY6A-EL] .)	
5	• Verify test results. ▪ If normal, return to the diagnostic index to service any additional symptoms. ▪ If malfunction remains, inspect the related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. • If the vehicle is repaired, troubleshooting completed. • If the vehicle is not repaired or additional diagnostic information is not available, replace the TCM.		

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		No Inspect for parking mechanism.
2	INSPECT SELECTOR LEVER AND SELECTOR CABLE ADJUSTMENT FOR MALFUNCTION - Start the engine. - Does vehicle move when selector lever in between N position and D position?	Yes Inspect or adjust selector lever and cable. (See SELECTOR LEVER INSPECTION .) (See AUTOMATIC TRANSAXLE SHIFT MECHANISM REMOVAL/ INSTALLATION .) Perform N position learning. (See TCM NEUTRAL POSITION LEARNING [AY6A-EL] .)
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		No Inspect the coupler component. If normal, replace the control valve body. (See CONTROL VALVE BODY REMOVAL/ INSTALLATION [AY6A-EL] .)

	[AY6A-EL] .) ▪ Shift solenoid F (See SHIFT SOLENOID F INSPECTION [AY6A-EL] .) ▪ Line pressure control solenoid (See LINE PRESSURE CONTROL SOLENOID INSPECTION [AY6A-EL] .) • Are these normal?		
4	VERIFY IF MALFUNCTION CAUSE IS TORQUE CONVERTER OR TRANSAXLE • Perform the stall test. (See MECHANICAL SYSTEM TEST [AY6A-EL] .) • Is the stall speed within the specified?	Yes Replace the transaxle. (See AUTOMATIC TRANSAXLE REMOVAL/ INSTALLATION [AY6A-EL] .)	
		No Replace the torque converter. (See TORQUE CONVERTER REMOVAL/ INSTALLATION [AY6A-EL] .)	
5	• Verify test results. ▪ If normal, return to the diagnostic index to service any additional symptoms. ▪ If malfunction remains, inspect the related Service Bulletins and/or On-line Repair Information and perform repair or diagnosis. • If the vehicle is repaired, troubleshooting completed. • If the vehicle is not repaired or additional diagnostic information is not available, replace the TCM.		