

2012 - Mazda6 - Body and Accessories

No.1 AUTO DOOR LOCK FUNCTION DOES NOT OPERATE [AUTO DOOR LOCK SYSTEM]

1	Auto door lock function does not operate
DESCRIPTION	- All the doors do not lock automatically when the vehicle speed is about 20 km/ h (12 mph) or more. - When the ignition is switched ON and the shift lever is shifted from park (P) to any other gear position, all the doors do not lock automatically.
POSSIBLE CAUSE	- Auto door lock function (customer's desired operation mode does not activate) - Door lock actuator or related wiring harness malfunction - Door switch (driver-side, passenger-side, LR and/or RR) or related wiring harness malfunction - Vehicle speed signal improperly - Transaxle range improperly - Open circuit in BCM power supply (IG1) circuit - Communication error between BCM and PCM - Communication error between BCM and TCM - BCM malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	VERIFY IF MALFUNCTION CAUSE IS AUTO DOOR LOCK FUNCTION ERROR - Set the auto door lock function to the customer's desired operation mode. (See PERSONALIZATION FEATURES SETTING PROCEDURE.) - Has the malfunction symptom been eliminated?	Yes System is normal. (Malfunction cause is auto door lock function not set to customer's desired operation mode) No Go to the next step.

2	DETERMINE IF THE MALFUNCTION CAUSE IS DOOR LOCK RELATED OR ANOTHER PART • Verify that the keyless entry system door lock function is operating. • Does the door lock function operate normally?	Yes Go to the next step. No Perform the keyless entry system on-board diagnosis. (See SYMPTOM TROUBLESHOOTING CHART [ADVANCED KEYLESS ENTRY AND PUSH BUTTON START SYSTEM] .) (See SYMPTOM TROUBLESHOOTING CHART [KEYLESS ENTRY SYSTEM] .)
3	VERIFY THE DTCs FOR THE MODULES RELATED TO THE AUTO DOOR LOCK SYSTEM • Retrieve DTCs from BCM, PCM, and TCM using the M-MDS. (See ON-BOARD DIAGNOSTIC TEST [MZI 3.7 V6] .) (See ON-BOARD DIAGNOSTIC TEST [MZR 2.5] .) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [FS5A-EL] .) (See ON-BOARD DIAGNOSTIC SYSTEM DTC INSPECTION [AY6A-EL] .) (See DTC INSPECTION [BCM] .) • Is there any DTC present?	Yes Go to applicable DTC troubleshooting procedure. (See DTC TABLE [MZR 2.5] .) (See DTC TABLE [MZI 3.7 V6] .) (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [FS5A-EL] .) (See ON-BOARD DIAGNOSTIC SYSTEM DTC TABLE [AY6A-EL] .) (See DTC INSPECTION [BCM] .) No Go to the next step.
4	DETERMINE IF THE MALFUNCTION CAUSE IS THE AUTO DOOR LOCK SYSTEM SIGNAL RELATED • Monitor the following PCM and TCM PIDs using the M-MDS. (See PCM INSPECTION [MZR 2.5] .) (See PCM INSPECTION [MZI 3.7 V6] .) (See ON-BOARD DIAGNOSTIC SYSTEM PID/ DATA MONITOR INSPECTION [FS5A-EL] .) (See ON-BOARD DIAGNOSTIC SYSTEM PID/ DATA MONITOR INSPECTION [AY6A-EL] .) PCM PID: ▪ VSS (Vehicle speed)	Yes Go to the next step. No Inspect the followings and repair or replace malfunctioning part. PID VSS: • ABS wheel speed sensor (See FRONT ABS WHEEL-SPEED SENSOR INSPECTION .) (See REAR ABS WHEEL-SPEED SENSOR INSPECTION .) PID TR: • TR switch

	TCM PID: ▪ TR (Transaxle range) • Are PIDs indicated properly?		(See TRANSAXLE RANGE (TR) SWITCH INSPECTION [FS5A-EL] .) (See TRANSAXLE RANGE (TR) SWITCH INSPECTION [AY6A-EL] .)
5	DETERMINE IF THE MALFUNCTION CAUSE IS BCM IG1 POWER SUPPLY SYSTEM OR BCM RELATED • Measure the voltage of the BCM 4A terminal. (See BODY CONTROL MODULE (BCM) INSPECTION .) • Is the voltage normal?	Yes	Replace the BCM. (See BODY CONTROL MODULE (BCM) REMOVAL/ INSTALLATION .)
		No	Go to the next step.
6	DETERMINE IF THE MALFUNCTION IS CAUSED BY AN OPEN CIRCUIT IN THE BCM IG1 POWER SUPPLY OR A SHORT TO GROUND • Inspect the METER IG 15 A fuse condition. • Is the METER IG 15 A fuse burned out?	Yes	Repair for short to ground in wiring harness between ignition switch ^{*1}/IG relay^{*2} and BCM terminal 4A. Then, replace the METER IG 15 A fuse.
		No	Repair for open circuit in wiring harness between ignition switch ^{*1}/IG relay^{*2} and BCM terminal 4A.

*1

Vehicles without advanced keyless entry and push button start system

*2

Vehicles with advanced keyless entry and push button start system

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