

# Service Information

Mazda Motor Corporation

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Category <b>F</b>	<b>Repair Guidance</b>	Ref. No. R024/14	Page 1 of 2
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued February 26, 2014	
Please convey this information to your <input type="checkbox"/> Director <input checked="" type="checkbox"/> General Manager <input checked="" type="checkbox"/> Warranty Dept. <input checked="" type="checkbox"/> Parts Dept. <input checked="" type="checkbox"/> Training Dept. <input checked="" type="checkbox"/> Field Rep.		Date Revised	
Applicable Model Mazda3(BM), Mazda6 (GJ), CX-5 (KE) with SKYACTIV Engine & MT		Applicable Countries or Specifications Europe	

## Subject: Gear Shift Indication in Instrument Cluster stops working after engine i-stop and restart

### DESCRIPTION

Some customers may complain that the Gear Shift Indication (GSI) in the instrument cluster is missing after the engine is restarted from i-stop condition.

It may be occurred the same symptom after the engine is started with long IG on.

### CAUSE

Improper control logic of the PCM.

### MASS PRODUCTION CHANGE

Control logic of the PCM has been changed.

### SUBJECT VIN & PRODUCTION DATE

#### **Mazda3**

JMZBM\*\*\*\* \*\* 132712      December 20, 2013

#### **Mazda6**

JMZGJ\*\*\*\* \*\* 158163      November 25, 2013

JMZGJ\*\*\*\* \*\* 161343      December 17, 2013 (Russia)

#### **CX-5**

JMZKE\*\*\*\* \*\* 265740      December 11, 2013 (LHD)

JMZKE\*\*\*\* \*\* 166090      December 11, 2013 (RHD)

JMZKE\*\*\*\* \*\* 271360      January 10, 2014 (Russia)

### REPAIR PROCEDURE

**Note:** The parameter "Battery State of Charge (SOC)" is reset during PCM reprogramming procedure. Since the SOC value is necessary when performing "Battery condition initialization setting" after PCM reprogramming to decide whether battery charging is necessary or not, measure and record the PID BATT\_SOC first by using M-MDS Data logger function before reprogramming the PCM.

1. Reprogram the PCM with M-MDS using IDS 88.05 or later software, or IDS 89.02 or later software.
2. Perform the battery condition initialization setting (i-stop setting). Charge or replace the battery if necessary according to the result of battery electrolyte gravity inspection.

#### **Note:**

- Always update the IDS tool first, then follow on-screen instructions to download the needed calibration file for PCM reprogramming.
- Follow the attached "Service Caution for reprogramming"

Calibration Files Information

Spec.	Model	Engine (*1)	File Name	Memo
EU	Mazda3	1.5L (Low)	P501-188K2-C	Mitsubishi
			P51J-188K2-C	Denso
		1.5L (High)	P53L-188K2-B	Mitsubishi
			P53M-188K2-B	Denso
		2.0L (Low)	PEHD-188K2-B	Mitsubishi
			PEHE-188K2-B	Denso
	2.0L (High)	PE20-188K2-B	Mitsubishi	
		PEAN-188K2-B	Denso	
	Mazda6	2.0L (Low)	PE11-188K2-H	Mitsubishi
			PE2L-188K2-H	Denso
		2.0L (High)	PE5R-188K2-H	Mitsubishi
			PE6E-188K2-H	Denso
			PE5T-188K2-H	Mitsubishi with i-ELOOP
			PE6G-188K2-H	Denso with i-ELOOP
CX-5	2.0L	PE03-188K2-L	Mitsubishi	
		PE1T-188K2-K	Denso	
		PE1R-188K2-L	Mitsubishi with 4WD	
		PE1W-188K2-K	Denso with 4WD	
Russia	Mazda6	2.0L (Low)	PE6A-188K2-E	Mitsubishi
			PE6L-188K2-E	Denso
			PE5W-188K2-H	Mitsubishi with i-stop
			PE6J-188K2-H	Denso with i-stop
	CX-5	2.0L	PE2W-188K2-L	Mitsubishi
			PE2X-188K2-K	Denso

(\*1) **1.5L:** SKYACTIV-G 1.5    **2.0L:** SKYACTIV-G 2.0

WARRANTY INFORMATION

This warranty information applies only to verified customer complaint ON VEHICLE eligible for warranty repair.

Assembly group		F – Fuel and emission control	
Subassembly group		08 – EMISSION CONTROLS	
Symptom Code		61	
Damage Code		9W	
Causal Part No.		5555 RP PCM	
Q'ty		0	
Operation No. & Labor Hours	PCM, Reprogramming	XXK5CAFX	0.3 Hrs.
	* Reprogramming * Battery Electrolyte Gravity Inspection (once).	XXK5CBFX	0.4 Hrs (KE)
Period Covered		Normal Warranty Period	

After the reprogramming, be sure to keep the copy of "Log Viewer" screen on M-MDS along with the repair order and warranty application sheet, until the vehicle's warranty period expires. Please refer to S/I E005/10.

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Technical Service Dept.  
Mazda Motor Corporation  
2DC1310142 (MC Internal Use)

## Service Caution for Reprogramming

### CAUTION

- Perform reprogramming only when the concern matches to the condition described on Service Information. Unnecessary reprogramming may change drive feeling and result in customer complaint.
- Do NOT perform reprogramming with modules which are taken from other vehicles and installed on the repaired vehicle. There is a possibility that the engine will not start.

### 1. Regular maintenance requirements for PC.

- Verify that the latest M-MDS software is installed on the PC.
- Make sure to keep proper free space on the PC's hard disc. Insufficient free space (less than 1 GB) may result in PC freeze during reprogramming.

### 2. Attentions for PC operation.

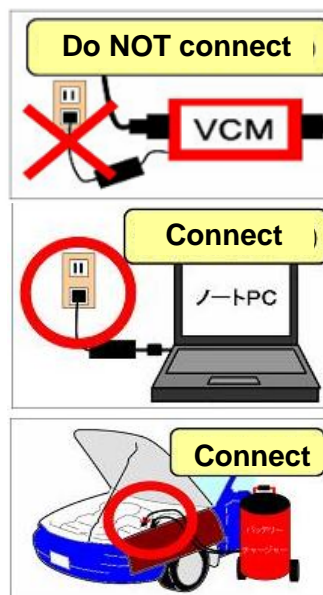
- When following M-MDS instructions such as "Select YES/NO", "Turn IG on" etc., carefully read the instructions first then acts the next operation correctly. Too quick action will cause incorrect selection/ key touching and the following PC freeze. Wait for a few seconds and then select and press correct button.
- Terminate all programs other than IDS on the PC. Or, it will take longer time for reprogramming, PC may freeze or it will cause any other problem.
- Perform reprogramming under proper Internet environment. Especially when using wireless network, make sure to have good connection.
- Set the power management of the PC to 'Always ON'.

### 3. Before reprogramming

- For vehicles equipped with i-stop, the parameter "Battery State of Charge" is reset during the PCM reprogramming procedure, but it is needed for "Battery condition initialization setting (i-stop setting)" to decide whether battery charging is necessary or not. Therefore check and record the PID BATT\_SOC inside the PCM first by using M-MDS Data logger function before reprogramming the PCM.

- Low voltage may result in abnormal termination and/or PCM (TCM) data corruption. Please check following items.

- Do NOT connect AC adapter to VCM when M-MDS is communicating with a vehicle.
- Connect AC adapter to the PC in order to stabilize voltage fluctuation during reprogramming (Do NOT use vehicle battery outlet as power source for the PC).
- Connect battery charger (charge current maintained within 10 to 15A) to the vehicle to stabilize voltage fluctuation.
- Make sure to turn off all the electrical loads. (Especially A/C (blower), audio, rear defogger and headlights).
- Disconnect all non-genuine aftermarket electrical parts and modifications.



#### 4. During reprogramming

- On some models, the meter illumination turns off during reprogramming. This is normal operation.
- Do not touch the VCM and DLC cable to prevent noise occurrence and bad connection.

#### 5. After reprogramming

- After reprogramming, delete all DTCs, then perform self-test and verify no DTC is stored.
  - Note:** After reprogramming, communication error related DTCs may be stored. This is normal operation and you can delete these DTCs.
  - Note:** In some cases the vehicle may set U-codes that will not clear and the engine will not shut off. To correct this concern, disconnect the F-45 (30 amp ABS fuse) for 10 seconds, then recheck. The F-45 fuse is located in the F-01 fuse block on the left side of the engine compartment.
- Please close the session once even when you continue the reprogramming on another same model.
  - Note:** Even with the same model, the applicable reprogramming file may be different depending on the equipment type/level of transmission, immobilizer, etc.
- Please confirm the file name on the “Log Viewer” screen after reprogramming.

**NOTE:**  
After reprogramming, once close the session. Then, open a new session again and go to the “Log Viewer” screen on which the programmed file name is displayed as shown in figure. Take the screen copy and keep it with the reprogramming date written on it.

**Filename (PCM):**  
SW-**LFCAEA000**

LFCA : Base No.  
A : Suffix

Please verify the suffix is same or later than the Service Information.

**Filename (PCM):**  
PE7B-188K2-D

PE7B-188K2 : Base No.  
D : Suffix

Please verify the suffix is same or later than the Service Information.

**Filename (TCM):**  
PE25-21PS1-A

PE25-21PS1 : Base No.  
A : Suffix

Standard Equipment Modules - Fail - (RCM)  
Optional equipment Modules - Fail - (RPSDM)  
(TCM) Part Number = FZ21-21EM1-  
**(TCM) FILENAME = PE25-21PS1-A**  
(TCM) HARDWARE\_NUM = FZ21-18ZB7-  
Standard Equipment Modules - Pass - (TCM)

#### <Caution for vehicle with i-stop>

- For vehicles equipped with i-stop, perform “battery condition initial learning” after reprogramming, or i-stop does not function.