

Service Information

Mazda Motor Corporation

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Category F	Repair Guidance	Ref. No. R107/13	Page 1 of 2
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued December 12, 2013	
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 CX-5 (KE) with SKYACTIV-D 2.2		Applicable Countries or Specifications ADR,EC	

Subject: Check Engine Light ON with “Engine Inspection Required” message on LCD and DTC P2118:00 stored in memory

DESCRIPTION

Some customers may complain of Check Engine Light being illuminated and i-Stop Indication Light (Amber) flashing during driving. At the same time, “Engine Inspection Required” message is displayed on the LCD. DTC P2118:00 is stored in PCM memory.

- P2118:00: Intake shutter valve control duty signal error.

CAUSE

Improper control logic of the PCM.

MASS PRODUCTION CHANGE

Control logic of the PCM will be changed.

SUBJECT VIN & PRODUCTION DATE RANGE

TBD

REPAIR PROCEDURE

After clearing DTCs, turn the ignition OFF, start the engine and verify if any DTC is stored.

1. If no DTC is stored, reprogram the PCM with the Mazda Modular Diagnostic System (M-MDS) using IDS 87.06 or later software, or IDS 88.01 or later software.
2. If DTC P2118:00 is stored again, this service information is not applicable. Troubleshoot the concern according to the diagnostic procedure for P2118:00 in the workshop manual.
3. Perform ENGINE OIL DATA RESET by using M-MDS according to the workshop manual.
Note: Please be sure to do the ENGINE OIL DATA RESET because engine oil deterioration judgment control is changed by the PCM reprogramming of step 1.

Note:

- In order to make it easier to perform the battery condition initialization setting (i-stop setting) afterward, first verify and take a note of PID “**BATT_SOC**” value. To do so, connect the M-MDS to the vehicle and then select “Datalogger”→ “PCM” → PID “**BATT_SOC**”.
- 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.	Power	Transmission	Drive	Kickdown Switch	File Name
ADR	High	AT	4WD	Without	SH04-188K2-T
				With	SH3H-188K2-E
EC	Low	MT	2WD	N/A	SH01-188K2-T
			4WD	N/A	SH1A-188K2-T
		AT	2WD	Without	SH02-188K2-S
			With	SH3E-188K2-F	
	4WD	Without	SH1B-188K2-S		
		With	SH3F-188K2-F		
	High	MT	4WD	N/A	SH1J-188K2-T
		AT	Without	SH1K-188K2-S	
			With	SH3G-188K2-F	
Russia	High	AT	4WD	With	SH3N-188K2-E

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 CONTROL
Symptom Code		6X
Damage Code		9W
DTC Code		P2118
Causal Part No.		5555 RP PCM
Q'ty		0
Operation No. & Labor Hours	PCM, Reprogramming	XXK25AFX 0.3 Hrs.
	* Reprogramming * Battery Electrolyte Gravity Inspection (once).	XXK25BFX 0.4 Hrs.
	* Reprogramming * Battery Electrolyte Gravity Inspection (twice) * Recharge.	XXK25CFX 0.5 Hrs.
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.
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1D11415258 (MC Internal Use)

-Attachment- 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.

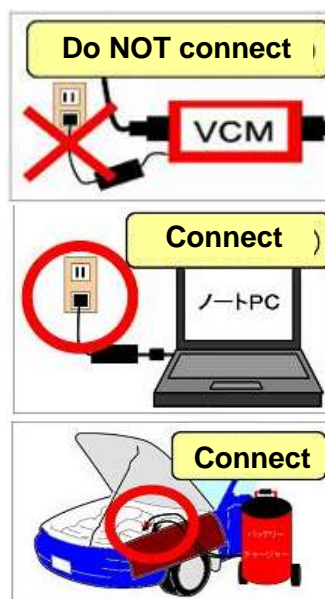
- When following M-MDS instructions such as "Select YES/NO", "Turn IG on" etc., carefully read the instructions first then acts the next operation correctly. Too quick action will cause incorrect selection/ key touching and the following PC freeze. Wait for a few seconds and then select and press correct 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-**LFCAE**A000

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

<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.