

Service Information

Mazda Motor Corporation

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Category F	Repair Guidance	Ref. No. R050/14A	Page 1 of 6
Coverage <input type="checkbox"/> Distributor only <input checked="" type="checkbox"/> Please inform your dealers		Date Issued June 12, 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 July 10, 2014	
Applicable Model Mazda3 (BM), Mazda6 (GJ) and CX-5 (KE) with SKYACTIV Engine & i-ELOOP		Applicable Countries or Specifications Worldwide (Except North America)	

REVISED

Revision Note:

- “Applicable Countries” has been revised.
- The calibration files information in “Repair Procedure” has been updated.

Subject: i-Stop Warning Light flashing, Master Warning Light illumination and a message “i-ELOOP Malfunction” (BM) / “i-ELOOP Inspection Required” (GJ)&(KE) in LCD (DTC P1794)

DESCRIPTION

Some vehicles may exhibit a concern while the vehicle is stopping or running that the i-stop warning light starts flashing, the master warning light starts illuminating and a message “i-ELOOP Malfunction” (BM) / “i-ELOOP Inspection Required” (GJ) &(KE) is displayed on LCD in the instrument cluster. Upon inspection of the vehicle, the DTC P1794:00 is stored in PCM memory.

P1794:00: Capacitor (i-ELOOP) system: Capacitor (i-ELOOP) malfunction

CAUSE

Improper control logic of the PCM.

MASS PRODUCTION CHANGE

Control logic of the PCM has been/will be changed.

BEGINNING VIN & DATE OF MODIFICATION

Mazda3

ADR Spec.

JM0BM**** ** 135157 June 18, 2014

EU Spec.

JMZBM**** ** 166433 June 18, 2014

General Spec.

JM6BM**** ** 135157 June 18, 2014

JM7BM**** ** 135157 June 18, 2014

Israel Spec.

JMZBM**** ** 135157 June 18, 2014

China Spec.

TBD

Mazda6

ADR Spec.

JM0GJ**** ** TBD July 11, 2014 (Scheduled)

EU Spec.

JMZGJ**** ** TBD July 11, 2014 (Scheduled)

Russia Spec.

RUMGJ**** ** TBD

General Spec.

JM6GJ**** ** TBD July 15, 2014 (Scheduled)

JM7GJ**** ** TBD July 15, 2014 (Scheduled)

Israel Spec.

JMZGJ**** ** TBD July 15, 2014 (Scheduled)

China Spec.

TBD

CX-5

China Spec.

TBD

REPAIR PROCEDURE

When you receive a customer complaint on this concern, repair the vehicle using the following repair procedure.

Note (For vehicles with i-stop):

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 Mazda Modular Diagnostic System (M-MDS) to the vehicle and then select "Datalogger" → "PCM" → PID "**BATT_SOC**".

1. Verify the DTC P1794:00 is stored in PCM memory.
2. With the DTC P1794 being stored, select M-MDS initial screen → "Datalogger" → "Module" → "PCM" → PID "**CAP_SYS_16**" and read the value.
ON ➤ Go to next step.
OFF ➤ This Service Information is not applicable. Diagnose the concern according to the instructions in the workshop manual.
3. Reprogram the PCM with M-MDS using IDS **91.02** or later software.

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)	T/M	File Name	Memo	
ADR	Mazda3	2.5L	AT	PY7B-188K2-C	Denso	
				PY6W-188K2-C	Mitsubishi	
	Mazda6			PY4H-188K2-F	Denso	
	PY4E-188K2-F			Mitsubishi		
	2.2L			SH08-188K2-L	-	
EU	Mazda3	2.0L	MT	PEAN-188K2-C	Denso	
				PE20-188K2-C	Mitsubishi	
	Mazda6	2.2L	MT	SH1R-188K2-P	Sedan	
				SH3A-188K2-L	Wagon	
				SH4J-188K2-E	Sedan, High Gear type	
				SH4K-188K2-E	Wagon, High Gear type	
				SH05-188K2-P	High power	
				AT	SH1S-188K2-N	Low power
					SH06-188K2-P	High power
	2.0L	MT	PE5T-188K2-J	Mitsubishi		
			PE6G-188K2-J	Denso		
	2.5L	AT	PE5V-188K2-K	Mitsubishi		
			PE6H-188K2-K	Denso		
			PY3E-188K2-G	Mitsubishi		
	Russia	Mazda6	2.5L	AT	PY3F-188K2-F	Mitsubishi
PY3J-188K2-F					Denso	
General , Israel	Mazda3	1.5L	AT	P53D-188K2-B	Denso / Stage5(EOBD)	
				P53C-188K2-B	Mitsubishi / Stage5(EOBD)	
				P52X-188K2-B	Denso / Stage4(EOBD)	
				P52W-188K2-B	Mitsubishi / Stage4(EOBD)	
				P52S-188K2-B	Denso / Stage4(POBD)	
				P52R-188K2-B	Mitsubishi / Stage4(POBD)	
				P53K-188K2-B	Denso / Stage4(POBD)	
				P53J-188K2-B	Mitsubishi / Stage4(POBD)	
				2.0L	PEGG-188K2-B	Denso / Stage5(EOBD)
		PEGF-188K2-B	Mitsubishi / Stage5(EOBD)			
		PEFT-188K2-B	Denso / Stage4(EOBD)			
		PEFS-188K2-B	Mitsubishi / Stage4(EOBD)			
		PEGE-188K2-B	Denso / Stage4(POBD)			
		PEGD-188K2-B	Mitsubishi / Stage4(POBD)			
		PEFW-188K2-B	Denso / Stage4(POBD)			
		PEFV-188K2-B	Mitsubishi / Stage4(POBD)			
		PEKS-188K2-A	Denso / SULEV(JOBD2)			
		PEKR-188K2-A	Mitsubishi / SULEV(JOBD2)			
	PEFR-188K2-B	Denso (ISRAEL)				
	PEFP-188K2-B	Mitsubishi (ISRAEL)				
	MT	PEMS-188K2-B	Denso / Stage4(POBD)			
		PEMR-188K2-B	Mitsubishi / Stage4(POBD)			
	Mazda6	2.5L	AT	PY5C-188K2-F	Denso	
				PY4V-188K2-F	Mitsubishi	
				PY5D-188K2-G	Denso	
				PY4W-188K2-G	Mitsubishi	
				PYT7-188K2-A	Denso (Vietnam CKD)	

(*1)

2.5L: SKYACTIV-G 2.5 2.2L: SKYACTIV-D 2.2 2.0L: SKYACTIV-G 2.0 1.5L: SKYACTIV-G 1.5

Calibration Files Information

Spec.	Model	Engine (*2)	T/M	File Name	Memo
China	Mazda3	2.0L	AT	PEEV-188K2-B	Mitsubishi / Stage5
				PEDV-188K2-B	Mitsubishi / Stage4
				PEAM-188K2-C	Mitsubishi / Stage5
				PEAL-188K2-C	Mitsubishi / Stage4
	Mazda6	2.5L		PY6S-188K2-B	Mitsubishi / Stage5
				PY6R-188K2-B	Mitsubishi / Stage4
				PY6M-188K2-B	Mitsubishi / Stage5
				PY6L-188K2-B	Mitsubishi / Stage4
CX-5					

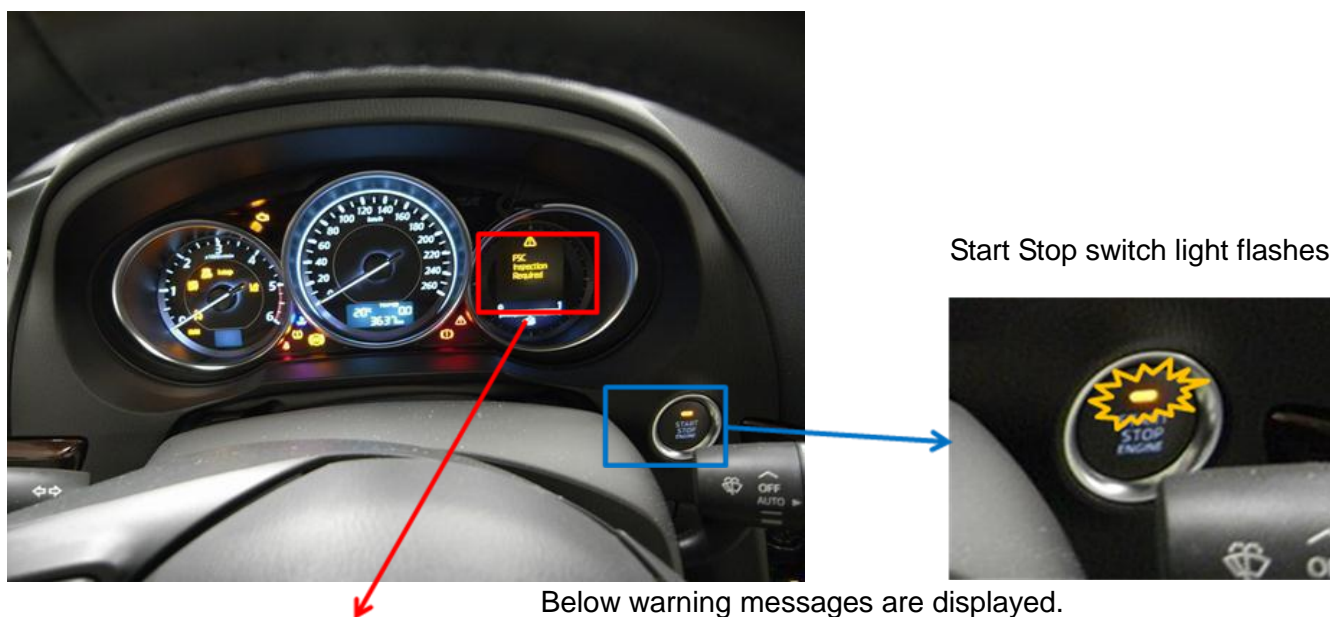
(*2)
2.0L: SKYACTIV-G 2.0 2.5L: SKYACTIV-G 2.5

(For vehicles with i-stop)

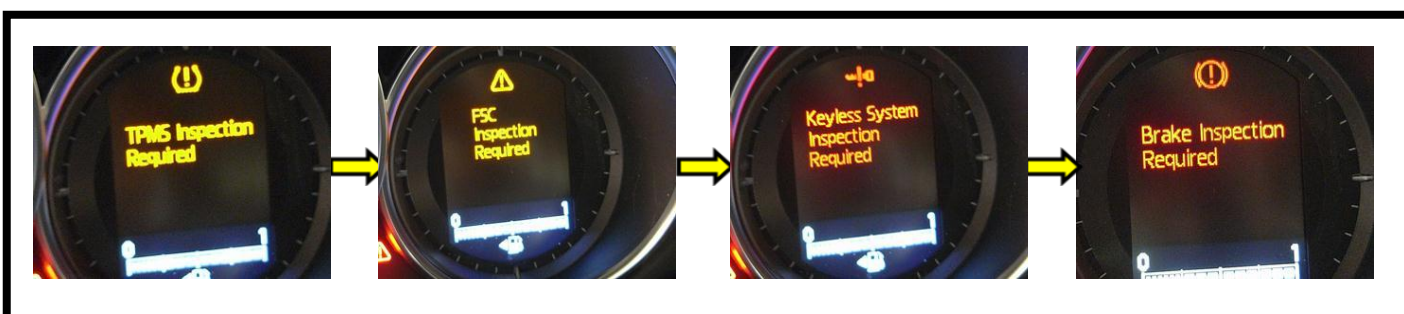
4. Perform the battery condition initialization setting (i-stop setting). Charge or replace the battery if necessary according to the result of battery electrolyte gravity inspection.

Note:

During PCM reprogramming, some vehicles may show some warning messages with flashing Start stop switch. This is caused by reset function of ABS/DSC CU not working properly.

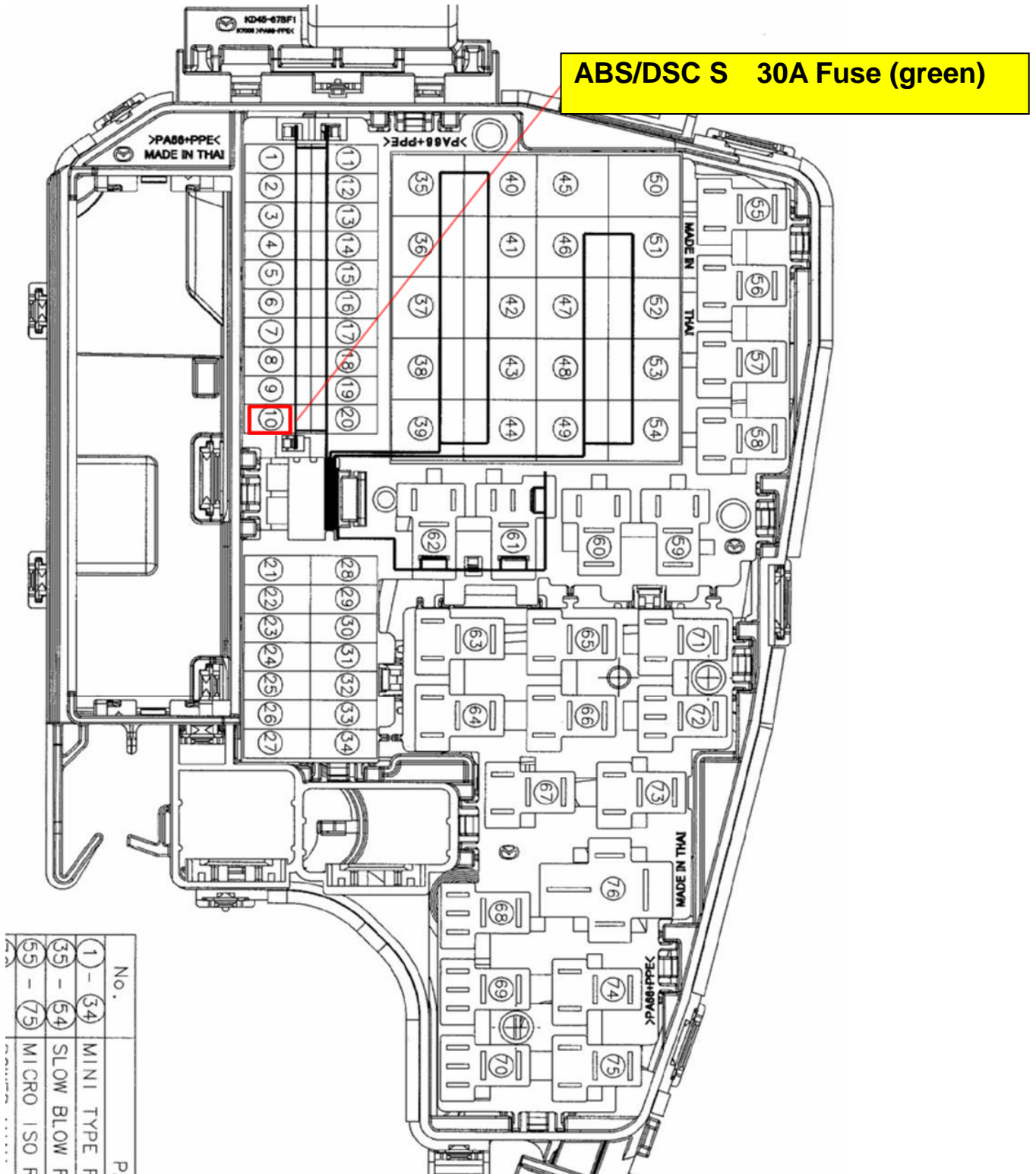


Below warning messages are displayed.



REPAIR PROCEDURE

1. Turn the IG-off by pushing Start Stop switch for long time (around 3 seconds) to turn off.
2. After that, disconnect **ABS/DSC S 30A** Fuse for 30 seconds so that the system is reset back to normal.



Note: There is similar name fuse "ABS/DSC M 50A, that's wrong one.

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		6X
Damage Code		9W
DTC Code		P1794
Causal Part No.		5555 RP PCM
Q'ty		0
Operation No. & Labor Hours	PCM, Reprogramming	XXK7VAFX , 0.3 Hrs.
	* Reprogramming * Battery Electrolyte Gravity Inspection (once).	XXK7VBFX , 0.4 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.
Mazda Motor Corporation
1E30345953 (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.

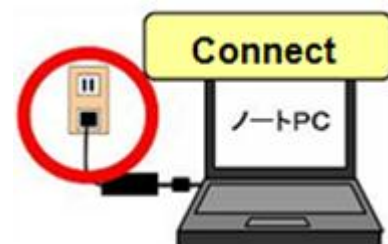
- When following M-MDS instructions such as "Select YES/NO", "Turn IG on" etc., carefully read the instructions first then acts the next operation correctly. Too quick action will cause incorrect selection/ key touching and the following PC freeze. Wait for a few seconds and then select and press correct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

- 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 II 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

(TCM) FILENAME = PE25-21PS1-A

(TCM) HARDWARE_NUM = FZ21-1BZB7-

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.