Service Information

mazda

Category		**Repair Guidance**	Ref. No. R079/13A	Page 1 of 4
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Coverage ☐ Distributor only ■ Please inform your dealers	Date Issued October 10, 2013
Please convey this information to your ☐ Director ■ General Manager ■ Warranty Dept. ■ Parts Dept. ■ Training Dept. ■ Field Rep.	Date Revised June 12, 2014

Applicable Model	Applicable Countries or Specifications
Mazda6 (GJ) with MRCC	Worldwide

REVISED

Revision Note: REPAIR PROCEDURE, PARTS INFORMATION, and WARRANTY INFORMATION have been changed.
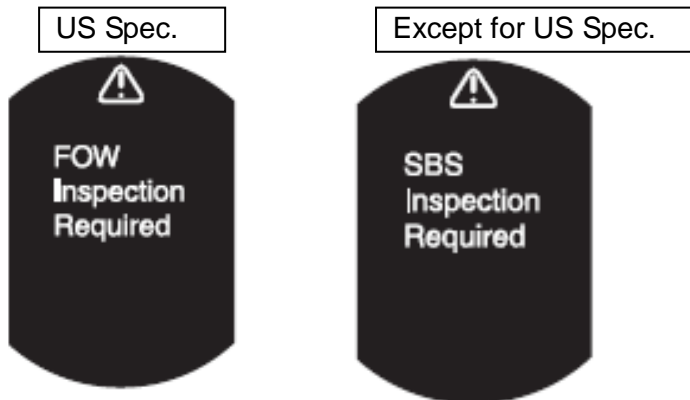
Subject: "FOW/SBS Inspection Required" indication in instrument cluster is illuminated. (DTC: C1A67:78)

DESCRIPTION

Some vehicles may exhibit the stopping of MRCC operation if driving without stopping for a long time and no obstacle which MRCC can detect.
Additionally, "FOW/SBS inspection required" is displayed in instrument cluster and DTC C1A67:78 is set due to misjudgment.
.
C1A67:78 Radar sensor axis is deviated

US Spec. — FOW Inspection Required

Except for US Spec. — SBS Inspection Required

CAUSE

Improper software of vehicle control module.

MASS PRODUCTION CHANGE

The software of Vehicle Control Module (VCM) has been changed.

BEGINNING VIN & DATE OF MODIFICATION
EU Spec.
  JMZ GJ**** 150217   October 01, 2013
US Spec.
  JM1 GJ**** 149082   October 01, 2013
Israel Spec.
  JMZ GJ**** 123703   October 01, 2013
ADR Spec.
  JM0 GJ**** 123703   October 01, 2013
General Spec.
  JM6 GJ**** 123703   October 01, 2013
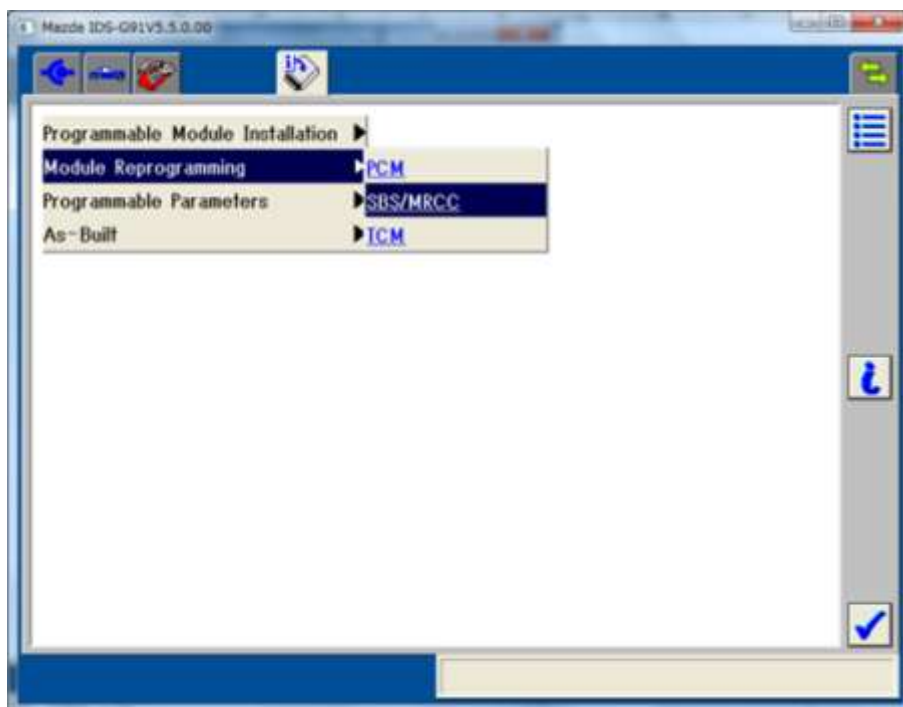 JM7 GJ**** 123703   October 01, 2013

REPAIR PROCEDURE
  When you encounter a customer complaint on this concern, proceed as follows.

1. Verify customer complaint.
2. Verify that there is no external damage to the radar sensor, or impact around the radar sensor causing the radar axis deviation.
3. Reprogram the VCM with Mazda Modular Diagnostic System (M-MDS) using IDS **90.05** or later software referring to the following procedure and the attached Service Caution for Reprogramming.

   Note: For Vehicle 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) Select "Module Reprogramming", then select "SBS/MRCC".

Note: The menu "SBC/MRCC" appears regardless of the equipment of MRCC System. For vehicles without the MRCC System, do not click this menu.

2) Either of the following screens (Figure 1 or 2) is displayed.

- If the Figure 1 is displayed, the VCM is before the latest calibration. Click "YES" and follow the M-MDS instructions to reprogram the VCM.
- If the Figure 2 is displayed, the VCM is already the latest calibration. This Service Information does not apply and refer to Workshop Manual for troubleshooting and repair.
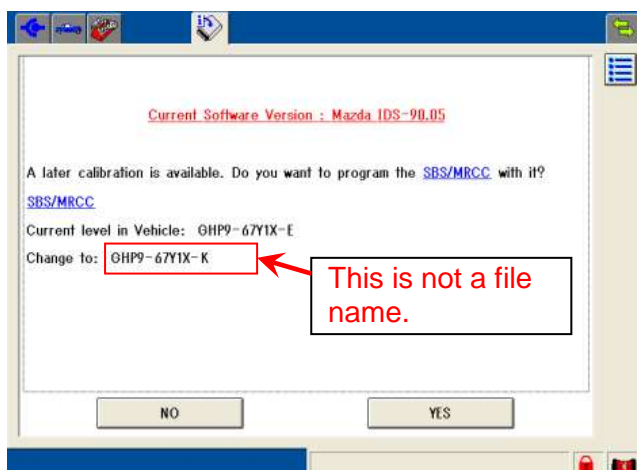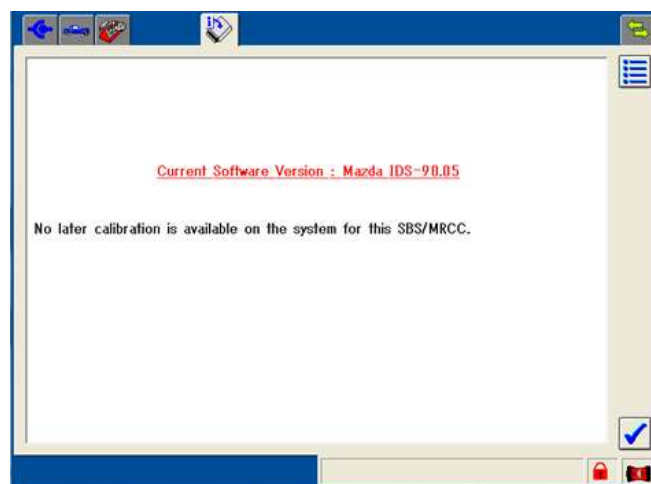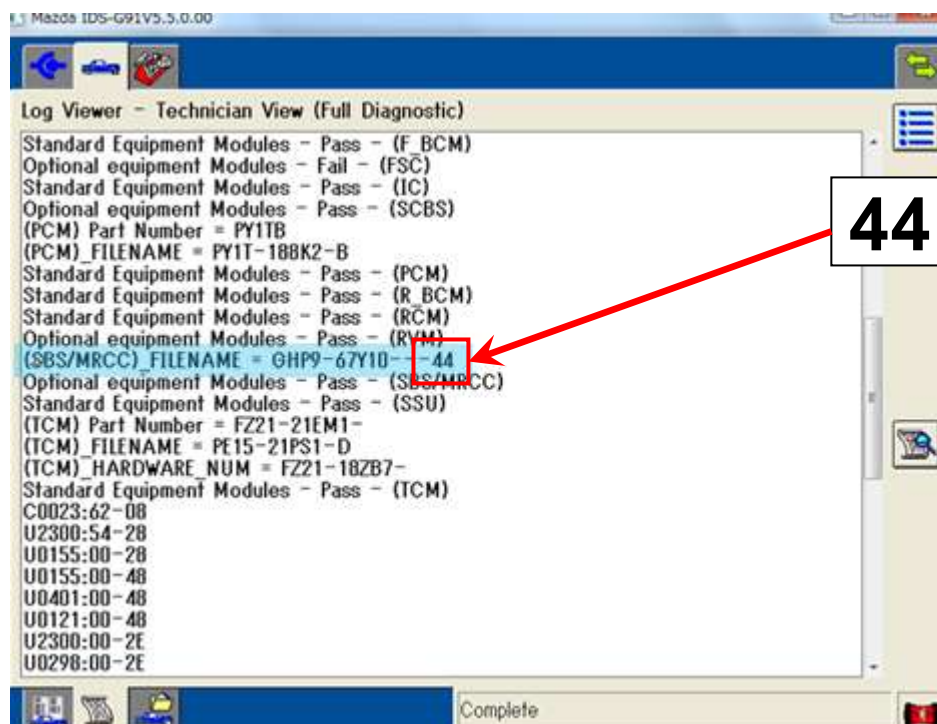
Figure 1: Subject for VCM reprogramming

Current Software Version : Mazda IDS-90.05

A later calibration is available. Do you want to program the SBS/MRCC with it?
SBS/MRCC
Current level in Vehicle: GHP9-67Y1X-E
Change to: GHP9-67Y1X-K

This is not a file name.

NO   YES

Figure 2: Not subject for VCM reprogramming

Current Software Version : Mazda IDS-90.05

No later calibration is available on the system for this SBS/MRCC.

3) 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. If the last two letters are "44", the reprogramming has been successfully completed.

Mazda IDS-G91V5.5.0.00

Log Viewer - Technician View (Full Diagnostic)

Standard Equipment Modules - Pass - (F_BCM)
Optional equipment Modules - Fail - (FSC)
Standard Equipment Modules - Pass - (IC)
Optional equipment Modules - Pass - (SCBS)
(PCM) Part Number = PY1TB
(PCM)_FILENAME = PY1T-18BK2-B
Standard Equipment Modules - Pass - (PCM)
Standard Equipment Modules - Pass - (R_BCM)
Standard Equipment Modules - Pass - (RCM)
Optional equipment Modules - Pass - (RVM)
(SBS/MRCC)_FILENAME = GHP9-67Y10- -44
Optional equipment Modules - Pass - (SBS/MRCC)
Standard Equipment Modules - Pass - (SSU)
(TCM) Part Number = FZ21-21EM1-
(TCM)_FILENAME = PE15-21PS1-D
(TCM)_HARDWARE_NUM = FZ21-18ZB7-
Standard Equipment Modules - Pass - (TCM)
C0023:62-08
U2300:54-28
U0155:00-28
U0155:00-48
U0401:00-48
U0121:00-48
U2300:00-2E
U0298:00-2E

Complete

44

Note: In some cases, the ABS warning light may illuminate and the engine will not shut off by one-press of the engine start/stop button. To correct this concern, once disconnect the ABS/DSC 30A fuse for 10 seconds.

Note: After reprogramming, communication error related DTCs may be stored. This is normal operation and you can delete these DTCs.

4. **For vehicle with i-stop:** Perform the battery condition initialization setting (i-stop setting).

5. Perform the radar sensor aiming adjustment according to " RADAR SENSOR AIMING [MAZDA RADAR CRUISE CONTROL (MRCC) SYSTEM] " in workshop manual.

WARRANTY INFORMATION

With i-stop

Assembly group		T – Body Electrical
Subassembly group		08 - AUTO CRUISE CONTROL SYSTEM
Symptom Code		62
Damage Code		9W
DTC Code		C1A67
Causal Part No.		7777 SPJ48
Q'ty		0
Operation No. & Labor Hours	*Reprogramming *Radar sensor aiming	XXK7WAFX , 0.5 Hrs
	*Reprogramming *Radar sensor aiming *Battery Electrolyte Gravity Inspection (once).	XXK7WBFX , 0.6 Hrs
	*Reprogramming *Radar sensor aiming *Battery Electrolyte Gravity Inspection (once). *Recharge	XXK7WCFX , 0.8 Hrs
Period Covered		Normal Warranty Period

Without i-stop

Assembly group	T – Body Electrical
Subassembly group	08 - AUTO CRUISE CONTROL SYSTEM
Symptom Code	62
Damage Code	9W
DTC Code	C1A67
Causal Part No.	7777 SPJ48
Q'ty	0
Operation No.	XXK7WAFX
Labor Hours	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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Manager, Technical Information Gr.
Technical Service Dept.
Mazda Motor Corporation
2D30860924 (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.
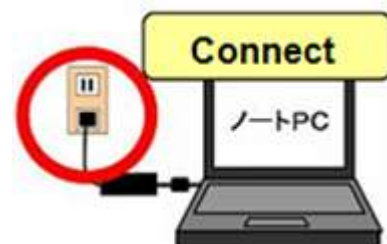
2. Attentions for PC operation.
　　- When following M-MDS instructions such as "Select YES/NO", "Turn IG on" etc., carefully read the instructions first then acts the next operation correctly. Too quick action will cause incorrect selection/ key touching and the following PC freeze. Wait for a few seconds 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-**LFCA**E**A**000

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

<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.