SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : INFORMATION	ISSUE NO. : MSB-10E00-018	DATE : 2010-11-20
SUBJECT : MAIN AND AUXILIARY BATTERIES SERVICE PROCEDURES		<MODEL> (EUR) i-MiEV (HA3W) <M/Y> 11
GROUP : GENERAL		

1. Description:

In order to improve main and auxiliary batteries servicing, the service procedures are changed in the applicable Workshop Manual. This Service Bulletin contains the modified descriptions.

Overview of change
- Actions required for an auxiliary battery removed for more than 1 month are added.
- Battery current capacity checking is added to the reset procedures of main battery capacity estimate information and control information.
- Main contactor coil resistance standard values are corrected.

2. Applicable Manual:

Manual	Pub. No.	Title (Info-ID)	Attached Sheet
2011 i-MiEV Workshop Manual	CTQE11E1-CD (English) CTQF11E1-CD (French) CTQG11E1-CD (German) CTQS11E1-CD (Spanish) CTQI11E1-CD (Italian)	Gr.00: Procedures for Writing BMU Learnig Value (M001-02-100-02200-01)	Attached sheet 1, 2
		Gr.00: Reset Estimated Information and Control Information of Main Battery Capacity (M001-02-110-02900-01)	Attached sheet 3
		Gr.54A: Auxiliary Battery Removal and Installation (M541-00-230-02300-01)	Attached sheet 4
		Gr.54D: Service Specification (M549-45-580-02100-01)	Attached sheet 5
		Gr.54D: Check on Coil Resistance of Contactor (M549-40-210-02100-01)	Attached sheet 6
		Gr.54D: Check on Main Battery Capacity (M549-45-500-03900-01)	Attached sheet 7

There may be some attached sheets not included in this Service Bulletin because they are not applicable to your market. Their sheet numbers are not listed in the above table.

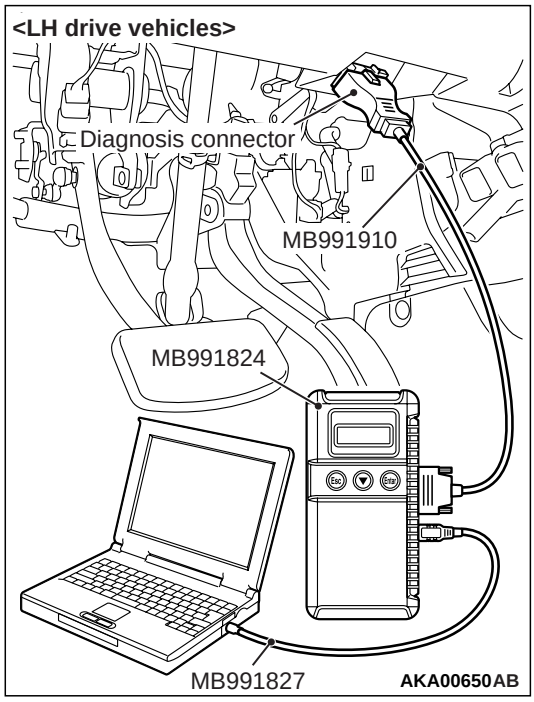
3. Details:

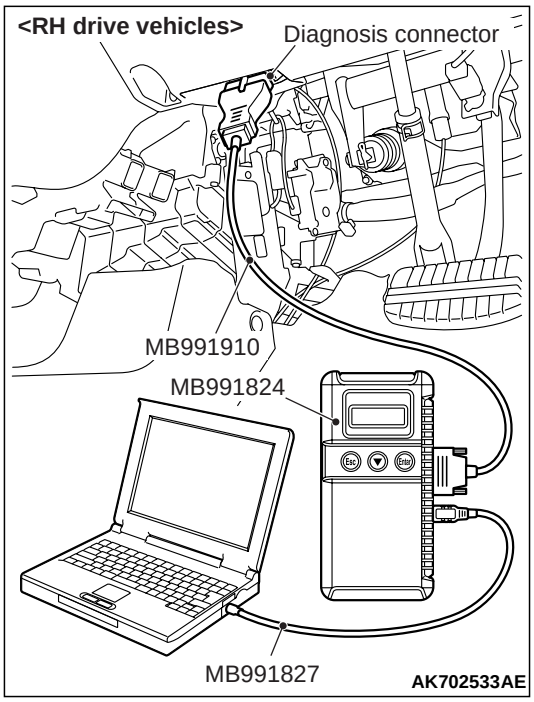
See Attached sheets 1 to 7.

Attached sheet 1

<Added>

NOTE: If the auxiliary battery is removed for more than month, it must be handled the BMU learning value manual written.





PROCEDURES FOR WRITING BMU LEARNING VALUE

If replacing the BMU, write the BMU learning value.

NOTE: If replacing the BMU and the main battery at the same time, you do not have to do this procedure.

BMU LEARNING VALUE STORED (BEFORE REPLACING BMU) AND BMU LEARNING VALUE WRITTEN (AFTER REPLACING BMU)

1. Connect the M.U.T.-III to the diagnosis connector with the electric motor switch in the "LOCK" (OFF) position.
2. Turn the electric motor switch to the ON position.
3. From the System select Screen of the M.U.T.-III, select the "BMU".
4. Select the "Special Function" from the BMU Screen.
5. Select the "Write learned value (change ECU)" from the Special Function Screen.
6. Select the "Learning value Read & save" from the Write learned value (change ECU) Screen.
7. Save the data from the Learning value Read & save Screen. If the BMU learning value cannot be saved, write the BMU learning value manual.

   NOTE: When the learned value file is normally saved, the "Learned value Save Complete" is displayed on the M.U.T.-III Screen.
8. Turn the electric motor switch to the "LOCK" (OFF) position to replace the BMU.
9. Turn the electric motor switch to the ON position.
10. Select the "Saved learned value writing" from the Write leraned value (change ECU) Screen.
11. Select the saved data from the Saved learned value writing Screen to write the BMU learning value.

    NOTE: Use only the BMU learning value file saved in the Step 7. Do not use other files.

    NOTE: When the BMU learning value is correctly written, the "Completed" should be displayed on the M.U.T.-III Screen.
12. Turn the electric motor switch to the "LOCK" (OFF) position to disconnect the M.U.T.-III.

Attached sheet 2

BMU LEARNING VALUE MANUAL WRITTEN

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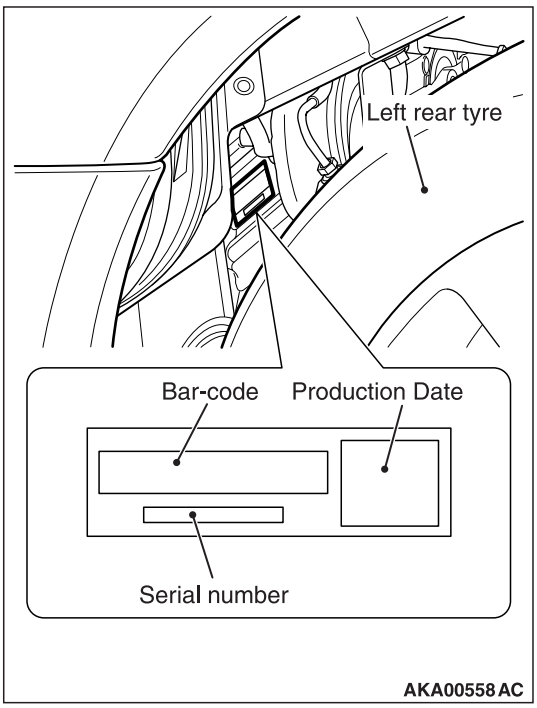
~~*NOTE: These procedures must be performed only when the BMU learning value cannot be saved. Do not perform those for any other purposes.*~~



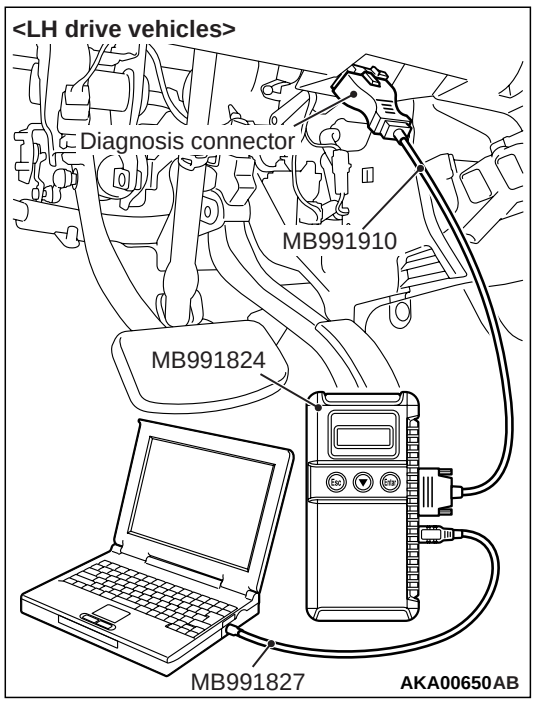
1. Check the label attached to the main battery from the left rear wheel to check the manufacturing date.

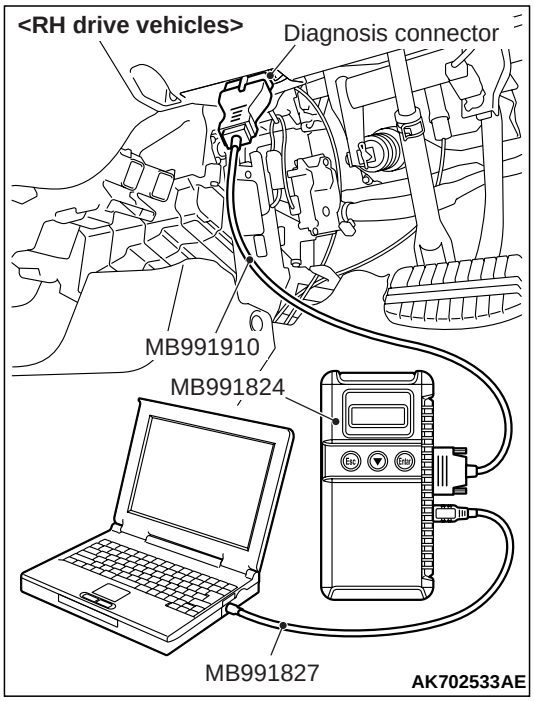
   NOTE: Depending on the manufacturing date, the label may not be attached. If the label is not attached, check the production timing from the vehicle number to regard it as the manufacturing date of the main battery.

2. Calculate how many months elapsed from the next month of the manufacturing date of the main battery to this moment.

<Correct>

NOTE: When the BMU learning value cannot be saved or when the battery for the auxiliary is removed for more than month, these procedures must be handled.
Do not handle those for any other purposes.





RESET ESTIMATED INFORMATION AND CONTROL INFORMATION OF MAIN BATTERY CAPACITY

If replacing the main battery, reset the main battery capacity information and the control information.

NOTE: If replacing the BMU and the main battery at the same time, you do not have to do this procedure.

1. Connect the M.U.T.-III to the diagnosis connector with the electric motor switch in the "LOCK" (OFF)position.
2. Turn the electric motor switch to the ON position.
3. From the System select Screen of the M.U.T.-III, select the "BMU".
4. Select the "Special Function" from the BMU Screen.
5. Select the "Reset" from the Special Function Screen
6. Select the "Battery capacity estimated info" from the Reset Screen, and reset.
7. After the estimated information of the main battery capacity is reset, select "Control information" from the Reset Screen to reset. <Incorrect>
8. ~~Turn the electric motor switch to the "LOCK" (OFF) position to disconnect the M.U.T.-III.~~

<Correct>

8. Put the power switch in the LOCK (OFF) position.
9. After the reset of the BMU control information, check the battery current capacity according to the following procedures:
   (1) After 10 seconds elapsed from the previous process, turn on the power switch.
   (2) Select the "STV (Scan Tool Viewer)" from the M.U.T.-III start screen.
   (3) Select the "System Select" from the fault STV top menu screen.
   (4) Select the "BMU" from the system select screen.
   (5) Select the "Service Data" from the BMU screen.
   (6) Check the BMU service data, item No. 23: Battery current capacity.
   (7) If the value, item No. 23: Battery current capacity, satisfies 45.0 - 48.0 Ah, go to the step 10. If not, start from step 4 to do the reset of the control information.
10. Turn the electric motor switch to the "LOCK" (OFF) position to disconnect the M.U.T.-III.

Attached sheet 4

REMOVAL AND INSTALLATION

M1541002300023

⚠ WARNING

Do not disconnect the negative terminal of auxiliary battery for 1 minute after turning the electric motor switch to LOCK (OFF).

⚠ CAUTION

- **Do not keep the auxiliary battery removed for a long period of time (approximately 1 month or more). (The BMU will not be able to comprehend the main battery status.)**
- **If the auxiliary battery has necessarily been removed for a long period of time (approximately 1 month or more), perform "BMU Learning Value Manual Writing." (Refer to GROUP 00 – Precautions before Service – Procedures for Writing BMU Learning Value.)**

<Added>

Attached sheet 5

SERVICE SPECIFICATIONS

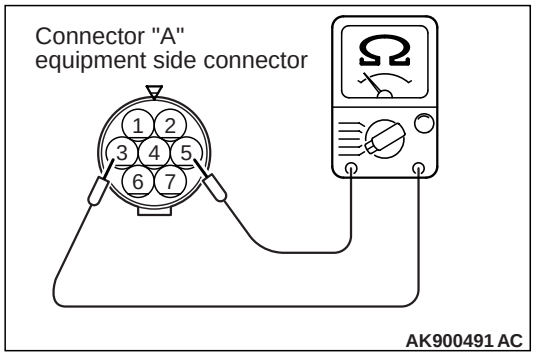
<Correct> Standard value

Items <Incorrect>		~~Specifications~~
Charging contactor coil resistance Ω (at 23°C)		33 – 39
Main contactor (+) coil resistance Ω (at 23°C)		~~19 – 22~~ <Incorrect>
Main contactor (–) coil resistance Ω (at 23°C)		~~19 – 22~~ <Incorrect>
Local CAN (for main battery) terminating resistance Ω (at 20°C)		80 – 96
Main battery current sensor resistance kΩ (at 25°C)	main battery connector (13 pin) terminal No. 12 – terminal No. 13	1 – 5
	main battery connector (13 pin) terminal No. 5 – terminal No. 13	1 – 5
	main battery connector (13 pin) terminal No. 4 – terminal No. 13	1 – 5

<Correct> 33 - 39

改訂A

Attached sheet 6



2. Measure the resistance between terminal No. 3 and No. 5 of the main battery connector "A".

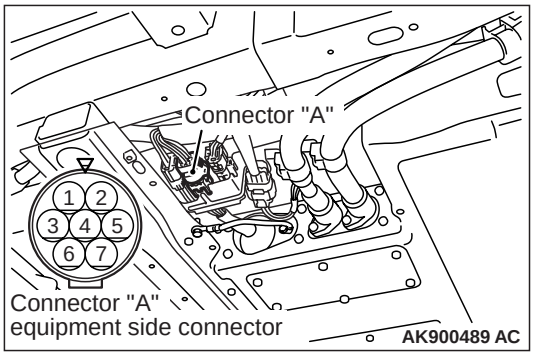
   Standard value: ~~19 — 22~~ Ω (at 23°C)

<Incorrect>

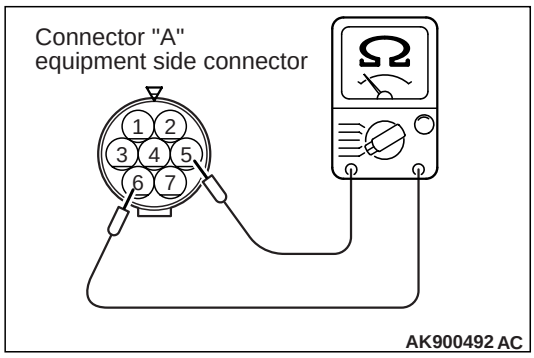
3. If the resistance deviates from the standard value, replace main battery.

33 - 39 <Correct>

CHECK ON COIL RESITANCE OF MAIN CONTACOTOR (–)



1. Disconnect the main battery connector "A".



2. Measure the resistance between terminal No. 6 and No. 5 of the main battery connector "A".

   Standard value: ~~19 — 22~~ Ω (at 23°C)

<Incorrect>

3. If the resistance deviates from the standard value, replace main battery.

33 - 39 <Correct>

Attached sheet 7

CHECK ON MAIN BATTERY CAPACITY

NOTE: Measuring the main battery capacity enables the check on the main battery capacity .

NOTE: This procedure is to check the main battery capacity on the vehicle. This is not to judge whether the main battery is good or not. The energy level of the main battery gradually decreases with the elapse of time and depending on the operating conditions.

1. Connect the diagnosis connector to the M.U.T.-III with electric motor switch in the "LOCK" (OFF) position.
2. From the System Selection Screen of the M.U.T.-III, select the "BMU".
3. Select the "Data List" from the BMU Screen.
4. Check the BMU data list, Item ~~No. 368: Cell current capacity (measured)~~.
5. Turn the electric motor switch to the "LOCK" (OFF) position, and disconnect the M.U.T.-III.

<Incorrect>

<Correct> No. 23: Battey current capacity

