SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CORRECTION	ISSUE NO. : MSB-13EXML54-502	DATE : 2013-09-09
SUBJECT : TROUBOLE SHOOTING OF CODE NO.P1AC3		<Destination/Model> (MMNA/USTP/EUR/MMAL/NZ) i-MiEV(HA3W) <M/Y> 11-14
GROUP : POWER UNIT/TRACTION BATTERY(Gr:54D)		

1. Description :

Please refer to the attached document for the correction of the error in writing existing in the applicable service manual.

2. Applicable service manual :

Please refer to the attached document (Attached sheet 1)

3. About the details :

Please refer to the attached document (Attached sheet 3-4)

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Attached sheet 1

<For overseas market>

<EU>

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2011 i-MiEV Workshop Manual	ENG: CHAE11E1-CD FRE: CHAF11E1-CD GER: CHAG11E1-CD SPA: CHAS11E1-CD ITA: CHAI11E1-CD	CODE NO. P1AC3: MAIN BATTERY COOLIHG FAN FAILED (STOP ABNORMAL) (M549-45-300-02200-01)	Attached sheet 3
2012 i-MiEV Workshop Manual	ENG: CHAE12E1-CD FRE: CHAF12E1-CD GER: CHAG12E1-CD SPA: CHAS12E1-CD ITA: CHAI12E1-CD	CODE NO. P1AC3: MAIN BATTERY COOLING FAN FAILED (STOP ABNORMAL) (M549-45-300-03300-01)	
2013 i-MiEV Workshop Manual	ENG: CHAE13E1-CD FRE: CHAF13E1-CD GER: CHAG13E1-CD SPA: CHAS13E1-CD ITA: CHAI13E1-CD	CODE NO. P1AC3: MAIN BATTERY COOLING FAN FAILED (STOP ABNORMAL) (M549-45-300-03300-01)	
2014 i-MiEV Workshop Manual	ENG: CHAE14E1-CD FRE: CHAF14E1-CD GER: CHAG14E1-CD SPA: CHAS14E1-CD ITA: CHAI14E1-CD	CODE NO. P1AC3: TRACTION BATTERY COOLING FAN FAILED (STOP ABNORMAL) (M549-45-620-04700-01)	

<MMAL/NZ>

Applicable manual	Pub. No.	Applicable title	Content
2013 i-MiEV Workshop Manual	AU900303 NZ:DRAFT	CODE NO. P1AC3: TRACTION BATTERY COOLING FAN FAILED (STOP ABNORMAL) (M549-45-620-03600-01)	Attached sheet 3

<MMNA>

Applicable manual	Pub. No.	Applicable title (INFO ID)	Content
2012 i-MiEV Service Manual CD-ROM	MSCD-018B-2012	CODE NO. P1AC3: TRACTION BATTERY FAN FAILED (STOP ABNORMAL) (M549-45-620-02500-01)	Attached sheet 4
2013 i-MiEV Service Manual CD-ROM	MSCD-018B-2013	CODE NO. P1AC3: MAIN DRIVE LITHIUM-ION BATTERY FAN FAILED (STOP ABNORMAL) (M549-45-620-05800-01)	

Attached sheet 3

TROUBLE JUDGEMENT

Check Conditions

- The electric motor switch is "ON" position or while the traction battery is charged.

Judgement Criterion

- For more than 5 seconds, the PWM output signal of the traction battery cooling fan is 100 % (while the fan stops). The output of the rotational speed is more than 0.7 V (more than 493 r/min or equivalent).

FAIL-SAFE AND BACKUP FUNCTION

- Not available

PROBABLE CAUSES

- The traction battery cooling fan is failed.
- Open circuits of traction battery cooling fan relay circuit, short circuits to power supply system or damage; poor contact of connector.
- The BMU is failed.

DIAGNOSIS PROCEDURE

STEP 1. Connector check: C-107 BMU connector, C-14 traction battery cooling fan connector

Q: Is the check result normal?
YES : Go to Step 2.
NO : Repair.

STEP 2. Check harness between C-14 (terminal No. 2) traction battery cooling fan connector and C-107 (terminal No. 13) BMU connector

NOTE: Before checking harness, check intermediate connector C-102, and repair if necessary.

- Check signal line for open circuit and damage.

Q: Is the check result normal?
YES : Go to Step 3.
NO : Repair.

STEP 3. Perform voltage measurement at C-107 BMU connector

- Measure the BMU terminal voltage.
- Disconnect C-14 traction battery cooling fan connector.
- Electric motor switch: ON
- Voltage between terminal No. 21 and earth.

OK: 0 – 0.1 V

Q: Is the check result normal?
NO → <Correct>
YES : Check intermediate connector C-102, and repair if necessary. If intermediate connector is normal, check and repair harness between C-14 (terminal No. 3) traction battery cooling fan connector and C-107 (terminal No. 21) BMU connector. <Incorrect>
- Check output line for short circuit to power supply.

YES → <Correct>
NO : Go to Step 4. <Incorrect>

STEP 4. M.U.T.-III diagnosis code

Q: Is the diagnosis code set?
YES : Go to Step 5.
NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/ Inspection Service Points – How to Cope with Intermittent Malfunctions).

STEP 5. After replacing the traction battery, reconfirm the diagnosis code.

- After replacing the traction battery, reconfirm whether the diagnosis codes are set.

Q: Is the diagnosis code set?
YES : Replace the BMU.
NO : Check end.

Attached sheet 4

STEP 3. Perform voltage measurement at C-107 BMU connector

- Measure the BMU terminal voltage.
- Disconnect C-14 Main Drive Lithium-ion Battery fan connector.
- Electric motor switch: ON
- Voltage between terminal No. 21 and ground.

OK: 0 – 0.1 V

Q: Is the check result normal?

NO → <Correct>

YES : Check intermediate connector C-102, and repair if necessary. If intermediate connector is normal, check and repair harness between C-14 (terminal No. 3) Main Drive Lithium-ion Battery fan connector and C-107 (terminal No. 21) BMU connector.

- Check output line for short circuit to power supply.

<Incorrect>

YES → <Correct>

NO : Go to Step 4.

<Incorrect>

STEP 4. Scan tool MB991958 diagnostic trouble code

Q: Is the diagnostic trouble code set?

YES : Go to Step 5.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

STEP 5. After replacing the Main Drive Lithium-ion Battery, reconfirm the diagnostic trouble code.

- After replacing the Main Drive Lithium-ion Battery, reconfirm whether the diagnostic trouble codes are set.

Q: Is the diagnostic trouble code set?

YES : Replace the BMU.

NO : Check end.

Code No. P1AC4: Calculation Abnormal

TROUBLE JUDGEMENT

Check Condition

- 2 seconds elapse after the electric motor switch is turned ON, or 2 seconds elapse after the Main Drive Lithium-ion Battery starts to be charged.

Judgement Criterion

- The result of two RAM calculations is not the same.

FAIL-SAFE AND BACKUP FUNCTION

- Not available