



SERVICE BULLETIN

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : Addition	ISSUE NO. : MSB-19EXML54-003	DATE : 2019-10-24
SUBJECT : Addition of the diagnosis procedure about DTC No U1924		<DESTINATION/MODEL> <M/Y> (EU/NEW ZEALAND/ 11-17.5 MMNA/USTP/MMAL)
GROUP : Gr:54(CHASSIS ELECTRICAL)		i-MiEV(HA0V/HA0W)

1. Description :

Please refer to the attached document for the information about the mention in the applicable service manual.

2. Affected service manuals :

Please refer to the attached documents (Attached sheet 1)

※The word "DRAFT" is described for the workshop manual whose local publication number of each distributor is not known in MMC.

3. About the details :

Please refer to the attached documents (Attached sheet 2-12)

<EU>

Applicable manual	Pub. No.	Applicable title (INFO-ID/SIE No.)	Content
2011 i-MiEV Workshop Manual	CHAE11E1-CD (English) CHAF11E1-CD (French) CHAG11E1-CD (German) CHAS11E1-CD (Spanish) CHAI11E1-CD (Italian)	DIAGNOSIS CODE CHART (M133-56-000-03500-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-01000-01)	Attached sheet 3
		INSPECTION CHART FOR DIAGNOSIS CODE (M549-40-060-03100-01)	Attached sheet 4
		Added below "Code No. U1922: K-LINE Receiving Signal Error" (M549-45-400-02500-01)	Attached sheet 5
2012 i-MiEV Workshop Manual	CHAE12E1-CD (English) CHAF12E1-CD (French) CHAG12E1-CD (German) CHAS12E1-CD (Spanish) CHAI12E1-CD (Italian)	DIAGNOSIS CODE CHART (M549-20-060-03700-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-01000-01)	Attached sheet 3
		INSPECTION CHART FOR DIAGNOSIS CODE (M549-40-060-05300-01)	Attached sheet 4
		Added below "Code No. U1922: K-LINE Receiving Signal Error" (M549-45-400-02500-01)	Attached sheet 5
2013.5 i-MiEV Workshop Manual	CHAE13E1-CD (English) CHAF13E1-CD (French) CHAG13E1-CD (German) CHAS13E1-CD (Spanish) CHAI13E1-CD (Italian)	DIAGNOSIS CODE CHART (M549-20-060-11200-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-01000-01)	Attached sheet 3
		INSPECTION CHART FOR DIAGNOSIS CODE (M549-40-060-13800-01)	Attached sheet 4
		Added below "Code No. U1922: K-LINE Receiving Signal Error" (M549-45-400-04700-01)	Attached sheet 5
2015 i-MiEV Workshop Manual	CHAE15E1-CD (English) CHAF15E1-CD (French) CHAG15E1-CD (German) CHAS15E1-CD (Spanish) CHAI15E1-CD (Italian)	DIAGNOSIS CODE CHART (M549-20-060-29700-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-03200-01)	Attached sheet 3
2017 i-MiEV Workshop Manual	CHAE17E1-CD (English) CHAF17E1-CD (French) CHAG17E1-CD (German) CHAS17E1-CD (Spanish) CHAI17E1-CD (Italian)	DIAGNOSIS CODE CHART (M549-20-060-44600-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-03200-01)	Attached sheet 3
2017.5 i-MiEV Workshop Manual	CHAE17E2-CD (English) CHAF17E2-CD (French) CHAG17E2-CD (German) CHAS17E2-CD (Spanish) CHAI17E2-CD (Italian)	DIAGNOSIS CODE CHART (M549-20-060-44600-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-03200-01)	Attached sheet 3

<MMNA>

Applicable manual	Pub. No.	Applicable title (INFO-ID/SIE No.)	Content
2012 i-MiEV Service Manual	MSCD-018B-2012	DIAGNOSTIC TROUBLE CODE CHART (M549-20-060-03700-01)	Attached sheet 6
		Added below "DTC U1921 K-LINE ERROR (BMU) " (M549-22-160-01000-01)	Attached sheet 9
		INSPECTION CHART FOR DIAGNOSTIC TROUBLE CODE (M549-40-060-05300-01)	Attached sheet 10
		Added below "CODE NO. U1922: K-LINE RECEIVING SIGNAL ERROR" (M549-45-400-02500-01)	Attached sheet 12
2013 i-MiEV Service Manual	MSCD-018B-2013	DIAGNOSTIC TROUBLE CODE CHART (M549-20-060-03700-01)	Attached sheet 6
		Added below "DTC U1921 K-LINE ERROR (BMU) " (M549-22-160-01000-01)	Attached sheet 9
		INSPECTION CHART FOR DIAGNOSTIC TROUBLE CODE (M549-40-060-05300-01)	Attached sheet 10
		Added below "CODE NO. U1922: K-LINE RECEIVING SIGNAL ERROR" (M549-45-400-02500-01)	Attached sheet 12
2014 i-MiEV Service Manual	MSCD-018B-2014	DIAGNOSTIC TROUBLE CODE CHART (M549-20-060-15600-01)	Attached sheet 7
		Added below "DTC U1921 K-LINE ERROR (BMU) " (M549-22-160-01000-01)	Attached sheet 9
		INSPECTION CHART FOR DIAGNOSTIC TROUBLE CODE (M549-40-060-16100-01)	Attached sheet 11
		Added below "CODE NO. U1922: K-LINE RECEIVING SIGNAL ERROR" (M549-45-400-05800-01)	Attached sheet 12
2016 i-MiEV Service Manual	MSCD-018B-2016	DIAGNOSIS CODE CHART (M549-40-060-33200-01)	Attached sheet 8
		Added below "Code No. U1921: K-line error (BMU) " (M549-45-400-07000-01)	Attached sheet 9
2017 i-MiEV Service Manual	MSCD-018B-2016*	DIAGNOSIS CODE CHART (M549-40-060-33200-01)	Attached sheet 8
		Added below "Code No. U1921: K-line error (BMU) " (M549-45-400-07000-01)	Attached sheet 9

*As for 2017MY vehicles, refer to 2016 i-MiEV Service Manual (MSCD018B2016).

<AUSTRALIA / NEW ZEALAND>

Applicable manual	Pub. No.	Applicable title (INFO-ID/SIE No.)	Content
2012 i-MiEV Workshop Manual	<AUSTRALIA> AU900209 <NEW ZEALAND> DRAFT	DIAGNOSIS CODE CHART (M549-20-060-03700-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-01000-01)	Attached sheet 3
		INSPECTION CHART FOR DIAGNOSIS CODE (M549-40-060-05300-01)	Attached sheet 4
		Added below "Code No. U1922: K-LINE Receiving Signal Error" (M549-45-400-02500-01)	Attached sheet 5
2013.5 i-MiEV Workshop Manual	<AUSTRALIA> AU900303 <NEW ZEALAND> DRAFT	DIAGNOSIS CODE CHART (M549-20-060-11200-01)	Attached sheet 2
		Added below "Code No. U1921: K-line error (BMU) " (M549-22-160-01000-01)	Attached sheet 3
		INSPECTION CHART FOR DIAGNOSIS CODE (M549-40-060-13800-01)	Attached sheet 4
		Added below "Code No. U1922: K-LINE Receiving Signal Error" (M549-45-400-04700-01)	Attached sheet 5

Diagnosis code No.	Diagnostic item	Reference page
U111C	BMU CAN time-out	
U111D	On board charger CAN time-out	
U1160	EV-ECU lost (MCU)	
U1161	EV-ECU lost (BMU)	
U116A	Local CAN (for quick charger) bus-off	
U116B	Quick charger local CAN (for quick charger) time-out	
U1190	CAN trouble detection control signal reception not possible	
U1801	Air bag communication line, short to earth	
U1802	Air bag communication line, open circuit/short to power supply	
U1803	Air bag signal frame error	
U1804	Air bag signal parity error	
U1805	Air bag signal reception frequency error	
U1806	Air bag signal reception data error	
U1900	K-line between MCUs slave lost	
U1901	K-line slave lost among BMUs	
U1910	K-line between MCUs reception error	
U1911	K-line between BMUs reception error	
U1920	K-line error (MCU)	
U1921	K-line error (BMU)	
U1924	BMU Bat-LIN bit error	Attached sheet 3

<Added>

CODE No. U1924 BMU Bat-LIN bit error**CAUTION**

If there is any problem in the CAN bus lines, an incorrect diagnosis code may be set. Prior to this diagnosis, always diagnose the CAN bus lines.

OPERATION

- BMU communicates with EV-ECU via CAN.

No. U192C, No. U192D, No. U192E, No. U192F, No. U1930, No. U1931, No. U1932, No. U1933, No. U1934, No. U1935, No. U1936, No. U1937, No. U1938, No. U1939, No. U193A, No. U193B, No. U193C, No. U193D, No. U193E or No. U193F is set to the BMU, the diagnosis code No. U1924 will be set.

DIAGNOSIS CODE SET CONDITIONS

- When the diagnosis code No. U1924, No. U1927, No. U1928, No. U1929, No. U192A, No. U192B,

PROBABLE CAUSES

- BMU LIN (for main battery) from is failed.

DIAGNOSIS PROCEDURE**STEP 1. M.U.T.-III CAN bus diagnosis**

Using M.U.T.-III, perform CAN bus line diagnosis.

Q: Is the check result normal?

YES : Go to Step 3.

NO : Repair CAN bus line (Refer to GROUP 54C – Troubleshooting – CAN Bus Diagnostics Table. After repairing the CAN bus line, then go to Step 2.

STEP 2. M.U.T.-III diagnosis code

Check again if the diagnosis code No. U1924 is set to the EV-ECU.

- (1) Erase the diagnosis codes being set.
- (2) Electric motor switch: "LOCK" (OFF) → ON
- (3) Confirm whether the diagnosis codes are set.

Q: Is the diagnosis code set?

YES : Go to Step 3

NO : Check end.

STEP 3. M.U.T.-III other system diagnosis code.

Check if one or some of the diagnosis codes No. U1924, No. U1927, No. U1928, No. U1929, No. U192A, No. U192B, No. U192C, No. U192D, No. U192E, No. U192F, No. U1930, No. U1931, No. U1932, No. U1933, No. U1934, No. U1935, No. U1936, No. U1937, No. U1938, No. U1939, No. U193A, No. U193B, No. U193C, No. U193D, No. U193E or No. U193F are set to the BMU.

Q: Is the diagnosis code set?

YES : Carry out troubleshooting for the diagnosis code No. U1924, No. U1927, No. U1928, No. U1929, No. U192A, No. U192B, No. U192C, No. U192D, No. U192E, No. U192F, No. U1930, No. U1931, No. U1932, No. U1933, No. U1934, No. U1935, No. U1936, No. U1937, No. U1938, No. U1939, No. U193A, No. U193B, No. U193C, No. U193D, No. U193E, No. U193F. Then go to Step 4^{A4}

NO : Go to Step 4

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

Reconfirm whether the diagnosis codes are set from EV-ECU.

- (1) Erase the diagnosis codes being set.
- (2) Electric motor switch: "LOCK" (OFF) → ON
- (3) Confirm whether the diagnosis codes are set.

Q: Is the diagnosis code set?

YES : Go to Step 1

NO : Check end.

**ELECTRIC MOTOR UNIT AND MAIN BATTERY
BATTERY MANAGEMENT UNIT (BMU) AND MAIN BATTERY**

Attached sheet 4

Code No.	Diagnosis item	Reference page
U11A7	CMU08 time-out	
U11A8	CMU09 time-out	
U11A9	CMU10 time-out	
U11AA	CMU11 time-out	
U11AB	CMU12 time-out	
U1922	K-LINE receiving signal error	
U1924	BMU Bat-LIN bit error	Attached sheet 5
U1926	EV-ECU CAN abnormal	

<Added>

CODE No. U1924 BMU Bat-LIN bit error**TROUBLE JUDGMENT****Check Conditions**

- 3 seconds elapse after the electric motor switch is turned ON, or 3 seconds elapse after the main battery starts to be charged.

Judgement Criterion

- The bit value which has been sent differs from the bit value which has been monitored [The BMU and the CMU send the data to the sub LIN bus (for main battery) and monitor the LIN bus at the same time].

FAIL-SAFE AND BACKUP FUNCTION

- Not available

PROBABLE CAUSES

- Open circuits of SUB LIN (for main battery) circuit, short circuits to earth, short circuits to power supply system or damage; poor contact of connector.
- Noise generated in the LIN(for main battery) bus lines
- The main battery module (CMU) is failed.
- The BMU is failed.

DIAGNOSIS PROCEDURE**STEP 1. M.U.T.-III other system diagnosis code.**

Check if one or some of the diagnosis codes No. U1924 are set to the EV-ECU.

Q: Is the diagnosis code set?

YES : Carry out troubleshooting for the diagnosis code No. U1924. Then go to Step 2.

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

STEP 2. M.U.T.-III diagnosis code

Reconfirm whether the diagnosis codes are set from BMU.

1. Erase the diagnosis codes being set.
2. Electric motor switch: "LOCK" (OFF) → ON
3. Confirm whether the diagnosis codes are set.

Q: Is the diagnosis code set?

YES : Replace the BMU. Then go to Step 3

NO : Check end.

STEP 3. M.U.T.-III diagnosis code

Reconfirm whether the diagnosis codes are set from BMU.

1. Erase the diagnosis codes being set.
2. Electric motor switch: "LOCK" (OFF) → ON
3. Confirm whether the diagnosis codes are set.

Q: Is the diagnosis code set?

YES : Go to Step 1

NO : Check end.

**ELECTRIC MOTOR UNIT AND TRACTION BATTERY
EV-ECU**

54D-49

DTC	Diagnostic item	Reference page
U1090	Local CAN (for traction battery) error (BMU)	P.54D-332
U1102	ASC/TCL/ABS timeout/ Not equipped	P.54D-333
U1104	SAS CAN timeout/ Not equipped	P.54D-335
U1105	Yaw rate/ G sensor CAN timeout/ Not equipped	P.54D-336
U1106	EPS CAN timeout/ Not equipped	P.54D-337
U1108	Meter CAN timeout/ Not equipped	P.54D-339
U1109	ETACS CAN timeout/ Not equipped	P.54D-341
U1110	COMP/HTR CAN timeout	P.54D-342
U1113	EV remote CAN timeout/ Not equipped	P.54D-344
U1117	Immobilizer CAN timeout/ Not equipped	P.54D-345
U111B	EMCU CAN timeout	P.54D-346
U111C	BMU CAN timeout	P.54D-348
U111D	On board charger CAN timeout	P.54D-350
U1160	EV-ECU lost (EMCU)	P.54D-351
U1161	EV-ECU lost (BMU)	P.54D-352
U116A	Local CAN (for quick charger) bus-off	P.54D-353
U116B	Quick charger local CAN (for quick charger) timeout	
U1190	CAN trouble detection control signal reception not possible	P.54D-355
U1801	Air bag communication line, short to ground	P.54D-357
U1802	Air bag communication line, open circuit/short to power supply	
U1803	Air bag signal frame error	
U1804	Air bag signal parity error	
U1805	Air bag signal reception frequency error	
U1806	Air bag signal reception data error	
U1900	K-line between EMCUs slave lost	P.54D-360
U1901	K-line slave lost among BMUs	P.54D-362
U1910	K-line between EMCUs reception error	P.54D-360
U1911	K-line between BMUs reception error	P.54D-362
U1920	K-line error (EMCU)	P.54D-364
U1921	K-line error (BMU)	P.54D-365

NOTE: Some codes are set even if the vehicle is not equipped with applicable system. This is not abnormal.

<Added>

U1924	BMU Bat-LIN bit error	Attached sheet 9
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**ELECTRIC MOTOR UNIT AND MAIN DRIVE LITHIUM-ION BATTERY
EV-ECU**

54D-49

DTC	Diagnostic item	Reference page
U1081	V-CAN bus-off (BMU)	P.54D-387
U1090	Local CAN (for Main Drive Lithium-ion Battery) error (BMU)	P.54D-388
U1102	ASC/TCL/ABS timeout/ Not equipped	P.54D-389
U1104	SAS CAN timeout/ Not equipped	P.54D-391
U1105	Yaw rate/ G sensor CAN timeout/ Not equipped	P.54D-392
U1106	EPS CAN timeout/ Not equipped	P.54D-394
U1108	Meter CAN timeout/ Not equipped	P.54D-395
U1109	ETACS CAN timeout/ Not equipped	P.54D-397
U1110	COMP/HTR CAN timeout	P.54D-399
U1113	EV remote CAN timeout/ Not equipped	P.54D-401
U1117	Immobilizer CAN timeout/ Not equipped	P.54D-402
U111B	EMCU CAN timeout	P.54D-404
U111C	BMU CAN timeout	P.54D-405
U111D	On board charger CAN timeout	P.54D-407
U1160	EV-ECU lost (EMCU)	P.54D-408
U1161	EV-ECU lost (BMU)	P.54D-409
U116A	Local CAN (for quick charger) bus-off	P.54D-411
U116B	Quick charger local CAN (for quick charger) timeout	
U1190	CAN trouble detection control signal reception not possible	P.54D-413
U1801	Air bag communication line, short to ground	P.54D-415
U1802	Air bag communication line, open circuit/short to power supply	
U1803	Air bag signal frame error	
U1804	Air bag signal parity error	
U1805	Air bag signal reception frequency error	
U1806	Air bag signal reception data error	
U1900	K-line between EMCUs slave lost	P.54D-418
U1901	K-line slave lost among BMUs	P.54D-420
U1910	K-line between EMCUs reception error	P.54D-418
U1911	K-line between BMUs reception error	P.54D-420
U1920	K-line error (EMCU)	P.54D-422
U1921	K-line error (BMU)	P.54D-423

NOTE: Some codes are stored even if the vehicle is not equipped with applicable system. This is not abnormal.

<Added>

U1924	BMU Bat-LIN bit error	Attached sheet 9
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**EV-ECU
DIAGNOSTIC TROUBLE CODE PROCEDURES**

54Da-51

DTC	Diagnostic item	Reference page
U1801	Airbag communication line short	P.54Da-465
U1802	Airbag communication line open	
U1803	Airbag signal frame error	
U1804	Airbag signal parity error	
U1805	Airbag signal receive cycle	
U1806	Airbag signal data error	
U1900	Loss of MCU message (K-line)	P.54Da-468
U1901	Loss of BMU message (K-line)	P.54Da-471
U1910	Received error from MCU (K-line)	P.54Da-468
U1911	Received error from BMU (K-line)	P.54Da-471
U1920	K-line error (MCU)	P.54Da-473
U1921	K-line error (BMU)	P.54Da-474

NOTE: Some codes are set even if the vehicle is not equipped with applicable system. This is not abnormal.

U1924	BMU Bat-LIN bit error	Attached sheet 9
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<Added>

DIAGNOSTIC TROUBLE CODE PROCEDURES

DTC B1178 Reserve CHG. Circuit SHT TO GND

⚠ CAUTION

If there is any problem in the CAN bus lines, an incorrect DTC may be set. Prior to this diagnosis, always diagnose the CAN bus lines (Refer to GROUP 54C – CAN Bus Diagnostics Table P.54C-12).

OPERATION

- EV remote-ECU communicates with EV-ECU via CAN.

DTC SET CONDITION

- When a failure signal from the EV remote-ECU is received, DTC B1178 will be set.

PROBABLE CAUSES

- Damaged wiring harness or connector(s)
- Malfunction of the EV remote-ECU CAN data system
- Malfunction of the EV-ECU

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus lines.

Use the scan tool to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 3.

NO : Repair the CAN bus line (Refer to GROUP 54C – CAN Bus Diagnostics Table P.54C-12). Then go to Step 2.

<Added>

DTC U1924 BMU Bat-LIN bit error**CAUTION**

If there is any problem in the CAN bus lines, an incorrect diagnosis code may be set. Prior to this diagnosis, always diagnose the CAN bus lines.

OPERATION

- BMU communicates with EV-ECU via CAN.

DTC SET CONDITION

- When the DTC U1924, U1927, U1928, U1929, U192A, U192B, U192C, U192D, U192E, U192F, U1930, U1931, U1932, U1933, U1934, U1935, U1936, U1937, U1938, U1939, U193A, U193B, U193C, U193D, U193E or U193F is set to the BMU, the DTCU1924 will be set.

PROBABLE CAUSES

- BMU LIN (for main battery) from is failed.

DIAGNOSIS**STEP 1. Using scan tool MB991958, diagnose the CAN bus lines.**

Use the scan tool to diagnose the CAN bus lines.

Q: Is the check result normal?

YES : Go to Step 3.

NO : Repair CAN bus line (Refer to GROUP 54C – Troubleshooting – CAN Bus Diagnostics Table.). Then go to Step 2.

STEP 2. DTC recheck after resetting CAN bus lines

Check again if the DTC U1924 is set to the EV-ECU.

- (1) Erase the DTC.
- (2) Set the electric motor switch from the "LOCK" (OFF) position to the "ON" position.
- (3) Check if the DTC is set.

Q: Is the DTC set?

YES : Go to Step 3.

NO : This diagnosis is complete.

STEP 3. Using scan tool other system DTC.

Check if one or some of the diagnosis codes from U1924, U1927, U1928, U1929, U192A, U192B, U192C, U192D, U192E, U192F, U1930, U1931, U1932, U1933, U1934, U1935, U1936, U1937, U1938, U1939, U193A, U193B, U193C, U193D, U193E or U193F are set to the BMU.

Q: Is the DTC set?

YES : Carry out troubleshooting for the diagnosis code No. U1924, U1927, U1928, U1929, U192A, U192B, U192C, U192D, U192E, U192F, U1930, U1931, U1932, U1933, U1934, U1935, U1936, U1937, U1938, U1939, U193A, U193B, U193C, U193D, U193E, U193F. Then go to Step 4

NO : Go to Step 4.

<Added>

STEP 4. Check whether the DTC is reset.

Check again if the DTC is set to the EV-ECU.

- (1) Erase the DTC.
- (2) Set the electric motor switch from the "LOCK" (OFF) position to the "ON" position.
- (3) Check if the DTC is set.

Q: Is the DTC set?

YES : Go to Step 1.

NO : The diagnosis is complete.

54D-508

ELECTRIC MOTOR UNIT AND TRACTION BATTERY
BATTERY MANAGEMENT UNIT (BMU) AND TRACTION BATTERY

Code No.	Diagnosis item	Reference page
U1100	EV-ECU time-out	P.54D-594
U1108	Combination meter time-out	P.54D-596
U1109	ETACS-ECU time-out	P.54D-599
U111B	MCU time-out	P.54D-601
U11A0	CMU01 time-out	P.54D-604
U11A1	CMU02 time-out	P.54D-604
U11A2	CMU03 time-out	P.54D-604
U11A3	CMU04 time-out	P.54D-604
U11A4	CMU05 time-out	P.54D-604
U11A5	CMU06 time-out	P.54D-604
U11A6	CMU07 time-out	P.54D-604
U11A7	CMU08 time-out	P.54D-604
U11A8	CMU09 time-out	P.54D-604
U11A9	CMU10 time-out	P.54D-604
U11AA	CMU11 time-out	P.54D-604
U11AB	CMU12 time-out	P.54D-604
U1922	K-LINE receiving signal error	P.54D-610
U1926	EV-ECU CAN abnormal	P.54D-612

<Added>

U1924	BMU Bat-LIN bit error	Attached sheet 12
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ELECTRIC MOTOR UNIT AND MAIN DRIVE LITHIUM-ION BATTERY
BATTERY MANAGEMENT UNIT (BMU) AND MAIN DRIVE LITHIUM-ION BATTERY

54D-569

Code No.	Diagnosis item	Reference page
P1AC6	Voltage of each battery cell abnormal (HI side)	P.54D-655
P1AC7	CMU01 battery cell resistance abnormal	P.54D-656
P1AC8	CMU02 battery cell resistance abnormal	P.54D-656
P1AC9	CMU03 battery cell resistance abnormal	P.54D-656
P1ACA	CMU04 battery cell resistance abnormal	P.54D-656
P1ACB	CMU05 battery cell resistance abnormal	P.54D-656
P1ACC	CMU06 battery cell resistance abnormal	P.54D-656
P1ACD	CMU07 battery cell resistance abnormal	P.54D-656
P1ACE	CMU08 battery cell resistance abnormal	P.54D-656
P1ACF	CMU09 battery cell resistance abnormal	P.54D-656
P1AD0	CMU10 battery cell resistance abnormal	P.54D-656
P1AD1	CMU11 battery cell resistance abnormal	P.54D-656
P1AD2	CMU12 battery cell resistance abnormal	P.54D-656
U1073	Bus off	P.54D-657
U1082	Local CAN (for Main Drive Lithium-ion Battery) bus off	P.54D-660
U1100	EV-ECU time-out	P.54D-663
U1108	Combination meter time-out	P.54D-665
U1109	ETACS-ECU time-out	P.54D-668
U111B	EMCU time-out	P.54D-670
U11A0	CMU01 time-out	P.54D-674
U11A1	CMU02 time-out	P.54D-674
U11A2	CMU03 time-out	P.54D-674
U11A3	CMU04 time-out	P.54D-674
U11A4	CMU05 time-out	P.54D-674
U11A5	CMU06 time-out	P.54D-674
U11A6	CMU07 time-out	P.54D-674
U11A7	CMU08 time-out	P.54D-674
U11A8	CMU09 time-out	P.54D-674
U11A9	CMU10 time-out	P.54D-674
U11AA	CMU11 time-out	P.54D-674
U11AB	CMU12 time-out	P.54D-674
U1922	K-LINE receiving signal error	P.54D-681
U1926	EV-ECU CAN abnormal	P.54D-683

SERVICE DATA ITEM LIST CORRESPONDING TO DIAGNOSIS CODE OF EACH MODULE

M1549454700079

Battery Cell Voltage

U192I	BMU Bat-LIN bit error	Attached sheet 12
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<Added>

MSB-19EXML54-003(19AB049)

TSB Revision

<Added>

DTC U1924 BMU Bat-LIN bit error

CAUTION

If there is any problem in the CAN bus lines, an incorrect DTC may be stored. Prior to this diagnosis, always diagnose the CAN bus lines (Refer to GROUP 54C – CAN Bus Diagnostics Table.).

OPERATION

- The BMU and the CMU send the data to the sub LIN bus (for main battery) and monitor the LIN bus at the same time.

DTC SET CONDITION

- When the bit value which has been sent differs from the bit value which has been monitored, DTC U1924 will be set.

PROBABLE CAUSE

- Open circuits of SUB LIN (for main battery) circuit, short circuits to earth, short circuits to power supply system or damage; poor contact of connector.
- Noise generated in the LIN(for main battery) bus lines
- The main battery module (CMU) is failed.
- The BMU is failed.

DIAGNOSIS

STEP 1. Using scan tool MB991958, diagnose the CAN bus lines.

Check if the DTC is stored in the EV-ECU from DTC U1924.

Q: Is the DTC stored?

YES : Carry out troubleshooting for the DTC U1924
Then go to Step 2

NO : Repair the CAN bus line (Refer to GROUP 54C – CAN Bus Diagnostics Table.). Then go to Step 2.

STEP 2. DTC recheck after resetting CAN bus lines

Recheck if DTC U1920 is stored.

- (1) Erase the DTC.
- (2) Turn the electric motor switch from "LOCK"(OFF) position to "ON" position.
- (3) Check if the DTC is stored.

Q: Is the DTC stored?

YES : Go to Step 3.

NO : This diagnosis is complete.

STEP 3. Use scan tool MB991958 to confirm a DTC of other systems.

Check if DTC U1924 is stored in the EMCU.

Q: Is the DTC stored?

YES : Go to Step 1.

NO : This diagnosis is complete.