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2014 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

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CLEARING DTC [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)]

SM2898553

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MAZDA CONNECT (Type-A)

CMDTC Clearing DTC Procedure

- 1.Connect the M-MDS to the DLC-2.
- 2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - (1)Select "Self Test".
 - (2)Select "All CMDTCs".
- 3.Verify the DTC according to the directions on the screen.
- 4.Press the clear button on the DTC screen to clear the DTC.
- 5.Switch the ignition off.
- 6.Switch the ignition ON (engine off or on) and wait for 5 s or more.
- 7.Perform DTC inspection. (See **DTC DISPLAY [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)]**.)
- 8.Verify that no DTCs are displayed.

ODDTC Clearing DTC Procedure

- 1.Connect the M-MDS to the DLC-2.
- 2.After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
 - (1)Select "Self Test".
 - (2)Select "Modules".

DTC No.	Warning/indicator light	System malfunction location	Fail-safe function	Drive cycle	Self test type*1	Memory function	Page
B1A63:12	–	Solar radiation sensor (RH) circuit short to power supply	X	–	C, D	X	(See DTC B1A63:12, B1A63:13, B1A64:12, B1A64:13 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
B1A63:13	–	Solar radiation sensor (RH) circuit open	X	–	D	X	
B1A64:12	–	Solar radiation sensor (LH) circuit short to power supply	X	–	C, D	X	
B1A64:13	–	Solar radiation sensor (LH) circuit open	X	–	D	X	
B1A69:86	–	Invalid data (relative humidity) received from humidity sensor	X	–	C, D	X	(See DTC B11F5:86, B1A69:86, U210A:86 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
B1B71:11	–	Evaporator temperature sensor circuit short to ground	X	–	C, D	X	(See DTC B1B71:11, B1B71:13 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
B1B71:13	–	Evaporator temperature sensor circuit open	X	–	C, D	X	
B1C1A:12	–	Driver-side air mix actuator (potentiometer) circuit short to power supply	X	–	C, D	X	(See DTC B1C1A:12, B1C1A:13, B1C1B:12, B1C1B:13 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
B1C1A:13	–	Driver-side air mix actuator (potentiometer) circuit open	X	–	C, D	X	
B1C1B:12	–	Passenger-side air mix actuator (potentiometer) circuit short to power supply	X	–	C, D	X	
B1C1B:13	–	Passenger-side air mix actuator (potentiometer) circuit open	X	–	C, D	X	
B1C1C:12	–	Airflow mode actuator (potentiometer) circuit short to power supply	X	–	C, D	X	(See DTC B1C1C:12, B1C1C:13 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
B1C1C:13	–	Airflow mode actuator (potentiometer) circuit open	X	–	C, D	X	
U0010:88	–	Unit communication error (MS-CAN)	–	–	C	X	(See DTC U0010:88, U0155:00 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].)
U0155:00	–	Communication error with instrument cluster	X	–	C, D	X	

PID/DATA MONITOR TABLE [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)]

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With DUAL switch

PID	Unit/Condition	Data contents	Climate control unit terminal
A/C_SW	Off/On	- Off: A/C switch is off. - On: A/C switch is on.	—
AUTO_SW	Off/On	- Off: AUTO switch is off. - On: AUTO switch is on.	—
B_MT_RLY_CS	Off/On	- Off: Blower relay is off. - On: Blower relay is on.	—
DEF_SW	Off/On	- Off: DEFROSTER switch is off. - On: DEFROSTER switch is on.	—
DUAL_SW	Off/On	- Off: DUAL switch is off. - On: DUAL switch is on.	—
ENG_C_TMP	°C, °F	Engine coolant temperature is displayed.	—
EVA_TMP_SEN	°C, °F	Evaporator temperature is displayed.	1E
F_REC_CS	Off/On	- Off: Forced recirculate control is off. - On: Forced recirculate control is on.	—
F_WIND_TEMP *1	°C, °F	Windshield temperature is displayed.	—
FRE_SW	Off/On	- Off: FRESH switch is off. - On: FRESH switch is on.	—
FUEL_TYPE	—	Fuel type is displayed.	—
HC_TMP_SEN	°C, °F	Heater core temperature is displayed.	—
HUMIDITY_SEN *1	%	Relative humidity is displayed.	—
INC_TMP_SEN	°C, °F	Cabin temperature is displayed.	1A
M_DOWN_SW	Off/On	- Off: MODE switch (DOWN) is off. - On: MODE switch (DOWN) is on.	—
M_UP_SW	Off/On	- Off: MODE switch (UP) is off. - On: MODE switch (UP) is on.	—
OFF_SW	Off/On	- Off: OFF switch is off. - On: OFF switch is on.	—
OUT_CAR_TMP	°C, °F	Ambient temperature is displayed.	—
R/DEF_CS	Off (enable)/ Off (suspend)/ Off (inhibit)/ On	- Off (enable): Rear window defogger is off (operation enabled). - Off (suspend): Rear window defogger is off (operation interrupted / indicator is kept On). - Off (inhibit): Rear window defogger is off (operation disabled / indicator is turned Off). - On: Rear window defogger is on.	—
R/DEF_SW	Off/On	- Off: Rear window defogger switch is off. - On: Rear window defogger switch is on.	—
REC_SW	Off/On	- Off: RECIRCULATE switch is off. - On: RECIRCULATE switch is on.	—
RLS_TEMP *1	°C, °F	Humidity sensor temperature is displayed.	—
SLR_R_SEN_L	W/m ²	Solar radiation amount is displayed.	1H
SLR_R_SEN_R			1F

DTC B10FB:71 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)]

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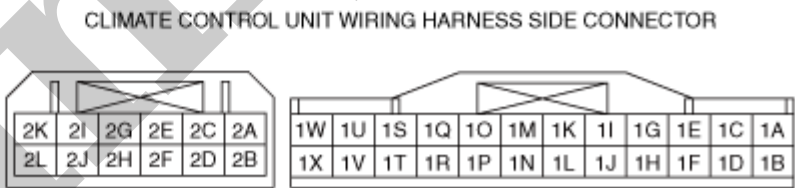
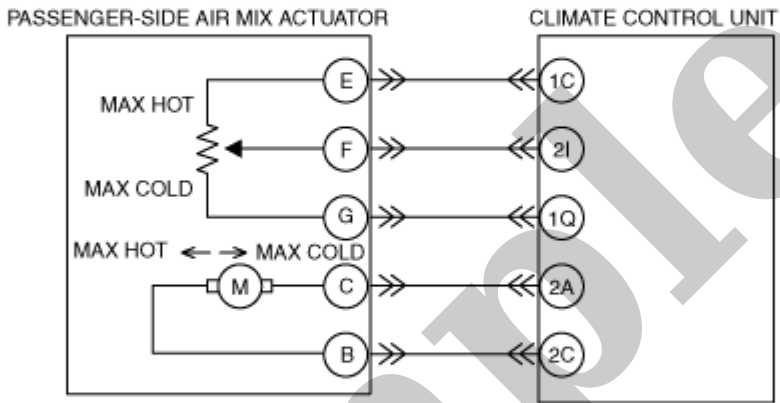
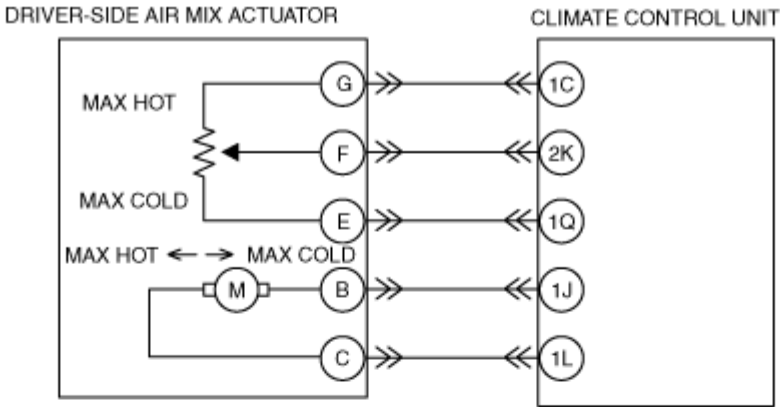
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System malfunction location	• Air intake actuator motor lock
Detection condition	• After the air intake actuator drive signal is output, the air intake actuator does not stop within the target air intake actuator opening angle range for a continuous 9 s or more.
Fail-safe function	Malfunction determined when ignition switched ON • Air intake actuator drive signal is stopped right when the malfunction is determined. Malfunction already exists when ignition switched ON • Nine seconds after the ignition is switched ON, the air intake actuator drive signal is output normally again. Afterwards, motor output is stopped during malfunction determination.
Possible cause	• Connector or terminal malfunction • Air intake actuator malfunction • Blower unit (air intake link, air intake door) malfunction • Open circuit in wiring harness between the following terminals: — Climate control unit terminal 1C–air intake actuator terminal C — Climate control unit terminal 1D–air intake actuator terminal D — Climate control unit terminal 1Q–air intake actuator terminal E — Climate control unit terminal 2H–air intake actuator terminal A — Climate control unit terminal 2F–air intake actuator terminal B • Short to ground in wiring harness between the following terminals: — Climate control unit terminal 1C–air intake actuator terminal C — Climate control unit terminal 1D–air intake actuator terminal D — Climate control unit terminal 2H–air intake actuator terminal A — Climate control unit terminal 2F–air intake actuator terminal B • Short to power supply in wiring harness between the following terminals: — Climate control unit terminal 1C–air intake actuator terminal C — Climate control unit terminal 1D–air intake actuator terminal D — Climate control unit terminal 1Q–air intake actuator terminal E — Climate control unit terminal 2H–air intake actuator terminal A — Climate control unit terminal 2F–air intake actuator terminal B • Climate control unit malfunction

Step	Inspection	Action
9	VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN • Switch the ignition off. • Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Reconnect the disconnected connectors. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Clear the DTC from the climate control unit memory using the M-MDS. (See CLEARING DTC [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Perform the DTC inspection for the climate control unit using the M-MDS. (See DTC DISPLAY [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Is the same DTC displayed?	Repeat the inspection from Step 1. • If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER] .) Go to the next step.
		Go to the next step.
10	VERIFY THAT NO OTHER DTCs ARE PRESENT • Verify other DTCs displayed. • Are any other DTCs displayed?	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)] .)
		DTC troubleshooting completed.

Step	Inspection	Action	
6	VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN • Reconnect the disconnected connectors. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Clear the DTC from the climate control unit memory using the M-MDS. (See CLEARING DTC [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Perform the DTC inspection for the climate control unit using the M-MDS. (See DTC DISPLAY [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Is the same DTC displayed?	Yes	Repeat the inspection from Step 1. • If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER].) Go to the next step.
		No	Go to the next step.
7	VERIFY THAT NO OTHER DTCs ARE PRESENT • Verify other DTCs displayed. • Are any other DTCs displayed?	Yes	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)] .)
		No	DTC troubleshooting completed.

- B1081:71: Driver-side air mix actuator motor lock
- B1082:71: Passenger-side air mix actuator motor lock



Diagnostic procedure

Step	Inspection	Action
1	VERIFY RELATED DTC • Switch the ignition off. • Perform the DTC inspection for the climate control unit using the M-MDS. (See DTC DISPLAY [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Is DTC B1C1A:12, B1C1A:13, B1C1B:12, B1C1B:13 or U200D:11 also present?	Yes
		No
		Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)] .)
		Go to the next step.

DTC B1086:71 [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)]

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System malfunction location	• Airflow mode actuator motor lock
Detection condition	• After the airflow mode actuator drive signal is output, the airflow mode actuator does not stop within the target mode actuator opening angle range for a continuous 9 s or more.
Fail-safe function	Malfunction determined when ignition switched ON • Airflow mode actuator drive signal is stopped right when the malfunction is determined. Malfunction already exists when ignition switched ON • Nine seconds after the ignition is switched ON, the airflow mode actuator drive signal is output normally again. Afterwards, motor output is stopped during malfunction determination.
Possible cause	• Connector or terminal malfunction • Airflow mode actuator malfunction • A/C unit (airflow mode main link, airflow mode door) malfunction • Open circuit in wiring harness between the following terminals: — Climate control unit terminal 1C–airflow mode actuator terminal B — Climate control unit terminal 1B–airflow mode actuator terminal C — Climate control unit terminal 1Q–airflow mode actuator terminal A — Climate control unit terminal 2B–airflow mode actuator terminal F — Climate control unit terminal 2D–airflow mode actuator terminal D • Short to ground in wiring harness between the following terminals: — Climate control unit terminal 1C–airflow mode actuator terminal B — Climate control unit terminal 1B–airflow mode actuator terminal C — Climate control unit terminal 2B–airflow mode actuator terminal F — Climate control unit terminal 2D–airflow mode actuator terminal D • Short to power supply in wiring harness between the following terminals: — Climate control unit terminal 1C–airflow mode actuator terminal B — Climate control unit terminal 1B–airflow mode actuator terminal C — Climate control unit terminal 1Q–airflow mode actuator terminal A — Climate control unit terminal 2B–airflow mode actuator terminal F — Climate control unit terminal 2D–airflow mode actuator terminal D • Climate control unit malfunction

Step	Inspection	Action
9	VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN • Switch the ignition off. • Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Reconnect the disconnected connectors. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Clear the DTC from the climate control unit memory using the M-MDS. (See CLEARING DTC [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Perform the DTC inspection for the climate control unit using the M-MDS. (See DTC DISPLAY [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)].) • Is the same DTC displayed?	Repeat the inspection from Step 1. • If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/INSTALLATION [FULL-AUTO AIR CONDITIONER] .) Go to the next step.
		Go to the next step.
10	VERIFY THAT NO OTHER DTCs ARE PRESENT • Verify other DTCs displayed. • Are any other DTCs displayed?	Repair or replace the malfunctioning part according to the applicable DTC troubleshooting. (See DTC TABLE [CLIMATE CONTROL UNIT (FULL-AUTO AIR CONDITIONER)] .)
		DTC troubleshooting completed.