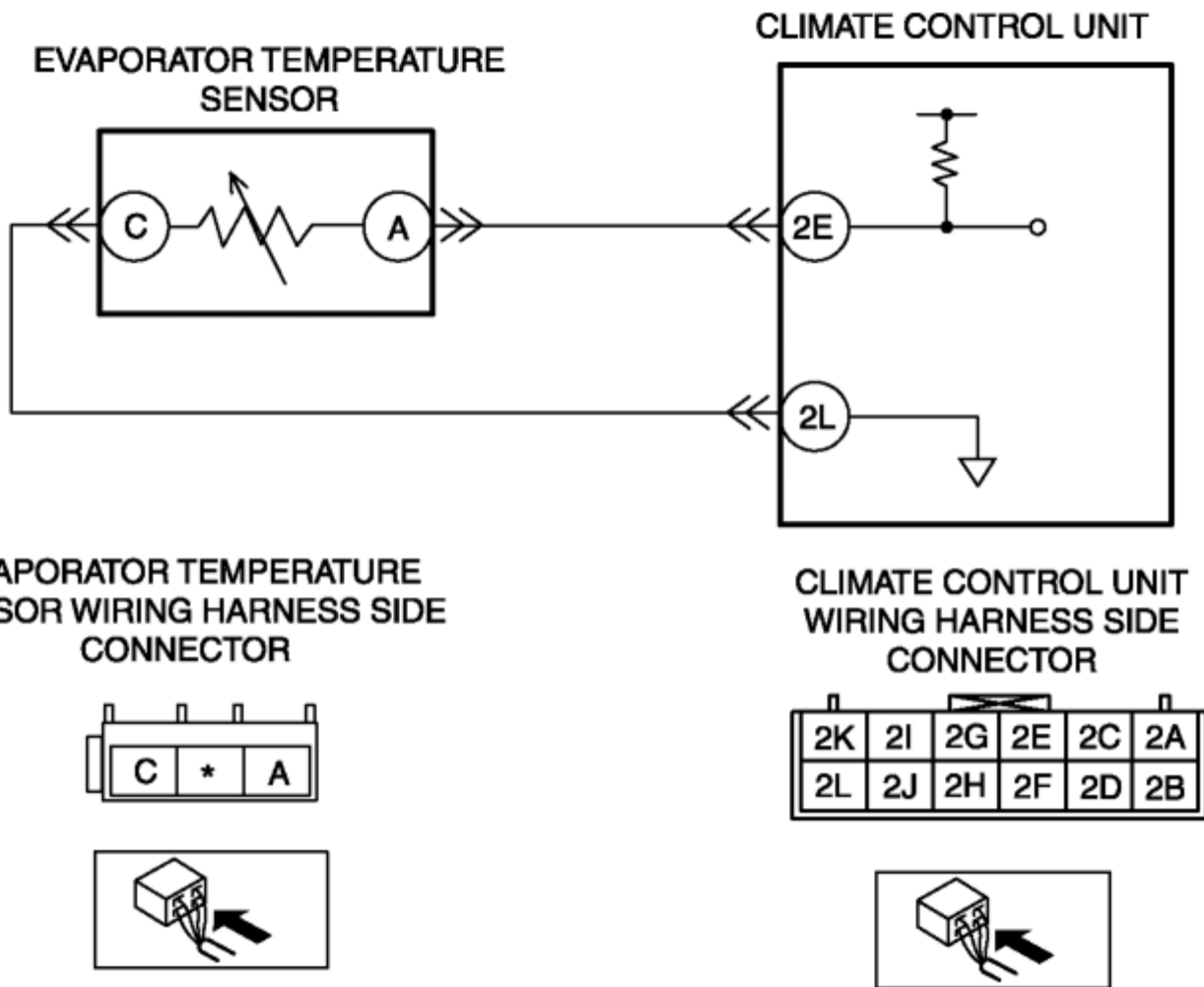


2012 - Mazda6 - HVAC

DTC B1B71:11, B1B71:13

DTC B1B71:11	Evaporator temperature sensor circuit short to ground
DTC B1B71:13	Evaporator temperature sensor circuit open
POSSIBLE CAUSE	• Evaporator temperature sensor connector malfunction • Evaporator temperature sensor malfunction • Open or short circuit in wiring harness between climate control unit and evaporator temperature sensor • Climate control unit connector malfunction • Climate control unit malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION	
1	INSPECT EVAPORATOR TEMPERATURE SENSOR CONNECTOR - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the evaporator temperature sensor connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Are the connector and terminals normal?	Yes	Go to the next step.
		No	Repair/replace the connector or terminal. After repair procedure, go to the next step.
2	INSPECT EVAPORATOR	Yes	Go to the next step.

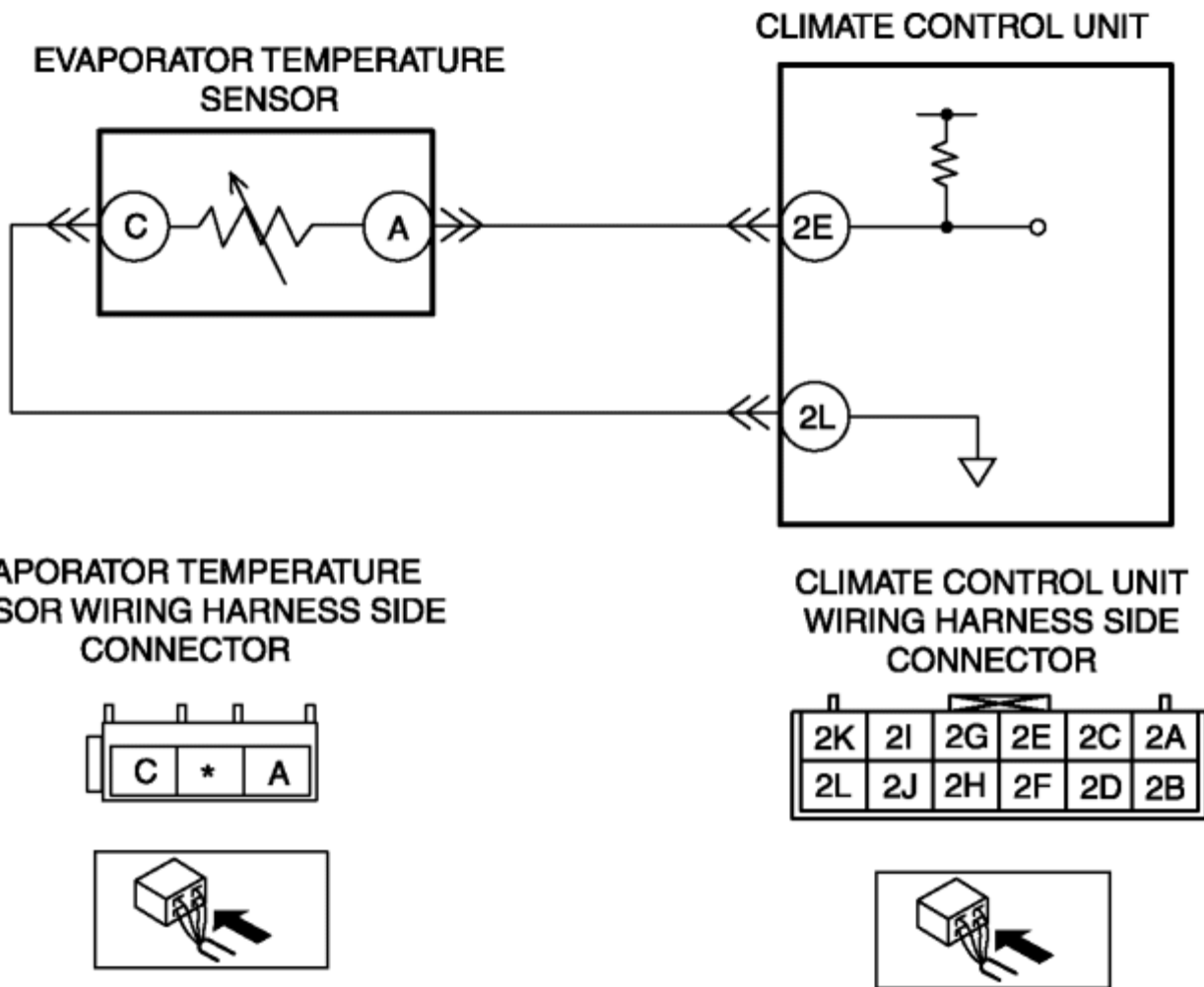
	TEMPERATURE SENSOR - Inspect the evaporator temperature sensor. (See EVAPORATOR TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) - Is it normal?		No Replace the evaporator temperature sensor. (See A/ C UNIT DI SASSEMBLY/ ASSEMBLY.) Go to the next step.
3	INSPECT EVAPORATOR TEMPERATURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Disconnect the climate control unit connector and the evaporator temperature sensor connector. - Is there an open circuit in the wiring harness between the following terminals of the climate control unit and the evaporator temperature sensor? 2E—A 2L—C	Yes	Repair the wiring harness. Go to the next step.
		No	Go to the next step.
4	INSPECT EVAPORATOR TEMPERATURE SENSOR CIRCUIT FOR SHORT TO GROUND Is there a short circuit to ground in the wiring harness between climate control unit terminal 2E and evaporator temperature sensor terminal A?	Yes	Repair the wiring harness. Go to the next step.
		No	Connect the climate control unit connector, then go to the next step.
5	VERIFY CLIMATE CONTROL UNIT CONNECTOR CONDITION - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Are the connector and terminals normal?	Yes	Go to the next step.
		No	Repair/replace the malfunctioning vehicle wiring harness, connector, or terminal. After repair procedure, go to the next step.
6	INSPECT EVAPORATOR	Yes	The system is normal at present.

	TEMPERATURE SENSOR CIRCUIT • Switch the ignition to ON. • Inspect the voltage at the following climate control unit terminal (wiring harness-side). ▪ Terminal 2E (evaporator temperature sensor input signal) • Is the voltage normal? (Approx. 5 V)		Go to the next step.
		No	Go to the next step.
7	VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN • Reconnect the disconnected connectors. • Clear the past malfunction from memory. • Verify DTCs. • Is DTC B1B71:11 or B1B71:13 output?	Yes	Repeat the inspection from Step 1. • If the malfunction does not recur, go to the next step. • If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].) then go to the next step.
		No	Go to the next step.
8	VERIFY THAT NO OTHER DTCs ARE PRESENT • Verify other DTCs displayed. • Are any other DTCs output?	Yes	Perform the corresponding DTC inspection.
		No	DTC troubleshooting completed.

2012 - Mazda6 - HVAC

DTC B1B71:11, B1B71:13

DTC B1B71:11	Evaporator temperature sensor circuit short to ground
DTC B1B71:13	Evaporator temperature sensor circuit open
POSSIBLE CAUSE	• Evaporator temperature sensor connector malfunction • Evaporator temperature sensor malfunction • Open or short circuit in wiring harness between climate control unit and evaporator temperature sensor • Climate control unit connector malfunction • Climate control unit malfunction



Diagnostic procedure

STEP	INSPECTION	ACTION	
1	INSPECT EVAPORATOR TEMPERATURE SENSOR CONNECTOR - Switch the ignition to off. - Disconnect the negative battery cable. - Disconnect the evaporator temperature sensor connector. - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Are the connector and terminals normal?	Yes	Go to the next step.
		No	Repair/replace the connector or terminal. After repair procedure, go to the next step.
2	INSPECT EVAPORATOR	Yes	Go to the next step.

	TEMPERATURE SENSOR - Inspect the evaporator temperature sensor. (See EVAPORATOR TEMPERATURE SENSOR INSPECTION [FULL-AUTO AIR CONDITIONER].) - Is it normal?		No Replace the evaporator temperature sensor. (See A/ C UNIT DI SASSEMBLY/ ASSEMBLY.) Go to the next step.
3	INSPECT EVAPORATOR TEMPERATURE SENSOR CIRCUIT FOR OPEN CIRCUIT - Disconnect the climate control unit connector and the evaporator temperature sensor connector. - Is there an open circuit in the wiring harness between the following terminals of the climate control unit and the evaporator temperature sensor? 2E—A 2L—C	Yes	Repair the wiring harness. Go to the next step.
		No	Go to the next step.
4	INSPECT EVAPORATOR TEMPERATURE SENSOR CIRCUIT FOR SHORT TO GROUND Is there a short circuit to ground in the wiring harness between climate control unit terminal 2E and evaporator temperature sensor terminal A?	Yes	Repair the wiring harness. Go to the next step.
		No	Connect the climate control unit connector, then go to the next step.
5	VERIFY CLIMATE CONTROL UNIT CONNECTOR CONDITION - Inspect the connector and terminals (corrosion, damage, pin disconnection). - Are the connector and terminals normal?	Yes	Go to the next step.
		No	Repair/replace the malfunctioning vehicle wiring harness, connector, or terminal. After repair procedure, go to the next step.
6	INSPECT EVAPORATOR	Yes	The system is normal at present.

	TEMPERATURE SENSOR CIRCUIT - Switch the ignition to ON. - Inspect the voltage at the following climate control unit terminal (wiring harness-side). - Terminal 2E (evaporator temperature sensor input signal) - Is the voltage normal? (Approx. 5 V)		Go to the next step.
		No	Go to the next step.
7	VERIFY THAT SAME DTC IS NOT OUTPUT AGAIN - Reconnect the disconnected connectors. - Clear the past malfunction from memory. - Verify DTCs. - Is DTC B1B71:11 or B1B71:13 output?	Yes	Repeat the inspection from Step 1. - If the malfunction does not recur, go to the next step. - If the malfunction recurs, replace the climate control unit. (See CLIMATE CONTROL UNIT REMOVAL/ INSTALLATION [FULL-AUTO AIR CONDITIONER].) then go to the next step.
		No	Go to the next step.
8	VERIFY THAT NO OTHER DTCs ARE PRESENT - Verify other DTCs displayed. - Are any other DTCs output?	Yes	Perform the corresponding DTC inspection.
		No	DTC troubleshooting completed.