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2024 Mazda CX-5 Service and Repair Manual

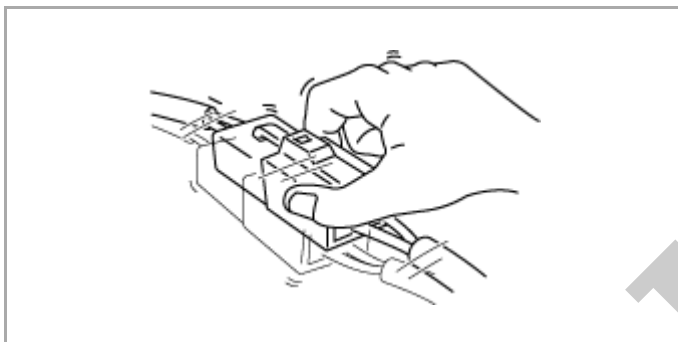
[Go to manual page](#)

*1:(See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-B].) (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-A (SKYACTIV-G 2.5)].) (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-A (SKYACTIV-G 2.5T, SKYACTIV-D 2.2)].)

Action for Non-repeatable Malfunction

• If the malfunction does not recur, verify the malfunction cause by performing the following actions:

- Based on the repair order form, attempt to drive the vehicle or perform tests to replicate the malfunction, record the data at that time, and detect the malfunction cause.
- Shake the wiring harness or connector of the electrical component which is suspected to be the cause of the malfunction, and inspect for occurrence of any malfunction or DTCs.

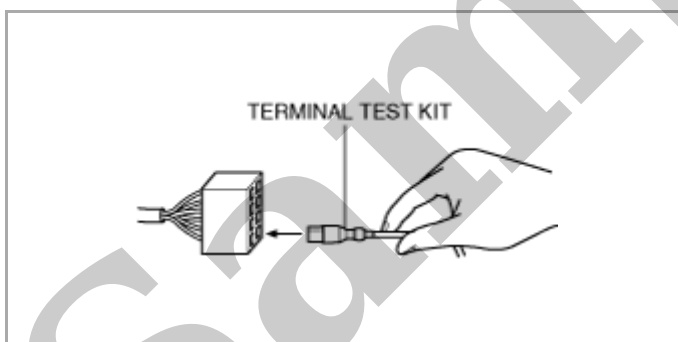


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- Inspect the female terminals on the connector of the electric component which is suspected to be the cause of the malfunction for poor connection. (See ELECTRICAL SYSTEM.)

Note

- Tool used (Reference): terminal test kit (49US-15-KIT)



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Step	Inspection		Action
3	INSPECT ACTIVE DRIVING DISPLAY • Inspect the active driving display. (See ACTIVE DRIVING DISPLAY INSPECTION.) • Is the active driving display normal?	Yes	Go to the next step.
		No	Replace the active driving display, then go to the next step. (See ACTIVE DRIVING DISPLAY REMOVAL/INSTALLATION.)
4	VERIFY MALFUNCTION SYMPTOM • Has the malfunction symptom been eliminated?	Yes	Complete the symptom troubleshooting. (Explain repair contents to customer).
		No	Repeat the diagnosis from Step 1. If the malfunction is not resolved, replace the forward sensing camera (FSC). (See FORWARD SENSING CAMERA (FSC) REMOVAL/INSTALLATION.)

Sample

Step	Inspection		Action
3	VERIFY DRIVING CONDITION <ul style="list-style-type: none"> • Ask the customer if the condition was any of the following conditions when the malfunction occurred. <ul style="list-style-type: none"> — NAVI SD card is not inserted • Is any of the above driving conditions met? 	Yes	The vehicle is normal. (Explain to the customer that a traffic sign is not displayed because the operation of the traffic sign recognition system (TSR) is canceled or depending on the driving conditions.)
		No	Go to the next step.
4	INSPECT ACTIVE DRIVING DISPLAY <ul style="list-style-type: none"> • Inspect the active driving display. (See ACTIVE DRIVING DISPLAY INSPECTION.) • Is the active driving display normal? 	Yes	Go to the next step.
		No	Replace the active driving display, then go to the next step. (See ACTIVE DRIVING DISPLAY REMOVAL/INSTALLATION.)
5	VERIFY MALFUNCTION SYMPTOM <ul style="list-style-type: none"> • Has the malfunction symptom been eliminated? 	Yes	Complete the symptom troubleshooting. (Explain repair contents to customer).
		No	Repeat the diagnosis from Step 1. If the malfunction is not resolved, replace the forward sensing camera (FSC). (See FORWARD SENSING CAMERA (FSC) REMOVAL/INSTALLATION.)

Step	Inspection		Action
4	INSPECT INSTRUMENT CLUSTER • Inspect the alarm sound for the instrument cluster. (See INSTRUMENT CLUSTER INSPECTION.) • Is the instrument cluster normal?	Yes	Go to the next step.
		No	Replace the instrument cluster, then go to the next step. (See INSTRUMENT CLUSTER REMOVAL/INSTALLATION.)
5	VERIFY MALFUNCTION SYMPTOM • Has the malfunction symptom been eliminated?	Yes	Complete the symptom troubleshooting. (Explain repair contents to customer).
		No	Repeat the diagnosis from Step 1. If the malfunction is not resolved, replace the forward sensing camera (FSC). (See FORWARD SENSING CAMERA (FSC) REMOVAL/INSTALLATION.)

Sample

TROUBLESHOOTING INDEX [360°VIEW MONITOR SYSTEM]

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Troubleshooting item
REAR MOUNT CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN (See REAR MOUNT CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN [360°VIEW MONITOR SYSTEM].)
SIDE CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN (See SIDE CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN [360°VIEW MONITOR SYSTEM].)
FRONT CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN (See FRONT CAMERA IMAGE NOT CLEAR/NO IMAGE ON SCREEN [360°VIEW MONITOR SYSTEM].)

Sample

Step	Inspection	Action
		<p data-bbox="1082 98 1117 125">No</p> <p data-bbox="1214 98 1596 152">Inspect the ROOM 25 A fuse and MAIN 200 A fuse.</p> <ul style="list-style-type: none"> <li data-bbox="1214 159 1465 185">• If any fuse is blown: <ul style="list-style-type: none"> <li data-bbox="1254 215 1557 456">— Refer to the wiring diagram and verify if there is a common connector between MAIN 200 A fuse and 360°view monitor control module terminal A. <p data-bbox="1294 495 1430 591">If there is a common connector:</p> <ul style="list-style-type: none"> <li data-bbox="1294 607 1522 994">• Inspect the common connector and terminals for corrosion, damage, or disconnection and the common wiring harnesses for short to ground to determine the malfunctioning location. <li data-bbox="1294 1010 1522 1106">• Repair or replace the malfunctioning location. <p data-bbox="1294 1144 1445 1240">If there is no common connector:</p> <ul style="list-style-type: none"> <li data-bbox="1294 1256 1522 1391">• Repair or replace the wiring harness which is shorted to ground. <li data-bbox="1294 1406 1522 1433">• Replace the fuse. <ul style="list-style-type: none"> <li data-bbox="1214 1440 1506 1467">• If any fuse is damaged: <ul style="list-style-type: none"> <li data-bbox="1254 1496 1490 1523">— Replace the fuse. <li data-bbox="1214 1529 1506 1556">• If the fuses are normal: <ul style="list-style-type: none"> <li data-bbox="1254 1585 1541 1861">— Refer to the wiring diagram and verify if there is a common connector between positive battery terminal and 360°view monitor control module terminal A. <p data-bbox="1294 1899 1430 1995">If there is a common connector:</p> <ul style="list-style-type: none"> <li data-bbox="1294 2011 1522 2063">• Inspect the common connector

Step	Inspection		Action
11	INSPECT REAR MOUNT CAMERA <ul style="list-style-type: none"> • Inspect the rear mount camera. (See REAR MOUNT CAMERA INSPECTION.) • Is the rear mount camera normal? 	Yes	Replace the 360°view monitor control module, then go to the next step. (See 360°VIEW MONITOR CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Replace the rear mount camera, then go to the next step. (See REAR MOUNT CAMERA REMOVAL/INSTALLATION.)
12	VERIFY IF MALFUNCTION CAUSE IS CORRECTED <ul style="list-style-type: none"> • Reconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition to ACC or ON (engine off or on). • 360°view monitor switch ON. • Is rear mount camera image output normally? 	Yes	Troubleshooting completed (explain the contents of the servicing to the customer).
		No	Verify the malfunction symptom in the symptom troubleshooting chart and perform the other applicable malfunction diagnosis. (See TROUBLESHOOTING INDEX [360°VIEW MONITOR SYSTEM].)

Sample

Step	Inspection		Action
7	VERIFY 360°VIEW MONITOR CONTROL MODULE B+ POWER SUPPLY VOLTAGE <ul style="list-style-type: none">• Switch the ignition off.• Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)• Disconnect the 360°view monitor control module connector.• Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)• Switch the ignition ON (engine off or on).• Measure the voltage at 360°view monitor control module terminal A (wiring harness-side).• Is the voltage B+?	Yes	Go to the next step.

Sample

Step	Inspection		Action
11	<p>VERIFY IF MALFUNCTION CAUSE IS SHORT CIRCUIT TO GROUND IN WIRING HARNESS BETWEEN PARKING ASSIST UNIT (OPTICAL) AND SIDE CAMERA</p> <ul style="list-style-type: none"> • Verify that the side camera and 360°view monitor control module connectors are disconnected. • Inspect for continuity between the following wiring harness terminals (vehicle wiring harness side) and body ground. <ul style="list-style-type: none"> — Side camera terminal A — Side camera terminal G — Side camera terminal F — Side camera terminal B • Is there continuity? 	Yes	Go to the next step.
		No	<ul style="list-style-type: none"> • Refer to the wiring diagram and verify if there is a common connector between the following terminals. <ul style="list-style-type: none"> — 360°view monitor control module terminal M and side camera terminal A (RH) — 360°view monitor control module terminal N and side camera terminal G (RH) — 360°view monitor control module terminal O and side camera terminal F (RH) — 360°view monitor control module terminal P and side camera terminal B (RH) — 360°view monitor control module terminal Y and side camera terminal A (LH) — 360°view monitor control module terminal Z and side camera terminal G (LH) — 360°view monitor control module terminal AA and side camera terminal F (LH) — 360°view monitor control module terminal AB and side camera terminal B (LH) • Go to Step 13.
12	<p>INSPECT SIDE CAMERA</p> <ul style="list-style-type: none"> • Inspect the side camera. (See SIDE CAMERA INSPECTION.) • Is the side camera normal? 	Yes	Replace the 360°view monitor control module, then go to the next step. (See 360°VIEW MONITOR CONTROL MODULE REMOVAL/INSTALLATION.)
		No	Replace the side camera, then go to the next step. (See SIDE CAMERA REMOVAL/INSTALLATION.)