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2017 MAZDA CX-3 OEM Service and Repair Workshop Manual

[Go to manual page](#)

QUICK DIAGNOSIS CHART [SECURITY AND LOCKS]

SM2899209

id0903k701230

X: Applicable

Open circuit in wiring harness between start stop unit terminal 2A and ground							X
Open circuit in wiring harness between start stop unit terminal 2B and ground			X	X	X		X
Open circuit in wiring harness between start stop unit terminal 1AF and ground			X	X	X		X
Open circuit in wiring harness between start stop unit terminal 2J and push button start terminal I							X
Open circuit in wiring harness between start stop unit terminal 1H and push button start terminal C							X
Personalization feature not set						X	
Open circuit in wiring harness between keyless beeper terminal B and LF control unit terminal N						X	
Open circuit in wiring harness between keyless beeper terminal A and LF control unit terminal L						X	
Short to ground in wiring harness between keyless beeper terminal B and LF control unit terminal N						X	
Short to ground in wiring harness between keyless beeper terminal A and LF control unit terminal L						X	
Short to power supply in wiring harness between keyless beeper terminal B and LF control unit terminal N						X	
Short to power supply in wiring harness between keyless beeper terminal A and LF control unit terminal L						X	
Keyless beeper malfunction						X	
Effect of non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV)					X		
Customer's mis-operation or misunderstanding					X		
Open circuit in wiring harness between keyless receiver terminal B and start stop unit terminal 2R				X	X		X
Open circuit in wiring harness between keyless receiver terminal A and start stop unit terminal 2Q				X	X		X
Remote transmitter malfunction				X	X		X
Keyless receiver malfunction				X	X		X
Open circuit in wiring harness between LF control unit terminal E and request switch (RF) terminal D				X			
Open circuit in wiring harness between LF control unit terminal G and request switch (LF) terminal D				X			
Open circuit in wiring harness between rear body control module (RBCM) terminal 4M and trunk lid opener switch terminal C			X				
Short to ground in wiring harness between start stop unit terminal 1P and door lock link switch (driver's side) terminal D		X		X			
Open circuit in wiring harness between start stop unit terminal 1P and door lock link switch (driver's side) terminal D		X		X			
Trunk lid opener switch malfunction			X				
Open circuit in wiring harness between power window main switch terminal C and rear body control module (RBCM) terminal 3F						X	
Open circuit in wiring harness between door lock switch (driver's side) terminal 2J (auto-open/close function for all windows)/2M (auto-open/close function for driver-side window) and rear body control module (RBCM) terminal 3F						X	
Front door latch and lock actuator terminal H and rear body control module (RBCM) terminal 3H	X	X		X	X	X	
Front door key cylinder switch malfunction	X					X	
Door lock actuator malfunction	X	X		X	X	X	
Door latch switch malfunction	X	X		X	X	X	
Possible cause	Malfunction symptom Door cannot be locked/unlocked using key cylinder Door cannot be locked/unlocked using lock knob Trunk lid does not open even if trunk lid opener switch is pressed Door cannot be locked/unlocked using request switch Door cannot be locked/unlocked using remote transmitter Door cannot be locked/unlocked using door lock switch Keyless beeper does not sound Ignition cannot be switched to ACC or ON (engine off)						

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ANSWER-BACK BUZZER DOES NOT SOUND [SECURITY AND LOCKS]

SM2899211

id0903k701250

Description

- The keyless beeper does not sound when door lock/unlock operation is performed using the remote transmitter button.

Possible cause

- Keyless beeper malfunction
- Short to power supply in wiring harness between the following terminals:
 - Keyless beeper terminal A and LF control unit terminal H
 - Keyless beeper terminal B and LF control unit terminal J
- Short to ground in wiring harness between the following terminals:
 - Keyless beeper terminal A and LF control unit terminal H
 - Keyless beeper terminal B and LF control unit terminal J
- Open circuit in wiring harness between the following terminals:
 - Keyless beeper terminal A and LF control unit terminal H
 - Keyless beeper terminal B and LF control unit terminal J
 - Start stop unit terminal 1AF and ground
 - Start stop unit terminal 2B and ground
- Personalization feature not set
- Effect of non-standard equipment (any control unit with built-in micro computer such as radio set, mobile telephone, and TV)

Diagnostic Procedure

Step	Inspection		Action
1	VERIFY PERSONALIZATION FEATURES SETTING • Verify the volume of the keyless beeper for the personalization features. (See SECURITY AND LOCKS PERSONALIZATION FEATURES SETTING PROCEDURE.) • Has the volume of the keyless beeper been set to off?	Yes	Set the volume so that the keyless beeper sounds and verify the operation. Operation is verified: • Troubleshooting completed. (Explain the servicing contents to the customer.) Operation is not verified: • Go to the next step.
		No	Go to the next step.
2	VERIFY IF MALFUNCTION CAUSE IS EXTERNAL NOISE • Ask the customer malfunction condition. • Does the malfunction occur at the specified place where external noise is received such as a TV tower, electric power station, or a broadcast station?	Yes	System is normal. (Explain the customer that operation cannot be performed caused by external noise.)
		No	Go to the next step.

SYMPTOM TROUBLESHOOTING ITEM TABLE [SECURITY AND LOCKS]

SM2899213

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• Verify the malfunctioning symptom and perform malfunction diagnosis according to the applicable item.

Malfunction symptom	Malfunction diagnosis
Door cannot be locked/unlocked using key cylinder	• DOOR LOCK DOES NOT OPERATE [SECURITY AND LOCKS]
Door cannot be locked/unlocked using lock knob	• DOOR LOCK DOES NOT OPERATE [SECURITY AND LOCKS]
Trunk lid does not open even if trunk lid opener switch is pressed	• ADVANCED KEYLESS ENTRY SYSTEM DOES NOT OPERATE [SECURITY AND LOCKS]
Door cannot be locked/unlocked using request switch	• DOOR LOCK DOES NOT OPERATE [SECURITY AND LOCKS] • ADVANCED KEYLESS ENTRY SYSTEM DOES NOT OPERATE [SECURITY AND LOCKS]
Door cannot be locked/unlocked using remote transmitter	• DOOR LOCK DOES NOT OPERATE [SECURITY AND LOCKS] • LOCK/UNLOCK OPERATION NOT POSSIBLE USING REMOTE TRANSMITTER [SECURITY AND LOCKS]
Door cannot be locked/unlocked using door lock switch	• DOOR LOCK DOES NOT OPERATE [SECURITY AND LOCKS]
Keyless beeper does not sound	• ANSWER-BACK BUZZER DOES NOT SOUND [SECURITY AND LOCKS]
Ignition cannot be switched to ACC or ON (engine off)	• PUSH BUTTON START SYSTEM DOES NOT OPERATE [SECURITY AND LOCKS]

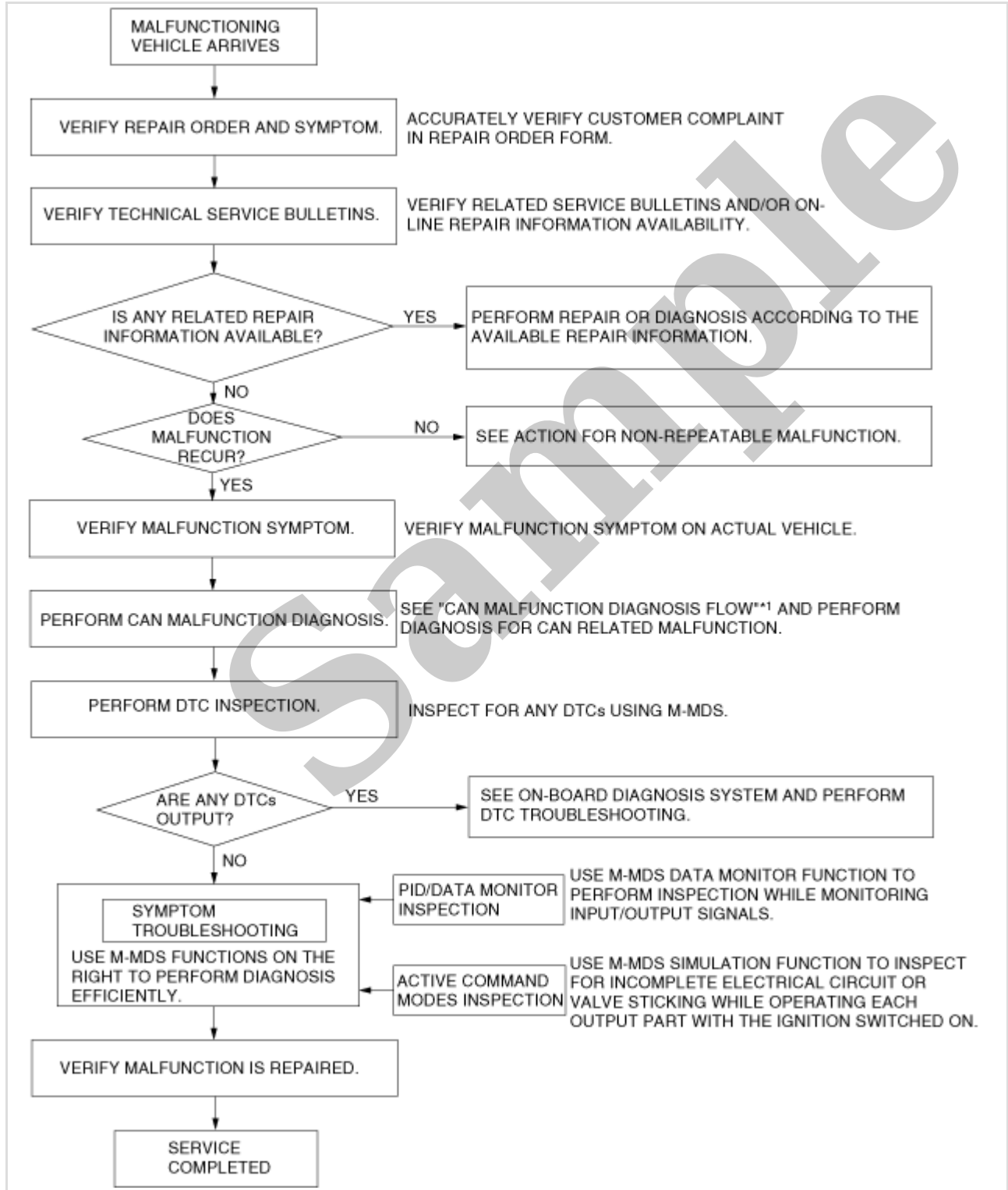
FOREWORD [THEFT-DETERRENT SYSTEM]

SM2899216

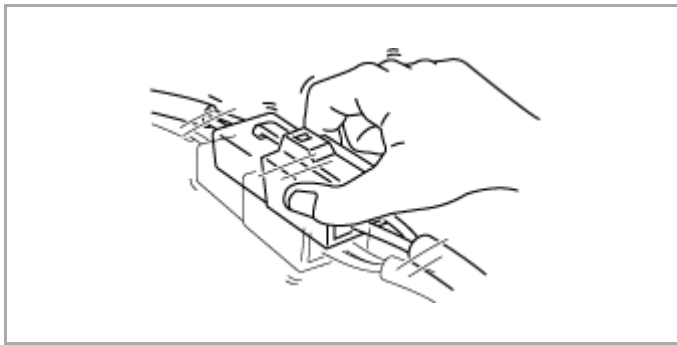
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- If there is any vehicle malfunction complaint lodged by a customer, perform malfunction diagnosis according to the troubleshooting procedure.

Troubleshooting Procedure



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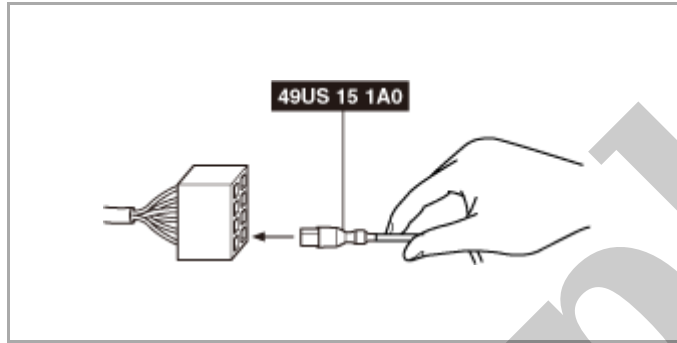


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— Inspect the female terminals on the connector of the electric component which is suspected to be the cause of the malfunction for poor connection.

Note

- SST (Reference): PROBE KIT (49US 15 1A0)



amxzzw00004455

Step	Inspection		Action
9	INSPECT PARKING SENSOR SWITCH - Inspect the parking sensor switch. (See PARKING SENSOR SWITCH INSPECTION.) - Is the parking sensor switch normal?	Yes	Replace the parking assist unit. (See PARKING ASSIST UNIT (ULTRASONIC) REMOVAL/INSTALLATION.)
		No	Replace the cluster switch. (See CLUSTER SWITCH REMOVAL/INSTALLATION.)

Sample

Step	Inspection		Action
7	INSPECT PARKING SENSOR BUZZER CIRCUIT FOR SHORT TO POWER SUPPLY • Verify that the following connectors are disconnected. — Front parking sensor buzzer — Rear parking sensor buzzer — Parking assist unit • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition ON (engine off or on). • Measure the voltage at the following terminals (wiring harness-side): — Front parking sensor buzzer terminal B — Front parking sensor buzzer terminal A — Rear parking sensor buzzer terminal B — Rear parking sensor buzzer terminal A • Is the voltage 0 V?	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals: • Front parking sensor buzzer terminal B–Parking assist unit terminal Y • Front parking sensor buzzer terminal A–Parking assist unit terminal Z • Rear parking sensor buzzer terminal B–Parking assist unit terminal W • Rear parking sensor buzzer terminal A–Parking assist unit terminal X If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply. • Repair or replace the malfunctioning part. If there is no common connector: • Repair or replace the wiring harness which has a short to power supply.
8	INSPECT PARKING SENSOR BUZZER CIRCUIT FOR OPEN CIRCUIT • Switch the ignition off. • Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Verify that the following connectors are disconnected. — Front parking sensor buzzer — Rear parking sensor buzzer — Parking assist unit • Inspect for continuity between the following terminals (wiring harness-side): — Front parking sensor buzzer terminal B–Parking assist unit terminal Y — Front parking sensor buzzer terminal A–Parking assist unit terminal Z — Rear parking sensor buzzer terminal B–Parking assist unit terminal W — Rear parking sensor buzzer terminal A–Parking assist unit terminal X • Is there continuity?	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals: • Front parking sensor buzzer terminal B–Parking assist unit terminal Y • Front parking sensor buzzer terminal A–Parking assist unit terminal Z • Rear parking sensor buzzer terminal B–Parking assist unit terminal W • Rear parking sensor buzzer terminal A–Parking assist unit terminal X If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for an open circuit. • Repair or replace the malfunctioning part. If there is no common connector: • Repair or replace the wiring harness which has an open circuit.
9	INSPECT FRONT PARKING SENSOR BUZZER • Inspect the front parking sensor buzzer. (See FRONT PARKING SENSOR BUZZER INSPECTION.) • Is the front parking sensor buzzer normal?	Yes	Go to the next step.
		No	Replace the front parking sensor buzzer. (See FRONT PARKING SENSOR BUZZER REMOVAL/INSTALLATION.)

Step	Inspection	Action	
3	INSPECT FRONT PARKING SENSOR BUZZER CONNECTOR CONDITION • Switch the ignition off. • Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Disconnect the front parking sensor buzzer connector. • Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection. • Is the connector normal?	Yes	Go to the next step.
		No	Repair or replace the connector.
4	INSPECT PARKING ASSIST UNIT CONNECTOR CONDITION • Disconnect the parking assist unit connector. • Inspect the connector engagement and connection condition and inspect the terminals for damage, deformation, corrosion, or disconnection. • Is the connector normal?	Yes	Go to the next step.
		No	Repair or replace the connector.
5	INSPECT FRONT PARKING SENSOR BUZZER CIRCUIT FOR SHORT TO GROUND • Verify that the front parking sensor buzzer and parking assist unit connectors are disconnected. • Inspect for continuity between the following terminals (wiring harness-side) and body ground: — Front parking sensor buzzer terminal B — Front parking sensor buzzer terminal A • Is there continuity?	Yes	Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals: • Front parking sensor buzzer terminal B–Parking assist unit terminal Y • Front parking sensor buzzer terminal A–Parking assist unit terminal Z If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to ground. • Repair or replace the malfunctioning part. If there is no common connector: • Repair or replace the wiring harness which has a short to ground.
		No	Go to the next step.
6	INSPECT PARKING SENSOR BUZZER CIRCUIT FOR SHORT TO POWER SUPPLY • Verify that the front parking sensor buzzer and parking assist unit connectors are disconnected. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition ON (engine off or on). • Measure the voltage at the following terminals (wiring harness-side): — Front parking sensor buzzer terminal B — Front parking sensor buzzer terminal A • Is the voltage 0 V?	Yes	Go to the next step.
		No	Refer to the wiring diagram and verify whether or not there is a common connector between the following terminals: • Front parking sensor buzzer terminal B–Parking assist unit terminal Y • Front parking sensor buzzer terminal A–Parking assist unit terminal Z If there is a common connector: • Determine the malfunctioning part by inspecting the common connector and the terminal for corrosion, damage, or pin disconnection, and the common wiring harness for a short to power supply. • Repair or replace the malfunctioning part. If there is no common connector: • Repair or replace the wiring harness which has a short to power supply.

Special Service Tool (SST)

49US 15 1A0

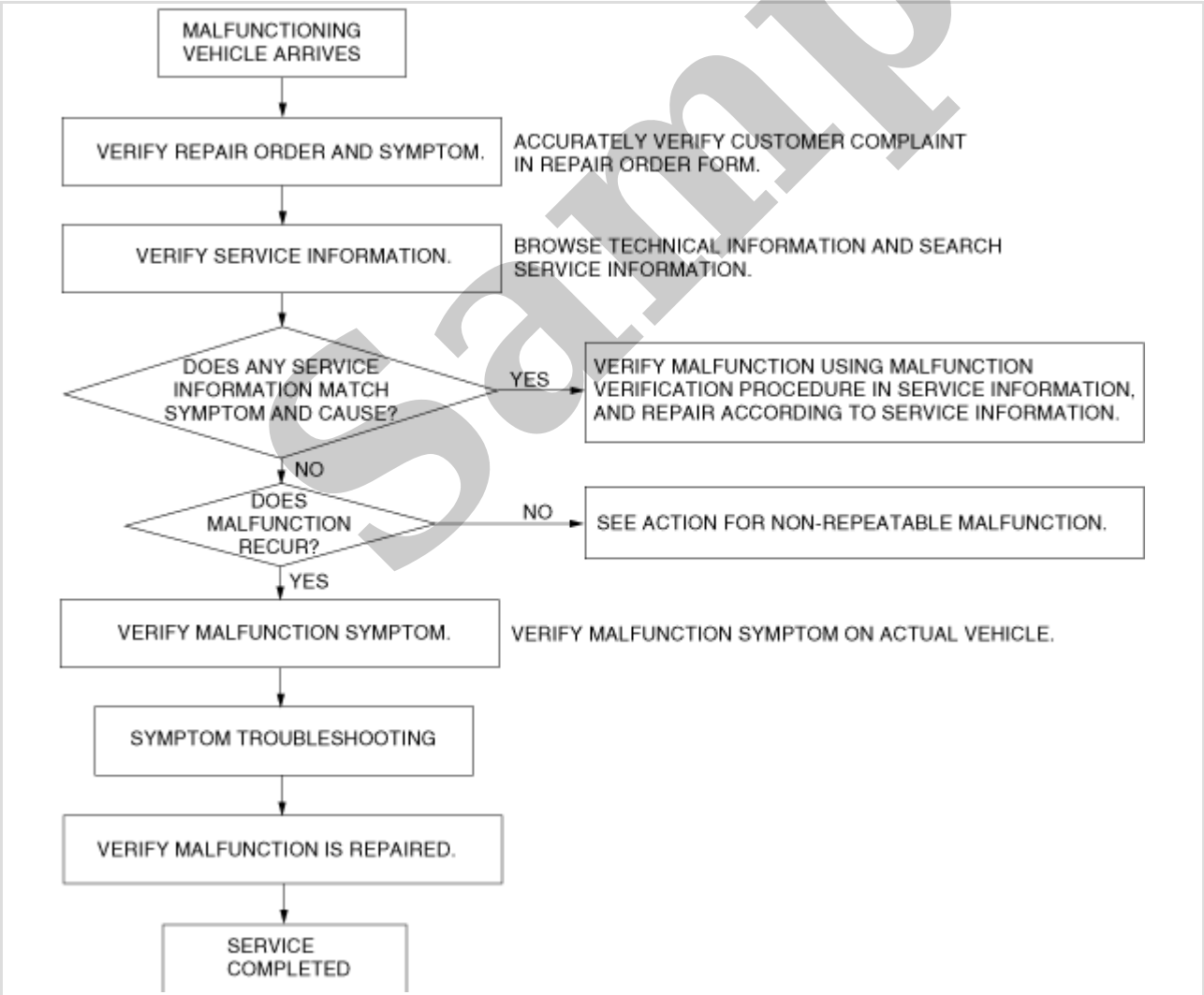
PROBE KIT



Warning

- Handling a side air bag improperly can accidentally operate (deploy) the air bag, which may seriously injure you. Read the service warnings/cautions in the Workshop Manual before handling the front seat (side air bag integrated). (See **AIR BAG SYSTEM SERVICE WARNINGS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.) (See **AIR BAG SYSTEM SERVICE CAUTIONS [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.]**.)

Troubleshooting Procedure



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Action for non-repeatable malfunction