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2014 MAZDA 2 / Demio - sedan OEM Service and Repair Workshop Manual

Go to manual page

	Step	Inspection	Results	Action
	3	VERIFY THAT THE SAME DTC IS NOT PRESENT • Make sure to reconnect all disconnected connectors. • Using the M-MDS, clear the DTC from the EPS control module. (See CLEARING DTC [ELECTRIC POWER STEERING (EPS) CONTROL MODULE].) • Using the M-MDS, perform the EPS control module DTC inspection. (See DTC INSPECTION [ELECTRIC POWER STEERING (EPS) CONTROL MODULE].) • Is the same Pending DTC present?	Yes	Repeat the inspection from Step 1. If the malfunction recurs, replace the EPS control module, then go to the next step. (See STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
			No	Go to the next step.
	//	VERIFY THAT NO OTHER DTCS ARE PRESENT • Are any other DTCs output?	Yes	Go to the applicable DTC inspection. (See DTC TABLE [ELECTRIC POWER STEERING (EPS) CONTROL MODULE].)
			No	DTC troubleshooting completed.



Diagnostic procedure

• (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)].) (See CONTROLLER AREA NETWORK (CAN) MALFUNCTION DIAGNOSIS FLOW [TYPE-B].)



SYMPTOM TROUBLESHOOTING [ELECTRIC POWER STEERING (EPS)]

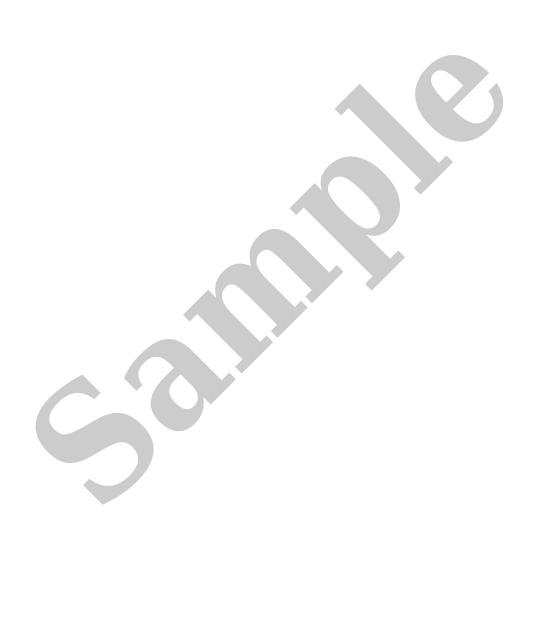
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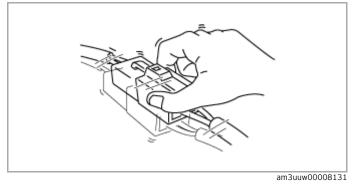
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• Verify the symptom, and perform troubleshooting according to the appropriate number.

No.	Symptom
1 Power steering malfunction indicator light does not illuminate with ignition switched	
2 Power steering malfunction indicator light does not go out even though engine has st	
Power assist differs between right and left turns.	



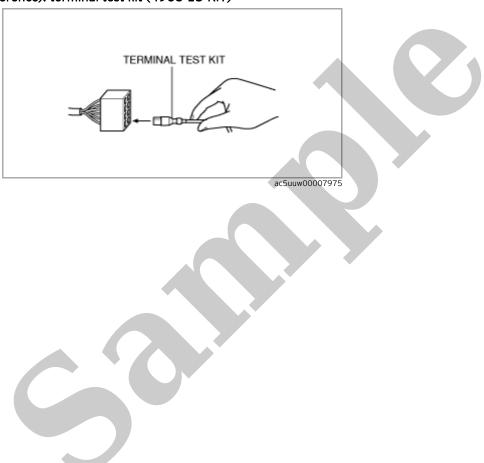


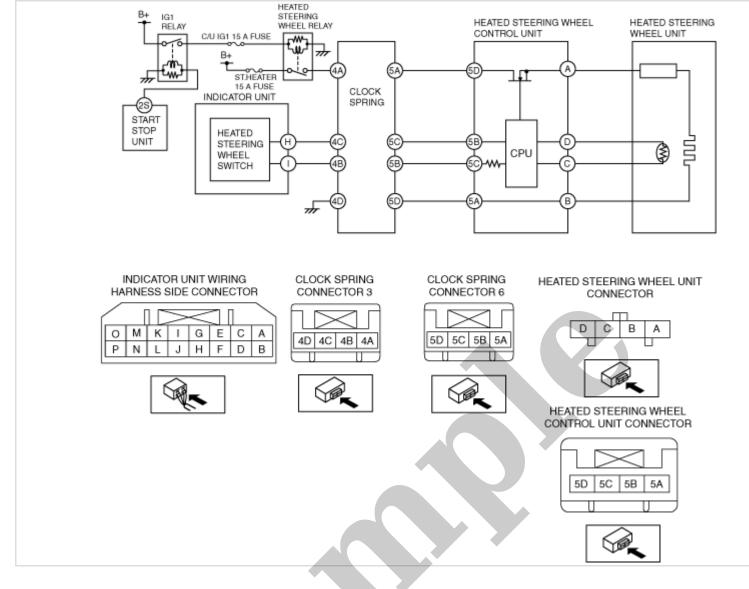


— Inspect the female terminals on the connector of the electric component which is suspected to be the cause of the malfunction for poor connection. (See ELECTRICAL SYSTEM.)

Note

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





• When performing an asterisked (*) troubleshooting inspection, shake the wiring harness and connectors while performing the inspection to discover whether poor contact points are the cause of any intermittent malfunctions. If there is a problem, check to make sure connectors, terminals and wiring harnesses are connected correctly and undamaged.

Diagnostic Procedure

	Step	Inspection	Results	Action
	WHEEL SWITCHOperate the heated steering wheel steering wheel system.	DETERMINE IF MALFUNCTION CAUSE IS HEATED STEERING	Yes	Go to the next step.
		• Operate the heated steering wheel switch to turn on the heated	No	Replace the indicator unit, then go to Step 14. (See INDICATOR UNIT REMOVAL/INSTALLATION.)
	2	INSPECT IG1 RELAY • Inspect the IG1 relay. (See RELAY INSPECTION.) • Is the relay normal?	Yes	Go to the next step.
			No	Replace the IG1 relay, then go to Step 14. (See RELAY LOCATION.)

Step	Inspection	Results	Action
		Yes	Go to the next step.
Step 7*	VERIFY IF MALFUNCTION CAUSE IS OPEN CIRCUIT IN WIRING HARNESS BETWEEN CLOCK SPRING CONNECTOR AND BODY GROUND • Switch the ignition off. • Verify that the clock spring connector 3 is disconnected. • Inspect for continuity between the following terminals (vehicle wiring harness side) and body ground. — Clock spring connector 3 terminal 4D • Is there continuity?		
			replace the
			malfunctioning
			location.
			If there is no
			common
			connector:
			• Repair or
			replace the
			wiring harness
			which has an
			open circuit.
			• Go to Step 14.

Step	Inspection	Results	Action
	VERIFY IF MALFUNCTION CAUSE IS OPEN CIRCUIT IN WIRING HARNESS OF HEATED STEERING WHEEL UNIT CIRCUIT Inspect for continuity between the following terminals (wiring harness-side); Heated steering wheel unit terminal A and B Heated steering wheel unit terminal C and D Is there continuity?	Yes	Go to the next step.
12*		No	Repair or replace the wiring harness which has an open circuit, then go to the next step. (See STEERING WHEEL AND COLUMN REMOVAL/INSTALLATION.)
	DETERMINE IF MALFUNCTION CAUSE IS HEATED STEERING WHEEL CONTROL UNIT • Reconnect all the disconnected connectors. • Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) • Switch the ignition ON (engine off or on). • Operate the heated steering wheel switch to turn on the heated steering wheel system. • Does the heated steering wheel system operate normally?	Yes	Go to the next step.
13		No	Replace the heated steering wheel control unit, then go to the next step. (See HEATED STEERING WHEEL CONTROL UNIT REMOVAL/INSTALLATION.)
	VERIFY IF MALFUNCTION CAUSE IS CORRECTED • Operate the heated steering wheel switch to turn on the heated steering wheel system. • Does the heated steering wheel system operate normally?	Yes	Troubleshooting completed. (Explain the contents of the servicing to the customer.)
14		No	Verify the malfunction symptom in the symptom troubleshooting chart and perform the other applicable malfunction diagnosis. (See SYMPTOM TROUBLESHOOTING [HEATED STEERING WHEEL].)



Step	Inspection	Results	Action
3*	DETERMINE IF MALFUNCTION CAUSE IS HEATED STEERING WHEEL CONTROL UNIT Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) Remove the clock spring. (See CLOCK SPRING REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].) Connect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.) Switch the ignition ON (engine off or on). Measure the voltage at clock spring connector 3 terminal 4B (vehicle wiring harness side). Is the voltage B+?	Yes	Refer to the wiring diagram and verify if there is a common connector between the following terminals. Clock spring connector 3 terminal 4B and indicator unit terminal I If there is a common connector: Inspect the common connector and terminals for corrosion, damage, or disconnection and the common wiring harnesses for short to power supply to determine the malfunctioning location. Repair or replace the wiring harness which is shorted to the power supply. If there is no common connector: Repair or replace the wiring harness which is shorted to the power supply. If there is no common connector: Repair or replace the wiring harness which is shorted to the power supply. Go to the next step. Replace the clock spring, then go to the next step. Replace the clock spring, then go to the next step. Csee CLOCK SPRING
		No	REMOVAL/INSTALLATION [STANDARD DEPLOYMENT CONTROL SYSTEM - MEXICO SPEC.].) (See CLOCK SPRING REMOVAL/INSTALLATION [TWO-STEP DEPLOYMENT CONTROL SYSTEM - US/CANADA/ISRAEL SPEC.].)