

2012 - Mazda6 - Body and Accessories

NO.5 VEHICLE POSITION DEVIATES FROM THE ROUTE MAP [CAR-NAVIGATION SYSTEM]

5	Vehicle position deviates from the route map
POSSIBLE CAUSE	• Jammed radio signals from after market equipment (radar, remote engine starter, anti-theft device etc.) • Poor connection of GPS antenna connector, terminal damage • Open or short circuit in harness (vehicle speed signal related). • Open or short circuit in feeder line between GPS antenna feeder and car-navigation unit. • Car-navigation unit malfunction • GPS antenna malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is any of the following after-market equipment installed? (Inspect especially near the GPS antenna.) ▪ Radar ▪ Remote engine starter ▪ Anti-theft device ▪ Other	Yes Go to the next step.
		No Go to Step 3.
2	• Remove the after-market equipment. CAUTION: • The procedure requires an assistant. • Drive the vehicle without any obstacles.	Yes System is normal. The after-market electrical device might be interrupting to GPS reception.
		No Go to the next step.

	Does the vehicle indicator follow the steering wheel direction?		
3	- Position the vehicle without any obstacles and receive GPS for 5 min. at idle. - Does "GPS" show up on interruption of the left-side of the display screen?	Yes	Go to the next step.
		No	Go to Step 8.
4	CAUTION: The procedure requires an assistant. - Start diagnostic function and indicate "Vehicle Signal" check screen. (See DIAGNOSTIC CHECK [CAR-NAVIGATION SYSTEM] .) - Drive the vehicle. - Check the "SPEED" on the diagnosis screen. - Does the "SPEED" change according to the vehicle speed? NOTE: - If the engine started after diagnostic function activated, the diagnostic function is reset.	Yes	Go to the next step.
		No	Go to Step 5.
5	CAUTION: The procedure requires an assistant. - Drive the vehicle and turn the steering wheel to the left or right. - Does the vehicle indicator follow the steering direction?	Yes	The system is normal.
			NOTE: - The vehicle indicator might be out of position in the following areas: - Parallel road, high-level road, loop road, tower type parking, high-rise building s lot.

		No	Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION .)
6	- Switch the ignition to off. - Inspect the connection of car-navigation unit connector (24-pin). - Is the connector securely connected?	Yes	Go to the next step.
		No	Securely connect the car-navigation unit connector.
7	- Disconnect the car-navigation unit connector (24-pin). - Inspect both car-navigation unit connector and wiring harness-side connector terminal I for poor connection (such as damaged/pulled out pins, corrosion). - Is the pin normal?	Yes	Inspect for vehicle speed signal circuit (between instrument cluster and car-navigation unit) Repair or replace if necessary.
		No	If the car-navigation unit connector is wrong: - Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
8	- Start diagnostic function and indicate "Vehicle Signal" check screen. (See DIAGNOSTIC CHECK [CAR-NAVIGATION SYSTEM].) - Drive the vehicle. - Check the "GPS Antenna" on the diagnosis screen. - Is the "OK" indicated? NOTE: - If the engine started after diagnostic function activated, the diagnostic function is reset.	Yes	Go to Step 5.
		No	Go to the next step.
9	Switch the ignition to off.	Yes	Go to the next step.

	Inspect the connection of the car-navigation unit connector (3-pin) and GPS antenna connector. Is the connector securely connected?	No	Securely connect the suspect connector.
10	- Disconnect the GPS antenna and car-navigation unit connector for poor connection (such as damaged/pulled out pins, corrosion). - Are all pins normal?	Yes	Go to the next step.
		No	If the car-navigation unit connector is wrong: - Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.) If the GPS antenna connector is wrong: - Replace the GPS antenna. (See GPS ANTENNA REMOVAL/ INSTALLATION.) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector.
11	- Replace the GPS antenna. - Does the vehicle position deviate from route map continuously?	Yes	Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)
		No	Troubleshooting completed. (GPS antenna malfunction)

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6	- Switch the ignition to off. - Inspect the connection of car-navigation unit connector (24-pin). - Is the connector securely connected?	Yes	Go to the next step.
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11	- Replace the GPS antenna. - Does the vehicle position deviate from route map continuously?	Yes	Replace the car-navigation unit. (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION.)
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