

2012 - Mazda6 - Body and Accessories

NO.5 NOISE FROM RADIO (SIRIUS SATELLITE RADIO ONLY) [RADIO]

5	Noise from radio (SIRIUS satellite audio only)
Possible DTC	—
POSSIBLE CAUSE	• Jamming from aftermarket electronic equipment (two-way radio, navigation system, mobile phone, etc.) • Battery malfunction • Noise from electrical system on vehicle (e.g. fuel pump) • Charging system malfunction • Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Antenna plug poor connection • Antenna feeder malfunction • Antenna installation loosened • SIRIUS satellite radio unit malfunction • Audio unit malfunction • Car-navigation unit malfunction

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Is aftermarket electronic equipment (two-way radio, navigation system, mobile phone, external FM transmitter, etc.) installed? NOTE: • TV antenna located closely to audio antenna can be cause of noise. Relocate TV antenna.	Yes Go to the next step. No Go to Step 3.

2	- Remove aftermarket electronic equipment. - Turn audio unit/car-navigation unit ON and check reception condition. - Is reception improved?	YesThe system is normal. (Explain to customers that aftermarket electronic equipment is cause of noise)	NoGo to the next step.
3	- Measure the voltage at battery. - Is the battery voltage okay? Specification: Ignition switch ON: 11.5 V or more Idle: 12.5 V or more NOTE: - Inspect that battery cables are connected to terminals securely.	YesGo to the next step.	NoCharge battery. Inspect charging system, and repair or replace if necessary.
4	- Is noise occurring only when vehicle electrical system (e.g. fuel pump) operates? NOTE: - Identify subject electrical component by disconnecting fuse, turning switch ON & OFF, or disconnecting & connecting connector. - It will be easy when simulation function on M-MDS is used.	YesGo to the next step.	NoGo to Step 6.
5	- Inspect power supply, ground condition, and noise prevention capacitor for electrical component. - Is noise present after inspection? NOTE: - Inspect following: - Power supply to electrical component for voltage drop (compare with battery voltage)	YesGo to the next step.	NoTroubleshooting completed. NOTE: The SIRIUS satellite radio is supplied 12 V battery power for the AM radio reception in the radio mode. The audio unit/car-navigation unit cannot receive the AM signals without the 12 V battery

	- Resistance between ground of electrical component and body. (Should be close to 0 ohm) - Installation condition of noise prevention capacitor for fuel pump etc.		power to the antenna amplifier. If the SIRIUS satellite radio signals become strong, the audio unit/car-navigation unit may receive the signal with noises.
6	- Inspect SIRIUS satellite radio antenna plug connection condition. - Is connection okay?	Yes	Go to the next step.
		No	Insert antenna plug securely.
7	- Inspect the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.) - Is the SIRIUS satellite radio antenna normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.)
8	- Switch the ignition to off. - Measure continuity between SIRIUS satellite radio antenna feeder axis and ground. - Is there any continuity?	Yes	Replace the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.)
		No	Go to the next step.
9	- Inspect the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna feeder normal?	Yes	Go to the next step.
		No	Replace the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.)
10	Compare reception with other audio unit/car-navigation unit on same model (model/unit) under same problem conditions.	Yes	The system is normal. (It is caused by electronic jamming from outside, or inferior

	- Is reception equivalent between customer's unit and compared unit? NOTE: - Due to following differences, you may feel difference in reception efficiency. (Vehicle side factor) - Antenna installation location, height, feeder wiring routing, optional electrical equipment (Audio unit/ car-navigation unit factor) - Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous) - Volume concern type: It decreases change of volume when signals become weak. (Noise is easy to be conspicuous)	broadcasting station signal condition.) No Go to the next step.
11	Retighten ground fixation for antenna installation part and antenna feeder.	Yes Replace the SIRIUS satellite radio unit.

	Is noise present, after retightening?	(See SIRIUS SATELLITE RADIO UNIT REMOVAL/ INSTALLATION.)
		No Troubleshooting completed.

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		No	Replace the SIRIUS satellite radio antenna. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER REMOVAL/ INSTALLATION.)
8	- Switch the ignition to off. - Measure continuity between SIRIUS satellite radio antenna feeder axis and ground. - Is there any continuity?	Yes	Replace the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.)
		No	Go to the next step.
9	- Inspect the SIRIUS satellite radio antenna feeder. (See SIRIUS SATELLITE RADIO ANTENNA FEEDER INSPECTION.) - Is the SIRIUS satellite radio antenna feeder normal?	Yes	Go to the next step.
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