

2012 - Mazda6 - Body and Accessories

NO.1 AF NOISE OR POP NOISE AT ALL SOURCES (RADIO, CD) [ENTIRE AUDIO SYSTEM]

1	AF noise or POP noise on all sources (Radio, CD)	
Possible DTC	Audio unit (without display)	09:Er21
	Audio unit (with display) or car-navigation unit	Device code 09/error code 21
Possible cause	• Electronic jamming from outside, or inferior condition of broadcasting station radio wave • Defective CD (e.g., cracked, badly bent, rough edges, scratch, dirty CD, condensation) • Vibration while vehicle is driven • Low vehicle battery voltage. • Jammed radio signals from after market equipment. • Speaker malfunction (e.g., any foreign material, broken) • Improper speaker installation • Poor connection of audio unit connector, terminal damage (with audio system) • Poor connection of car-navigation unit connector, terminal damage (with car-navigation system) • Antenna malfunction (e.g., poor ground) • Audio unit malfunction • Car-navigation unit malfunction • Poor connection of audio amplifier connector, terminal damage (with Bose®) • Audio amplifier malfunction (with Bose®) NOTE: • AF noise is a snapping noise that generally occurs during ON/OFF switching operations of electrical equipment other than the audio unit, or a continual rasping noise that occurs when electrical equipment is operated. This is caused by noise interference in the power supply wiring, signal wiring, speaker cable or head of cassette deck. Therefore noise can be heard regardless of radio wave conditions or the audio volume position. The noise will start after one click from the minimum position of the volume button but normally does not change even when	

volume is turned to a higher position.

- POP noise is snapping or popping noise that occurs during ON/OFF switching operation of the audio unit, or when switching from radio to CD. Even a normal audio unit sometimes emits a little noise depending on the conditions.

Diagnostic procedure

STEP	INSPECTION	ACTION
1	• Does the noise occur only while in radio mode?	Yes Go to the next step.
		No Go to Step 3.
2	• Can the location where the noise occurs be specified?	Yes The system is normal. Explain to the customer that the noise is caused by radio wave disturbances or broadcast wave conditions from the outside.
		No Go to Step 6.
3	• Does the noise occur only while in CD mode?	Yes Go to the next step.
		No Go to Step 6.
4	• Can the disc in which the noise occurs be specified?	Yes The system is normal. Explain to the customer that the cause is a disc that is damaged or dirty on the playback side, or warped.
		No Go to the next step.
5	• Drive the vehicle and verify the malfunction symptom. • Does noise occur while driving on an unlevel road or under other driving conditions (sudden curve, quick operation)?	Yes The system is normal. Explain to the customer that the cause is vibration while the vehicle is driven.
		No Go to the next step.
6	• Inspect the vehicle battery voltage. • Is the vehicle battery voltage normal? Specification: • Switch the ignition to ON.: 11.5 V or more	Yes Go to the next step.
		No Charge the battery, then go to the next step.

	• Idle: 12.5 V or more		
7	• Is any of the following after-market equipment installed? (Inspect especially near the antenna.) ▪ Radar ▪ Remote engine starter ▪ Anti-theft device ▪ Other	Yes	Go to the next step.
		No	Go to Step 9.
8	• Remove the after-market equipment. • Turn the audio system to ON. • Is there any noise?	Yes	Go to the next step.
		No	The system is normal. The after-market electrical devices might make a noise.
9	• Is there the noise from all speakers?	Yes	Go to Step 11.
		No	Go to the next step.
10	• Inspect the suspect speaker. • Is the speaker normal?	Yes	Go to the next step.
		No	If there is any foreign material on the speaker: • Remove the foreign material from the speaker. If the speaker is malfunctioning: • Replace the speaker. If the speaker is not installed properly: • Install the speaker properly.
11	• Attempt to duplicate the symptom on the other vehicle. • Is the noise better than the customer's vehicle?	Yes	Go to the next step.
		No	The system is normal. Explain the noise generation mechanism to the customer. NOTE:

			The noise may be heard depends on the operating speed of audio power and/or mode switch.
12	- Switch the ignition to off. - Remove the audio unit. - Inspect the connection of the audio unit/car-navigation unit connector (24-pin) (for sound signal line). - Is the connector connected securely?	Yes	Go to the next step.
		No	If poor connection of audio unit/ car-navigation unit connector: - Securely connect the audio unit connector. If the audio unit/ car-navigation unit side connector is wrong: - Replace the audio unit/car-navigation unit. (See AUDIO UNIT REMOVAL/ INSTALLATION.) (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION) If the wiring harness-side connector is wrong: - Repair or replace the pins and/or the connector. After treating either the above-mentioned, then go to the next step.
13	- Inspect the ground condition of the antenna. - Is the ground condition normal?	Yes	Go to the next step.
		No	Repair or replace the ground. Go to the next step.
14	Is there any noise?	Yes	With audio unit (with display) - Go to the next step. With car-navigation unit or audio unit (without display) - If noise occurs from the speaker of a specific channel, or the volume is minimized and the noise occurs: - Replace the audio amplifier. (See AUDIO AMPLIFIER REMOVAL/ INSTALLATION.) - If noise occurs from the speaker of two or more channels or the volume is minimized and the noise dose not occurs.

			▪ Replace the audio unit/car-navigation unit. (See AUDIO UNIT REMOVAL/ INSTALLATION.) (See CAR-NAVIGATION UNIT REMOVAL/ INSTALLATION)
		No	The system is normal.
15	• Verify that all of the audio unit reset conditions for the customer's audio unit are met. (See AUDIO UNIT RESET PROCEDURE [ENTIRE AUDIO SYSTEM].) • Are all of the audio unit reset conditions for the customer's audio unit met?	Yes	Perform the audio unit reset.
		No	Replace the audio unit.
			(See AUDIO UNIT RESET PROCEDURE [ENTIRE AUDIO SYSTEM] .)
			(See AUDIO UNIT REMOVAL/ INSTALLATION .)

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