

Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922



Subject: "ULTRASONIC SENSOR MALFUNCTION" WARNING MESSAGE AND DTC STORED AFTER REPLACING ULTRASONIC SENSOR	Bulletin No.: 09-026/23
	Last Issued : 08/03/2023

BULLETIN NOTES

This bulletin supersedes the previously issued bulletin(s) listed below. The changes are noted in Red text.

Previous TSBs:	Date(s) Issued:
09-026/23	6/28/23

APPLICABLE MODEL(S)/VINS

2022 MX-30 with VINS lower than JM1 DR**B*** 100078 (produced before July 20, 2021)

2020-2021 CX-30 (Mexico built) vehicles with VINs lower than 3MV DM**** ** 231437 (Produced before Nov. 14, 2020)

2019-2021 Mazda3 (Japan built) vehicles with VINs lower than JM1 BP**** ** 300047 (Produced before Jun. 17, 2020)

2019-2021 Mazda3 (Mexico built) vehicles with VINs lower than 3MZ BP**** ** 208787 (Produced before Nov. 14, 2020)

DESCRIPTION

Some vehicles may exhibit the warning message "Ultrasonic Sensor Malfunction" in the instrument cluster and the following DTC(s) stored after replacing the front and/or rear ultrasonic sensor(s) during body or paint repair.

DTC	System malfunction location
B1B36:04	Front corner ultrasonic sensor (RH) signal circuit malfunction
B1B36:49	Front corner ultrasonic sensor (RH) power supply circuit malfunction
B1B38:04	Front ultrasonic sensor (RH) signal circuit malfunction
B1B38:49	Front ultrasonic sensor (RH) power supply circuit malfunction
B1B40:04	Front corner ultrasonic sensor (LH) signal circuit malfunction
B1B40:49	Front corner ultrasonic sensor (LH) power supply circuit malfunction
B1B42:04	Front ultrasonic sensor (LH) signal circuit malfunction
B1B42:49	Front ultrasonic sensor (LH) power supply circuit malfunction
B1B44:04	Rear corner ultrasonic sensor (RH) signal circuit malfunction
B1B44:49	Rear corner ultrasonic sensor (RH) power supply circuit malfunction

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	alfunction
B1B46:04	Rear ultrasonic sensor (RH) signal circuit malfunction
B1B46:49	Rear ultrasonic sensor (RH) power supply circuit malfunction
B1B48:04	Rear corner ultrasonic sensor (LH) signal circuit malfunction
B1B48:49	Rear corner ultrasonic sensor (LH) power supply circuit malfunction
B1B50:04	Rear ultrasonic sensor (LH) signal circuit malfunction
B1B50:49	Rear ultrasonic sensor (LH) power supply circuit malfunction
B1B57:49	Malfunction in power supply to front ultrasonic sensor
B1B58:49	Malfunction in power supply to rear ultrasonic sensor
B1B5A:04	Rear side ultrasonic sensor (RH) signal circuit malfunction
B1B5A:49	Rear side ultrasonic sensor (RH) power supply circuit malfunction
B1B5C:04	Rear side ultrasonic sensor (LH) signal circuit malfunction
B1B5C:49	Rear side ultrasonic sensor (LH) power supply circuit malfunction

Due to configuration of the parking assist unit, the new ultrasonic sensor may not be recognized. To eliminate this concern, the parking assist unit has been modified.

Customers having this concern should have their vehicle repaired using the following repair procedure.

REPAIR PROCEDURE

MX-30:

1. Verify the customer concern and if the vehicle had recent body or paint repair.
2. Replace the parking assist unit with a modified one according to the instructions on MGSS (PARKING ASSIST UNIT (ULTRASONIC) REMOVAL/INSTALLATION).
3. Verify the repair.

Mazda3 and CX-30:

If you receive a customer complaint for this concern (after body and paint repairs), reprogram the parking assist unit (PAU) according to following steps.

1. Verify customer concern.

NOTE:

- If the concerned vehicle is equipped with electric/electronic accessories (especially aftermarket ones), the vehicle

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may not go to sleep mode after the ignition is turned off (depending on the wiring method to the power source). On such a vehicle, remove these accessories and then diagnose if they are the cause of the concern.

- If the concerned vehicle is equipped with a dash cam that is set to keep running even when the ignition is off (so-called parking mode), the power consumption may result in a drained battery when the vehicle that is not frequently driven.

2. [For 2019 Mazda3 5HB with advanced keyless entry]: Check if MSP56 has been completed.

Has MSP56 been completed?

YES: Go to step 3.

NO: Perform MSP56, then go to step 5.

3. Reprogram the PAU with the Mazda Modular Diagnostic System (M-MDS), using the Mazda Diagnostic And Repair Software (MDARS). Refer to MDARS ECU Reprogramming Procedure.

NOTE:

- If current calibration file name in the ECU FILENAME screen is the same as shown in Calibration Files Information or with later suffix, reprogramming is not necessary.
- If the BCM needs to be reprogrammed, related ECU may need to be reprogrammed together. Refer to TSB 09-027/22 - WHEN REPLACING BCM, SOME ECU MAY NEED REPROGRAMMING, reprogram applicable ECU and explain to the customer about the low battery warning function.

4. [For 2019 Mazda3 5HB with advanced keyless entry]: If the BCM needs to be reprogrammed and the current LFU file name is NOT the same as shown in Calibration Files Information or with later suffix, reprogram the LFU. Refer to MDARS ECU Reprogramming Procedure.

5. Reprogram the climate control unit (**CCU** on MDARS) using the Mazda Diagnostic And Repair Software (MDARS). Refer to MDARS ECU Reprogramming Procedure.

NOTE:

- If the current calibration file name in the ECU FILENAME screen is the same as shown in the Calibration Files Information or with a later suffix, reprogramming is not necessary.
- After the reprogramming, pending DTC P2610:00 [PCM] may be stored without the CHECK ENGINE light ON. Since this DTC may turn to a current DTC depending on operations after the reprogramming, clear DTC after all repair work done.
- If DTC U2120:00 or/and U2500:82 are stored and i-ACTIVSENSE warning light (amber) turns on after the reprogramming, refer to SA-043/20.
- If the Welcome Lamp function is accidentally activated while using MDARS, it may also cause this concern. Check and correct as necessary, refer to SA-054/20.

6. Clear the DTC, turn the ignition off, and get out of the vehicle.

7. Close and lock the door.

8. Wait for at least ten minutes.

9. Verify the repair by starting the engine and making sure the Check Engine light is OFF and no abnormal warning lights

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are ON.

NOTE: If any DTC should remain after performing a DTC erase, diagnose the DTC according to the instructions on MGSS.

CALIBRATION

Mazda3 and CX-30:

File Name	Note
B0J8-67UK2-F	With front ultrasonic sensors
B0J9-67UK2-F	Without front ultrasonic sensors

PARTS INFORMATION

MX-30:

Parts Number	Description	Qty.	Notes
DN4J-67-UU0A	UNIT, PARK ASSIST	1	With Front Sonar and Side Sonar
DN4K-67-UU0A	UNIT, PARK ASSIST	1	With Front Sonar and without Side Sonar or Without Front Sonar
E120-68-AB1	CLIP	1	[R] For trunk side upper trim

[R]: Replacement parts

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WARRANTY INFORMATION**NOTE:**

- This warranty information applies only to verified customer complaints on vehicles eligible for warranty repair.
- This repair will be covered under Mazda's New Vehicle Limited Warranty term.
- Additional diagnostic time cannot be claimed for this repair.

MX-30:

Warranty Type	A
Symptom Code	62
Damage Code	9W
Part Number Main Cause	****_67-UU0*
Quantity	1
Operation Number / Labor Hours:	XXWDPXRX / 0.4 Hrs.

Mazda3/CX-30:

Warranty Type	A
Symptom Code	64
Damage Code	9W
Part Number Main Cause	5555-67-UU0
Quantity	0
Operation Number / Labor Hours:	XXWDPAFX / 0.3 Hrs.

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