Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922

Subject:	
SHIFT NOISE AND/OR VIBRATION DURING 1-2 SHIFT AND WHEN ENGINE RESTARTING BY I-STOP FUNCTION	Bulletin No.: 05-001/24 Last Issued : 06/21/2024

BULLETIN NOTES

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

Previous TSBs:	Date(s) Issued:
05-001/24	05/29/24 and 05/01/24

APPLICABLE MODEL(S)/VINS

2024 CX-90 (H3T inline 6) with VINS lower than JM3KK******161438 (produced before February 29, 2024)

DESCRIPTION

Some customers may complain about the following symptoms:

- A bark, hoot, crunch, chirp, honk noise and/or vibration during 1-2 shift while accelerating from a complete stop at operating temperature.
- A vibration when engine restarting by i-stop function.

NOTE: See attached video file "Sample Noise" at end of document.
This shift noise and/or vibration may be caused by improper hydraulic pressure control of the automatic transmission. To eliminate these concerns, the control software of the TCM has been modified.
Customers having this concern should have their vehicle repaired using the following repair procedure.

REPAIR PROCEDURE

1. Verify the customer concern.
2. Reprogram the **PCM** and **TCM** with the Mazda Modular Diagnostic System (M-MDS), using the Mazda Diagnostic And Repair Software (MDARS). Refer to MDARS ECU Reprogramming Procedure, and then perform TCM Intial Learning, Powertrain Start-up Learning, and Shift Range Learning.

NOTE:

- **Be sure to submit ODR data as it is a required item and will be checked during warranty claim submission. Instructions can be found under M-MDS -> MDARS (Uploading ODR Data).**
- Reprogramming is not necessary if current calibration file name in the ECU FILENAME screen is the same as shown in Calibration Files Information or with later suffix.
- 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 is done.

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3. Clear any other DTCs.
4. Verify the repair by starting the engine and confirming there is no CHECK ENGINE light ON or abnormal warning lights present.

NOTE: If any DTCs should remain after deleting DTC, diagnose the DTCs according to the appropriate Troubleshooting section in MGSS.

4. Perform TCM Initial Learning according to the instuctions on MGSS (INITIAL LEARNING OF AT).

- If MDARS screen shows "Failed", perform the learning again.

5. Perform the Learning Cycle for Starting.
    a. Start the engine.
    b. Wait for at least 5 seconds.
    c. Turn the ignition OFF
    d. Wait for at least 5 seconds.
    e. Repeat steps (a) through (d) 2 more times (3 cycles total).
6. Perform the Learning Cycle for Shift Ranges.
    a. Start the engine.
    b. While idling, depress the brake pedal and perform the following steps:
        1) Move the shift lever in "D".
        2) Move the shift lever from "D" to "R" and wait 10 seconds.*
        3) Move the shift lever from "R" to "D" and wait 10 seconds.*
            * DO NOT stop in N range while moving the shift lever.
        4) Repeat steps (1) through (3) 4 more times (5 cycles total).

NOTE: After TCM reprogramming, the customer may notice a shift feeling change temporarily because the hydraulic pressure setting for clutch engagement is not optimized and
actual hydraulic pressure may not be stable depending on situations. During driving, the learning process optimizes the hydraulic pressure setting for clutch engagement to stabilize the actual hydraulic pressure. Therefore, in the beginning of driving, light shift shocks and shift feeling change may be felt temporarily.

CALIBRATION

Powertrain	Fuel	ECU	File Name (Old)	File Name (New)
H3T (inline 6)	Regular	PCM	H301-188K2-P	H301-188K2-R*
		TCM	H327-21PS1-J	H327-21PS1-K*
	Premium	PCM	H302-188K2-P	H302-188K2-R*
		TCM	H328-21PS1-J	H328-21PS1-K*

*: MDARS will load the correct PCM software automatically, depending on the engine.

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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 Federal Emission Warranty (long term).
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	82
Damage Code	9W
Part Number Main Cause	5555-21-100
Quantity	0
Operation Number / Labor Hours:	XXWP5AFX / 0.8 Hrs.

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