

Technical Service Bulletin

Mazda North American Operations
Irvine, CA 92618-2922



Subject: 1-2 SHIFT SHOCK WHEN VEHICLE IS COLD	Bulletin No.: 05-004/24
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BULLETIN NOTES

APPLICABLE MODEL(S)/VINS:

2024 CX-90 (H3T inline 6) with VINS lower than JM3KJ*****110311 (produced before May 22, 2024)

DESCRIPTION

Some customers may complain about shift shock during 1-2 shift when the vehicle is cold (ATF temperature is 86 °F (30 °C) or lower). This concern most likely occurs on the vehicle with certain versions of TCM file name as follows:

Model	Powertrain	Fuel	TCM File Name
CX-90	G 3.3	Regular	H327-21PS1-K
		Premium	H328-21PS1-K

This may be caused by improper hydraulic pressure control of the automatic transmission. To eliminate this concern, 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. If not performed yet, perform existing campaign programs including reprogram of the **PCM**. (Claim the labor hours to the campaign program.) Then the concern in this Service Information also may be repaired.
3. Reprogram the **TCM** with the Mazda Modular Diagnostic System (M-MDS), using the Mazda Diagnostic And Repair Software (MDARS). Refer to MDARS ECU Reprogramming Procedure.

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).**
 - When TCM has been selected, if necessary, then MDARS will reprogram PCM and TCM together, as one software package.
 - 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.
4. Clear any other DTCs.

Page 1 of 3

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5. 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.

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

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

7. Perform the Learning Cycle for Starting.

- Start the engine.
- Wait for at least 5 seconds.
- Turn the ignition OFF
- Wait for at least 5 seconds.
- Repeat steps (a) through (d) 2 more times (3 cycles total).

8. Perform the Learning Cycle for Shift Ranges.

- Start the engine.
- While idling, depress the brake pedal and perform the following steps:
 - Move the shift lever in "D".
 - Move the shift lever from "D" to "R" and wait 10 seconds.*
 - Move the shift lever from "R" to "D" and wait 10 seconds.*

* DO NOT stop in N range while moving the shift lever.

 - 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

Model	Power-train	Fuel	ECU	File Name (Old)	File Name (New)	Actual time to reprogram
CX-90	G 3.3	Regular	PCM	H301-188K2-P	H301-188K2-R	7 min.
			TCM	H327-21PS1-K	H327-21PS1-L	
		Premium	PCM	H302-188K2-P	H302-188K2-R	
			TCM	H328-21PS1-K	H328-21PS1-L	

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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 Power Train Warranty, Federal Emission Warranty (long term) or California Emission Warranty (long term).
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	26
Damage Code	9W
Part Number Main Cause	5555-21-100
Quantity	0
Operation Number / Labor Hours:	XXWR7AFX / 0.8 Hrs.

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