

# Technical Service Bulletin

Mazda North American Operations  
Irvine, CA 92618-2922



<b>Subject:</b>  SHIFT SHOCK WHEN SHIFTING INTO 3RD, 5TH AND/OR R	<b>Bulletin No.:</b> 05-003/23
	<b>Last Issued :</b> 06/05/2023

## BULLETIN NOTES

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

Previous TSBs:	Date(s) Issued:
05-001/22	04/07/22
05-001/20	06/04/20

## APPLICABLE MODEL(S)/VINS

### US Spec.:

2017 CX-5 vehicles with VINs lower than JM3 KF\*\*\*\* \*\* 228606 (Produced before Oct. 31, 2017)

### Mexico spec

2017-2020 Mazda6 vehicles with VINs lower than JM1 GL\*\*\*\* \*\* 510785 (Produced before Aug. 9, 2019)

## DESCRIPTION

Some customers may complain of a shift shock felt when shifting into 3rd, 5th and/or R range with no A/T related DTC stored. The symptom can be temporarily repaired by A/T initial learning procedure, but may recur after multiple driving cycles.

Applicable situations:

- Shifting up: 2-3 or 4-5
- Shifting down: 4-3 or 6-5

**NOTE:** 4-5 and 6-5 are felt more than others due to the gear ratio.

- Shifting into R: D-R, N-R, P-R

Improper control logic of the TCM may cause improper learning of R-3-5 brake engaging speed during certain driving situations. To correct this concern, the control logic of the TCM has been modified.

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

## REPAIR PROCEDURE

1. Verify customer concern.
2. Reprogram the TCM with Mazda Modular Diagnostic System (M-MDS) using IDS-**130.02** or later software and TCM

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Reprogramming Procedure below.

3. Perform "Initial Learning" according to the instructions on MGSS (INITIAL LEARNING).
4. Perform "N-R learning".
  - a. Verify the ATF temperature reached 60°C {140°F} or over.
  - b. Shift the selector lever to N position
  - c. Shift the selector lever from N to R position and wait for five seconds.
  - d. Shift the selector lever from R to N position and wait for five seconds.
  - e. Repeat the steps (3) and (4) five times or more.
5. Verify repair.

#### TCM REPROGRAMMING:

**ATTENTION: READ ALL NOTES AND CAUTIONS BEFORE REPROGRAMMING TCM!**

#### CAUTION:

- **IF IDS DOES NOT HAVE SUFFICIENT BATTERY POWER, THE REPROGRAMMING WILL FAIL.**
- **TCM DAMAGE MAY OCCUR IF THE CORRECT BATTERY CHARGER SETTING IS NOT USED.**
- **SET THE BATTERY MANAGEMENT SYSTEM TO "POWER SUPPLY MODE" DURING TCM REPROGRAMMING.**
- **POWER SUPPLY MODE** will maintain proper battery voltages during TCM reprogramming.
- If a different charger is used, **MAKE SURE IT DOES NOT EXCEED 20 AMPS. IF IT EXCEEDS 20 AMPS, IT COULD DAMAGE THE TCM.**
- The charger **MUST** be connected directly to the vehicle battery.
- It is **NOT** necessary to remove any fuses or relays during TCM reprogramming when the IDS screen prompts you to do so. You may accidentally stop power to one of the TCM terminals and **CAUSE THE TCM TO BE BLANKED**, or you may receive error messages during the IDS reprogramming procedure.
- Start/Stop button vehicles: **DO NOT** press the start/stop button during the reprogramming process.

#### BEFORE REPROGRAMMING TCM:

##### NOTES:

- Verify the current TCM file name in the vehicle by log view screen. If it's the same as shown in the chart(s) below (or a later one), you do not need to reprogram the TCM.
- Always update the IDS tool first, then follow on-screen instructions to download the needed calibration file for TCM reprogramming.
- If the vehicle exhibits any trouble codes or driveability symptoms, diagnose and repair using MGSS **BEFORE** attempting to reprogram the TCM.
- When reprogramming a TCM, IDS will always display the "latest" calibration P/N available for that vehicle. If any calibration has been revised/updated to contain new information for a new service concern, it will also contain all previously released calibrations.
- Confirm the DLC cable is in good condition before attempting to reprogram the TCM.

#### TCM REPROGRAMMING:

1. Reboot the IDS to clear memory before reprogramming.
2. Using the latest IDS Software available, reprogram the TCM to the latest calibration (refer to "Calibration Information"

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table) by following the "Module Reprogramming" procedure.

3. Verify the file name matches with the Calibration chart(s) below.
4. Clear all DTCs.
5. Start the engine and confirm that no warning lights stay on.
6. Record the customers radio presets from the infotainment system.
7. Disconnect the negative battery cable and wait at least 30 seconds to reset the fuel control learning data.
8. Re-connect the negative battery cable.
9. Re-enter the customers presets into the infotainment system.

#### AFTER REPROGRAMMING TCM:

##### NOTES:

- IDS shows the calibration part numbers after programming the TCM.
- If any DTCs should remain after performing DTC erase, diagnose the DTC using MGSS online instructions and submit a warranty claim according to the normal warranty procedure.
- Be aware that TCM calibration part numbers and file names listed in any Service Bulletin may change due to future releases of IDS software, and additional revisions made to those calibrations for service related concerns.

#### CALIBRATION

Model Year	File name
2017 CX-5 2WD (US Spec.)	PYNA-21PS1-C
2017 CX-5 4WD (US Spec.)	PYNC-21PS1-C
2017-2018 Mazda6 (Mexico Spec.)	PYJT-21PS1-C
2019-2020 Mazda6 (Mexico Spec.)	PYH5-21PS1-C

#### 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.
- Additional diagnostic time cannot be claimed for this repair.

Warranty Type	A
Symptom Code	26
Damage Code	9W
Part Number Main Cause	5555-RP-TCM
Quantity	0

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Operation Number / Labor Hours:

XXR4HXFX / 0.3 Hrs.

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