



<b>Subject:</b>  <b>VIBRATION WHEN DRIVING AT 1500-1650 RPM</b>	<b>Bulletin No.:</b> 01-009/20
	<b>Last Issued:</b> 07/08/2020

## APPLICABLE MODEL(S)/VINS

2019-2020 Mazda3 (US spec)  
2020 CX-30 (US spec)

## DESCRIPTION

Some customers may complain about a very low frequency noise and/or vibration felt at the steering wheel, the floor and/or the seats when driving at 1500-1650 rpm in any gear position. This may be caused by normal vehicle behavior while the cylinder deactivation is active (two cylinders drive). The state of the cylinder deactivation can be monitored in the center display to help verify if this is the issue.

**WARNING:** DO NOT keep your eyes focused solely on the display while test driving. For your safety, keep your eyes on the road ahead.

To correct this concern, the radiator mount brackets and the control software of the PCM have been modified to reduce the resonance of the radiator.

**NOTE:** The combination of the modified radiator mount brackets and older PCM calibration may result in worse vibration.

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

## REPAIR PROCEDURE

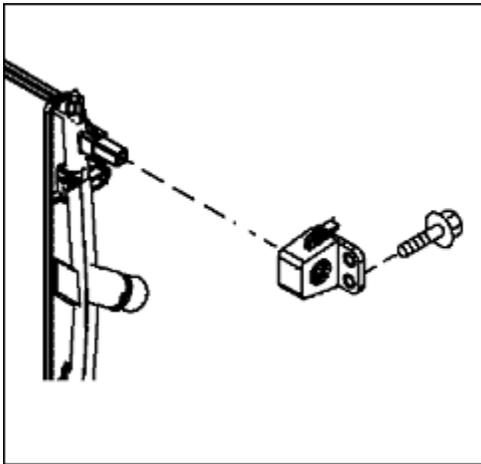
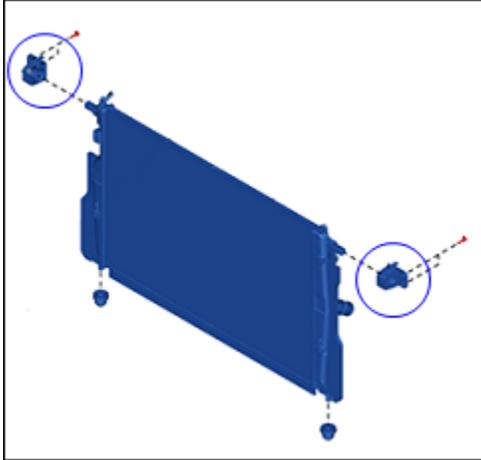
1. Verify customer concern. The state of the cylinder deactivation can be monitored in the center display to help verify if this is the issue.

**WARNING:** DO NOT keep your eyes focused solely on the display while test driving. For your safety, keep your eyes on the road ahead.

2. Replace the radiator mount brackets with modified ones.

**Bolt tightening torque: 71-88 in-lb (82-101 kgf-cm, 8-10 Nm)**

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3. Verify the VIN of the vehicle.

- If the vehicle is within the VIN range below, go to step 4.
- If the vehicle is outside the VIN range, go to step 8 as PCM reprogramming is not necessary.

**NOTE:** 2020 CX-30 does not need to be reprogrammed.

**2019-2020 Mazda3  
Japan Built**

VIN Range		Production Date Range
JM1BP*****	100001-163204	Sep. 25, 2018 - Jan. 10, 2020

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**Mexico Built**

3MZBP*****	100001-131963	Jan. 15, 2019 - Jan. 10, 2020
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4. Reprogram the PCM using the Mazda Diagnostic And Repair Software (MDARS). Refer to "MDARS - ECU Reprogramming Procedure".

**NOTE:**

- If the current calibration file name on the ECU FILENAME screen is the same as shown in Calibration Information or with a later suffix, reprogramming is not necessary.
- After reprogramming, pending DTC P2610:00 [PCM] will be stored without the Check Engine Light ON. Start the engine and clear the DTC.
- After reprogramming, if DTC U2120:00 and/or U2500:82 are stored and the i-ACTIVSENSE warning light (amber) turns ON, refer to SA-043/20.

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

6. Close and lock the door.

7. Wait for at least ten minutes.

8. Verify the repair by starting the engine and making sure that all warning lights are off.

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

**MDARS ECU Reprogramming Procedure**

**NOTE:** This procedure explains a generic reprogramming for all Electrical Control Units (ECU) such as PCM, BCM, ESU, etc. Be aware that some sentences and screen shots below mention a certain control unit such as "PCM" or "BCM" as an example.

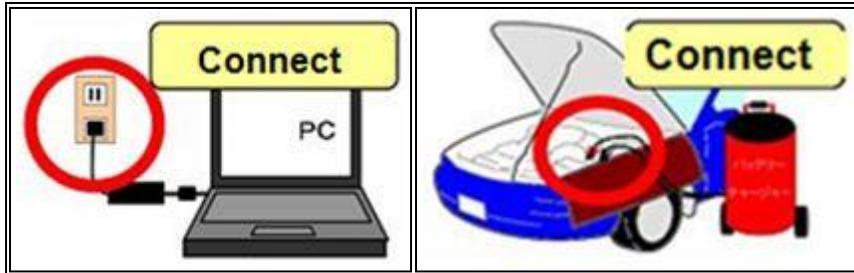
**ATTENTION: READ ALL CAUTIONS AND NOTES BEFORE AND AFTER REPROGRAMMING!**

**CAUTION:**

- **A poor connection between the vehicle and M-MDS and/or low voltage may result in abnormal termination and/or data corruption. A low battery voltage may cause a reprogramming failure resulting in unexpected ECU replacement.**
- **Make sure that the following connections are firmly connected, then DO NOT touch the VCM and DLC cable to prevent noise and a poor connection.**
  - **Between the vehicle-side connector and the DLC cable**
  - **Between the PC-side connector and the USB port of the PC**

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- **When reprogramming with MDARS, power consumption and voltage fluctuation are greater than with IDS. Connect the GR8 battery charger and use Manual Mode set to 14.5 volts and continuous charging to the vehicle to minimize any voltage fluctuation. DO NOT use any other charger.**



### BEFORE REPROGRAMMING NOTE:

- Turn off all electrical loads (i.e. A/C blower, audio system, rear defogger and headlights).
- Perform a self-test and verify no DTCs are stored. If any DTCs are stored, repair the concern and delete the DTCs.
- Disconnect any aftermarket accessories (non-genuine Mazda accessories).
- Terminate all programs other than MDARS on the PC. Running other programs may interfere with the MDARS performance, resulting in the PC freezing or other problems.
- Perform reprogramming with a proper internet connection. When using a wireless network, make sure the connection is strong.
- Make sure to keep enough free space on the PC's hard disc. Insufficient free space (less than 1 GB) may result in the PC freezing during reprogramming.
- **If MDARS requires Manual PCM Software Number Entry, follow these steps.**



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- a. Look for the small sticker on the PCM that has the software number “\*\*\*\* 18 8K2\*” printed on it.



- b. Enter the software number adding “-” instead of a space.

**Example:** If “PX06 18 8K2H” is printed, enter “PX06-18-8K2H”.

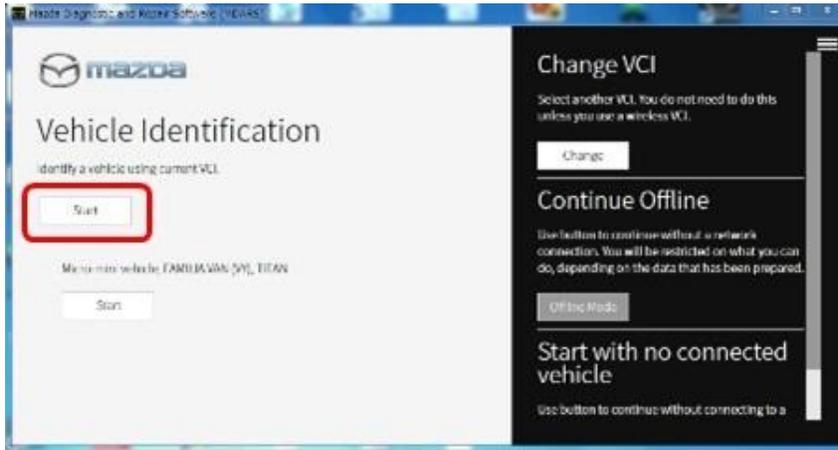
**CAUTION:** Entering wrong Software Number can lead to inappropriate software downloading and may result in abnormal operation of the vehicle.



1. Connect the M-MDS to the vehicle.
2. Launch the Mazda Diagnostic And Repair Software (MDARS).

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3. Turn the ignition on, then click “Start”.



4. Select the “toolbox” tab.



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5. Select Work Support group.

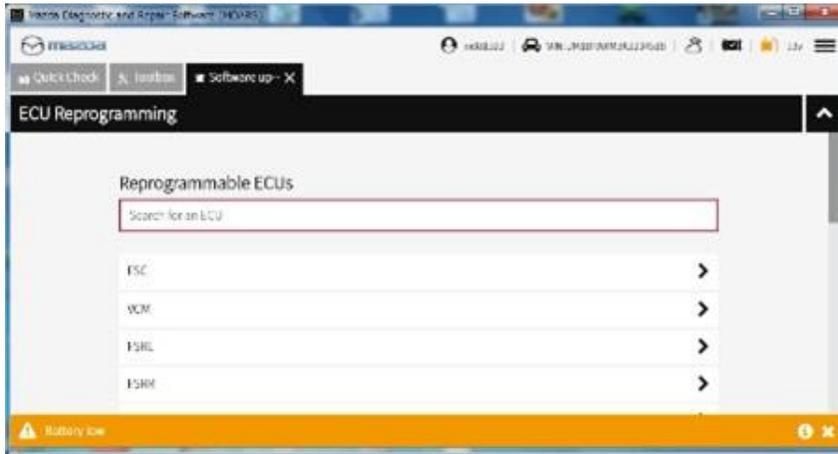


6. Select "Software update", then click "Run".

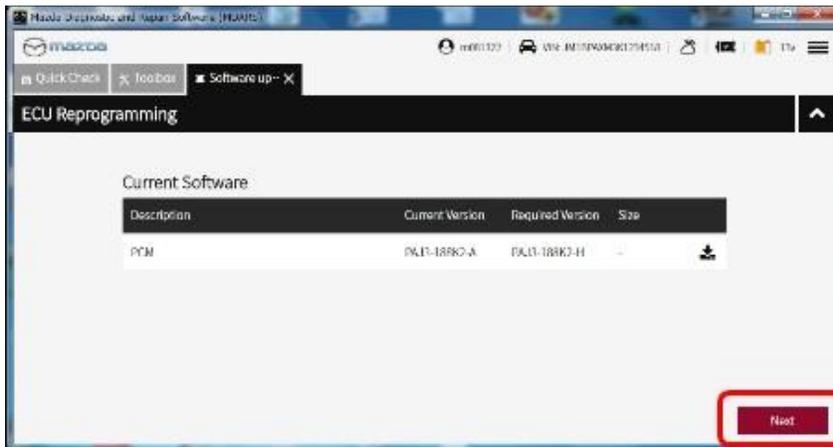


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7. Select the ECU to be reprogrammed.

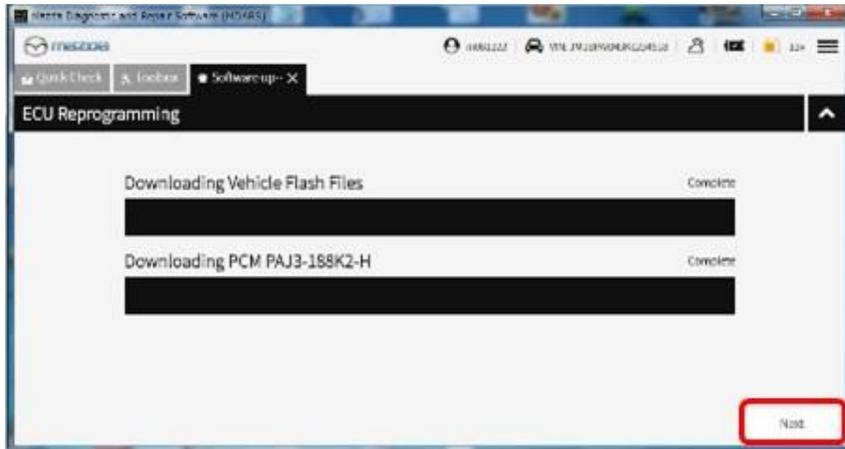


8. Confirm the current and new software versions, then click "Next".  
**NOTE:** When reprogramming the BCM, two softwares will be shown.



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9. Wait for the download, then click “Next”. **NOTE:** When reprogramming the BCM, downloading will occur twice.

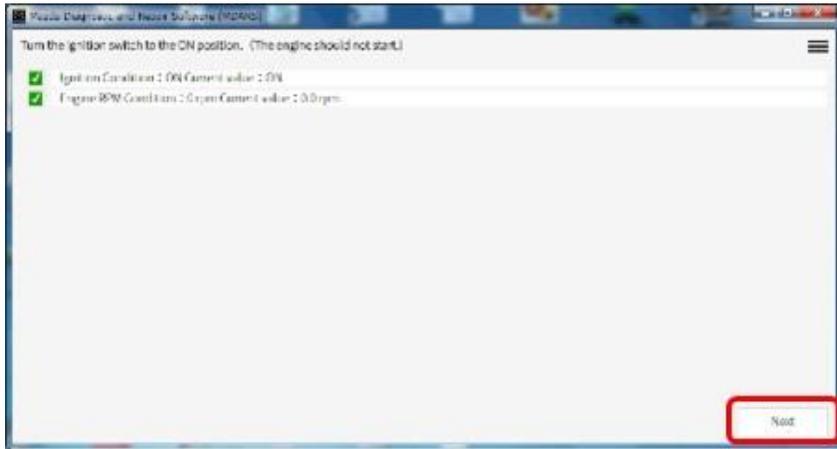


10. Read the screen instructions, then click “Next”.



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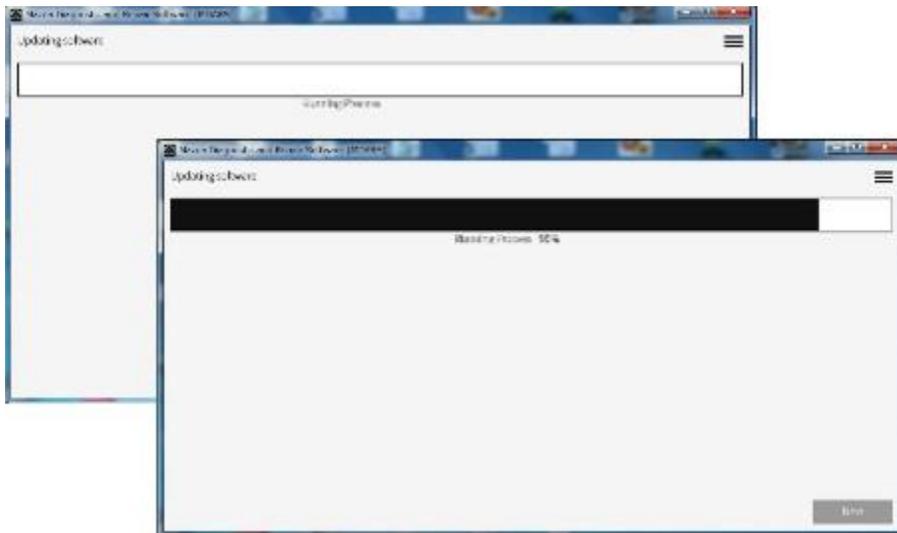
11. Follow the instructions on the screen, then click “Next”.



12. Wait for the reprogramming to complete.

**NOTE:**

- The progress bar will stay at 90% for 30 seconds. This is not a failure.
- When reprogramming the BCM, this process will occur twice.



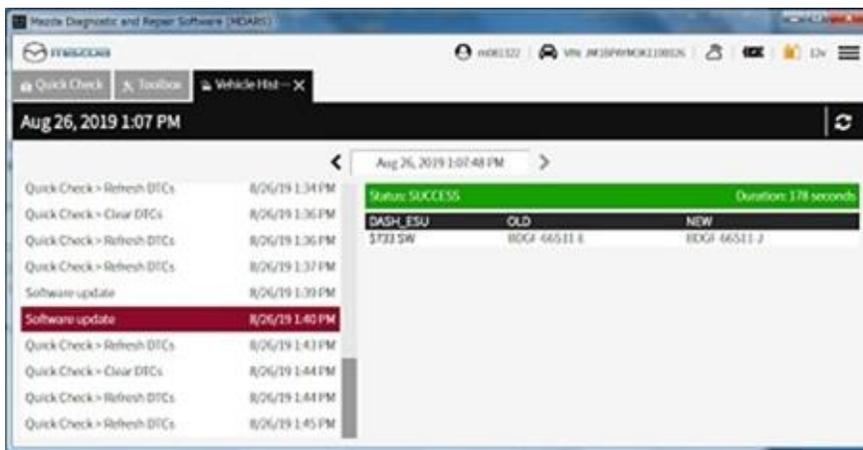
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**AFTER REPROGRAMMING  
NOTE:**

- Select "Vehicle History" under "Collect Diagnostic Information", then click "Run".



- Confirm the reprogramming on the screen and save the screen copy as a record.



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**CALIBRATION INFORMATION****2019-2020 Mazda3  
US spec. (Japan built)**

Transmission	Drive	File Name	Notes
M/T	2WD	PX58-188K2-K	Mitsubishi
		PX59-188K2-K	Denso
A/T	2WD	PX05-188K2-L	Mitsubishi
		PX06-188K2-L	Denso
	4WD	PX07-188K2-N	Mitsubishi
		PX08-188K2-N	Denso

**US spec. (Mexico built)**

Transmission	Drive	File Name	Notes
A/T	2WD	PX13-188K2-F	Mitsubishi
		PX14-188K2-F	Denso
	4WD	PX15-188K2-F	Mitsubishi
		PX16-188K2-F	Denso

**PARTS INFORMATION**

Parts Number	Description	Qty.
PEY1-15-241	Bracket (R), Radiator	1
PEY1-15-251	Bracket (L), Radiator	1

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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.

Warranty Type	A
Symptom Code	83
Damage Code	99
Part Number Main Cause	PEY1-15-241
Quantity	1
Operation Number / Labor Hours:	<p>Mazda3                      XXS3CARX / 0.3 Hrs. (without PCM reprogramming)                      XXS3CBRX / 0.4 Hrs. (with PCM reprogramming)                      CX-30                      XXS3CARX / 0.3 Hrs.</p>

**NOTE:** Claim PEY1-15-251 as related parts.

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