



<b>Subject:</b> <b>SURGING AT LOW SPEEDS AND DURING ACCELERATION</b>	<b>Bulletin No.:</b> 05-002/20
	<b>Last Issued:</b> 06/04/2020

## APPLICABLE MODEL(S)/VINS

2019-2020 Mazda3 (Japan built A/T only) with VINS lower than JM1BP\*\*\*\*\*163205 (produced before January 11, 2020)

2019-2020 Mazda3 (Mexico built A/T only) with VINS lower than 3MZBP\*\*\*\*\*131964 (produced before January 11, 2020)

**NOTE:** This TSB only applies to US spec vehicles with cylinder deactivation. Mexico spec vehicles are not applicable since they do not have cylinder deactivation.

## DESCRIPTION

Some customers may complain about a surging at low speeds and during acceleration. This surging is in the longitudinal direction, felt about 2 cycles per second, and occurs in the locked up 1st gear. This may be caused by the torque fluctuation and the torsional resonance in the torque converter. To correct this concern, the PCM software has been modified to reduce the torque fluctuation.

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

## REPAIR PROCEDURE

1. Verify customer concern.
2. 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.

**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

3. Verify repair.

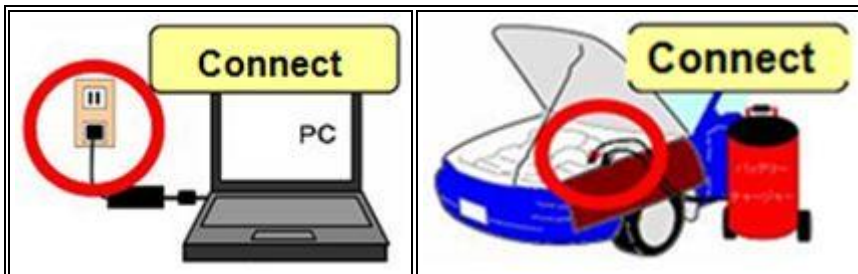
### MDARS ECU Reprogramming Procedure

**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**
- **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.**

**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

- 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.



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.

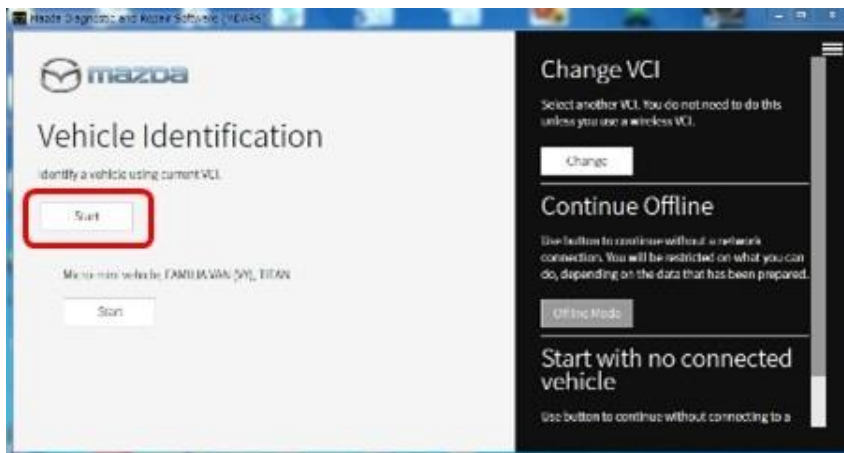
**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

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



**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by “do-it-yourselfers.” Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

4. Select the “toolbox” tab.



5. Select Work Support group.

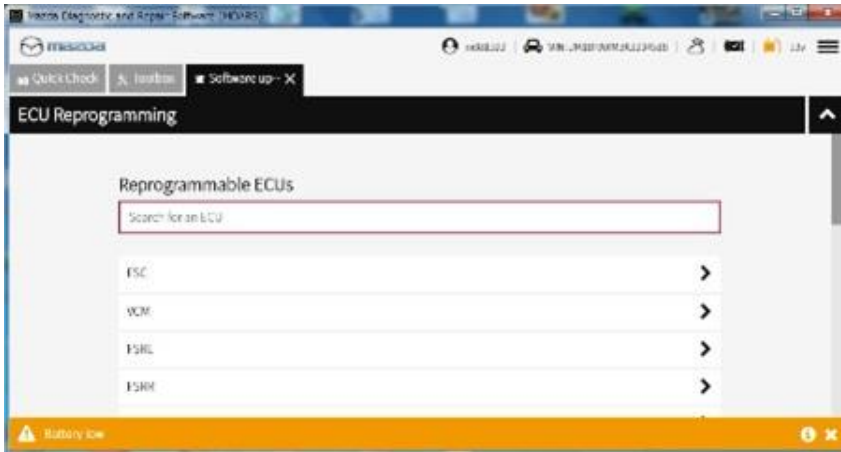


**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by “do-it-yourselfers.” Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

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

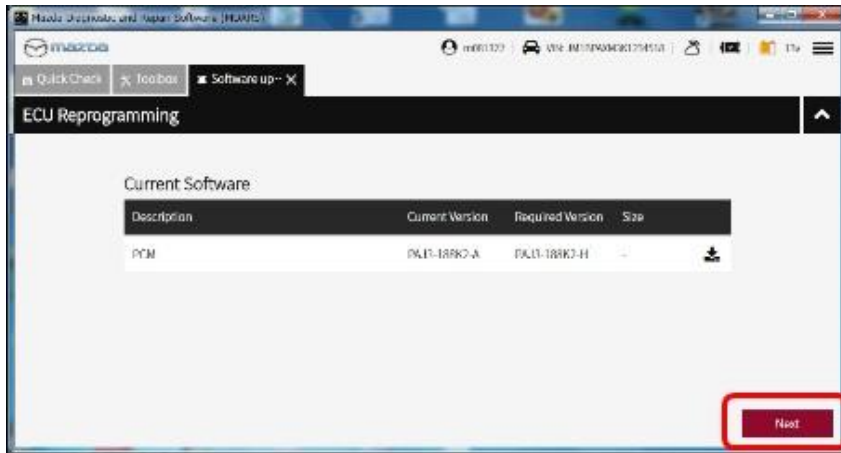


7. Select the ECU to be reprogrammed.

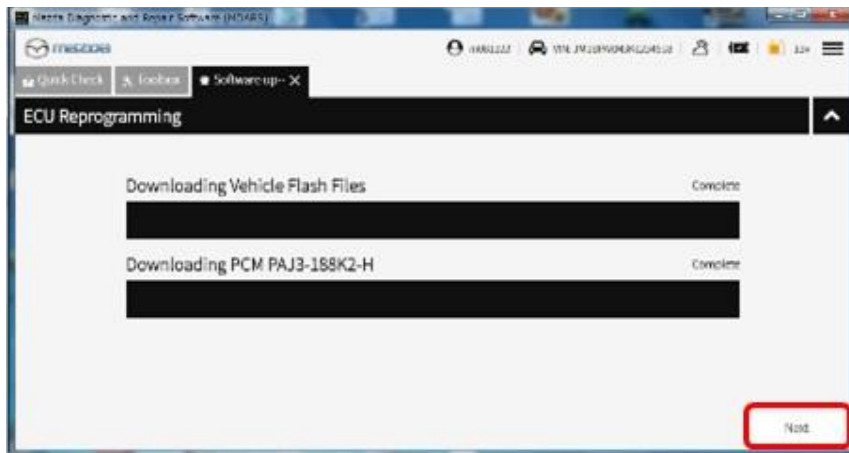


**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

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



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

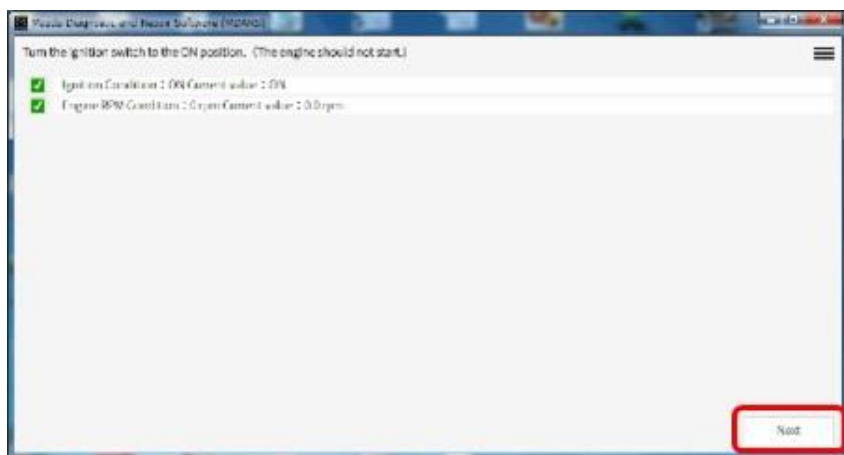


**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by “do-it-yourselfers.” Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

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



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



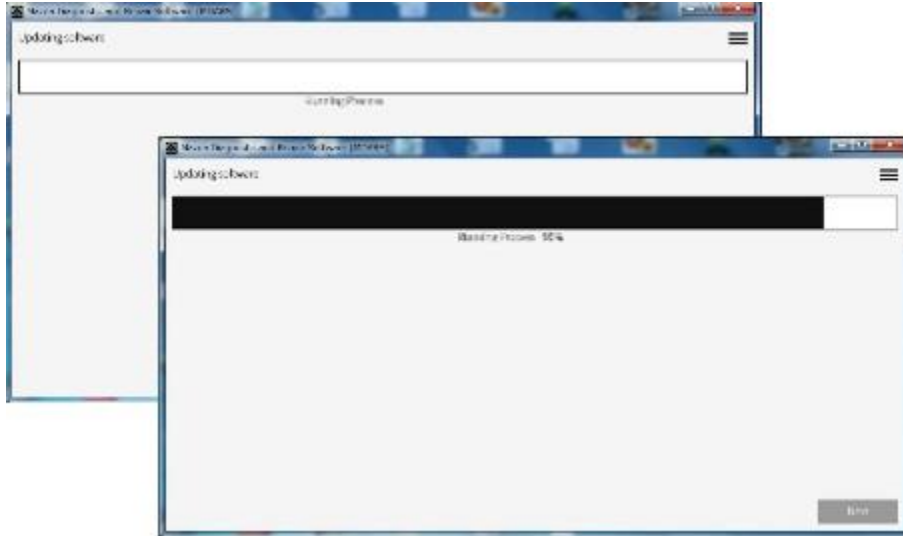
**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by “do-it-yourselfers.” Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical—including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.



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.



**AFTER REPROGRAMMING**

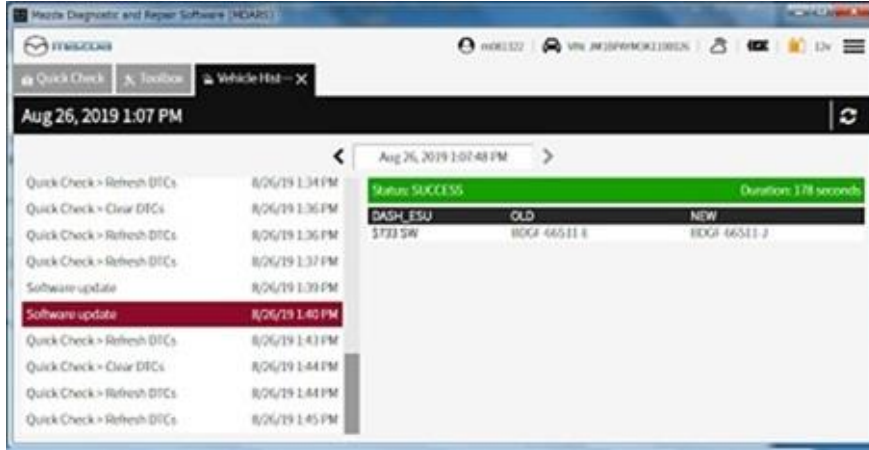
**NOTE:**

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



**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

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



## CALIBRATION INFORMATION

### Japan built

Transmission	Drive	File Name	Note
AT	2WD	PX05-188K2-L	Mitsubishi
		PX06-188K2-L	Denso
	4WD	PX07-188K2-N	Mitsubishi
		PX08-188K2-N	Denso

### Mexico built

Transmission	Drive	File Name	Note
AT	2WD	PX13-188K2-F	Mitsubishi
		PX14-188K2-F	Denso
	4WD	PX15-188K2-F	Mitsubishi
		PX16-188K2-F	Denso

**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.

**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	6X
Damage Code	9W
Part Number Main Cause	5555-18-881
Quantity	0
Operation Number / Labor Hours:	XXS39XFX / 0.2 Hrs.

**CONSUMER NOTICE:** The information and instructions in this bulletin are intended for use by skilled technicians. Mazda technicians utilize the proper tools/equipment and take training to correctly and safely maintain Mazda vehicles. These instructions should not be performed by "do-it-yourselfers." Customers should not assume this bulletin applies to their vehicle or that their vehicle will develop the described concern. To determine if the information applies, customers should contact their nearest authorized Mazda dealership. Mazda North American Operations reserves the right to alter the specifications and contents of this bulletin without obligation or advance notice. All rights reserved. No part of this bulletin may be reproduced in any form or by any means, electronic or mechanical---including photocopying and recording and the use of any kind of information storage and retrieval system ---without permission in writing.