# Technical Service Bulletin

**Mazda North American Operations**
**Irvine, CA 92618-2922**

| **Subject:** | **Bulletin No.:** 01-010/20 |
|---|---|
| **DISCHARGED BATTERY AFTER VEHICLE IS PARKED FOR MORE THAN 8 HOURS** | **Last Issued:** 08/11/2020 |

**APPLICABLE MODEL(S)/VINS**
2019-2020 Mazda3 (Japan built) with VINS starting with JM1
2019-2020 Mazda3 (Mexico built) with VINS starting with 3MZ
2020 CX-30

## DESCRIPTION

Some customers may experience a no start because the battery is discharged after the vehicle is parked for more than 8 hours. This may be caused by one or more of the following, resulting in excessive parasitic draw (dark current) on the battery.

1. The vehicle control system may not have gone to sleep because a key fob was left in the vehicle after the ignition switch was turned off and the doors were closed. This is caused by improper BCM control logic which allows a higher parasitic draw (approx. 6A) to continue for approximately 6 minutes until the vehicle control system goes into sleep mode. If the doors are operated frequently for car washing or luggage loading/unloading etc., it prevents the vehicle control system from sleeping during that time.
2. The parking lights may have been left on because the warning sound for lights on is a short ding, and it may not be noticed.
3. [With Full-Auto A/C] The heater control unit may not have gone to sleep because the hazard warning switch was pressed after the ignition was turned off. This is caused by improper control logic of the heater control unit.

To correct these concerns:

- The control software of the body control module (BCM) has been modified to shorten the time until going into the sleep mode to approximately 2 minutes.
- The control software of the body control module (BCM) has been modified to change the lights on warning sound to a continuous one.
- The control software of the heater control unit has been modified.

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



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## REPAIR PROCEDURE

1. Verify customer concern.
2. [For 2019 Mazda3 5HB with advanced keyless entry] Check if MSP56 has been completed.

**Has MSP56 been completed?**

- YES: Go to step 3.
- NO: Perform MSP56, then go to step 5.

3. Reprogram the BCM with the Mazda Modular Diagnostic System (M-MDS), using the Mazda Diagnostic And Repair Software (MDARS). Refer to "MDARS - ECU Reprogramming Procedure".

**NOTE:** If current calibration file name in the ECU FILENAME screen is the same as shown in Calibration Files Information or with later suffix, reprogramming is not necessary.

4. [For 2019 Mazda3 5HB with advanced keyless entry] If the BCM needs to be reprogrammed and the current LFU file name is NOT the same as shown in Calibration Files Information or with later suffix, reprogram the LFU. Refer to "MDARS - ECU Reprogramming Procedure".
5. Reprogram the IP-ESU (**CCU** on MDARS) using the Mazda Diagnostic And Repair Software (MDARS). Refer to "MDARS - ECU Reprogramming Procedure".

**NOTE:** If the Welcome Lamp function is accidently activated while using MDARS, it may also cause this concern. Check and correct as necessary. Refer to the SA-054/20 for details.

6. 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 with no more than 10-15A charging current to the vehicle to minimize any voltage fluctuation.**



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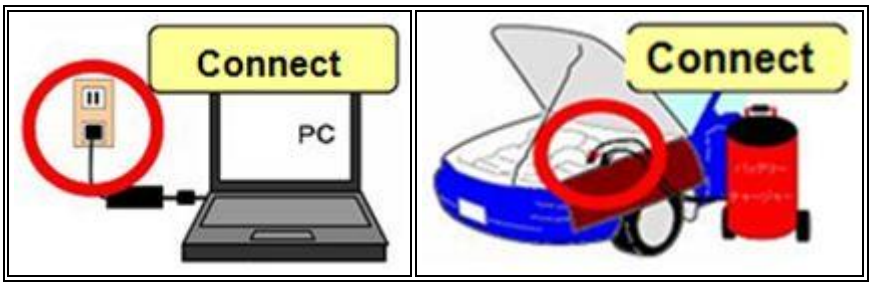
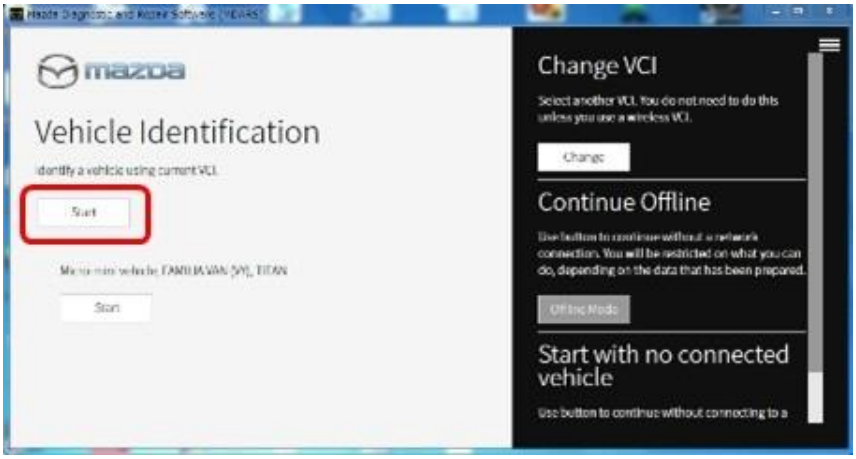



**BEFORE REPROGRAMMING**
**NOTE:**

- 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.

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".



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4. Select the “toolbox” tab.

5. Select Work Support group.

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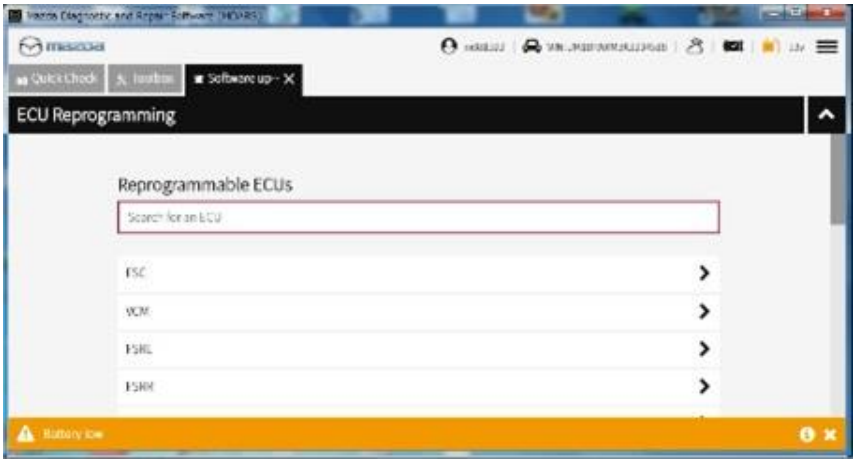
6. Select “Software update”, then click "Run".

7. Select the ECU to be reprogrammed.



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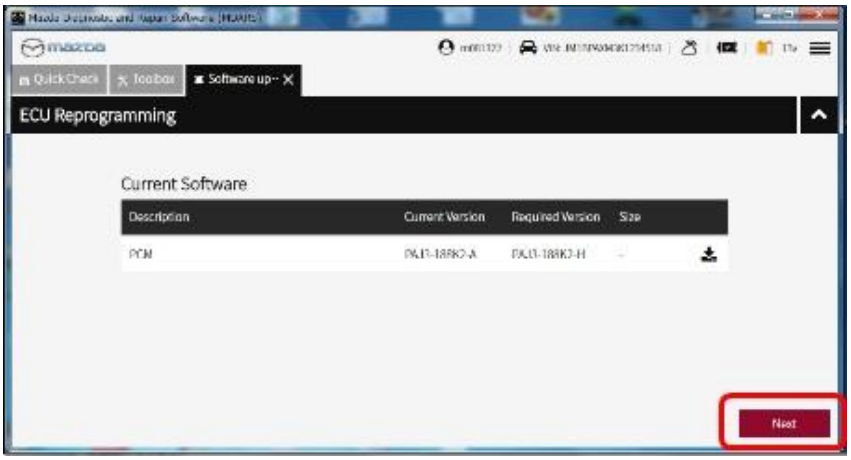
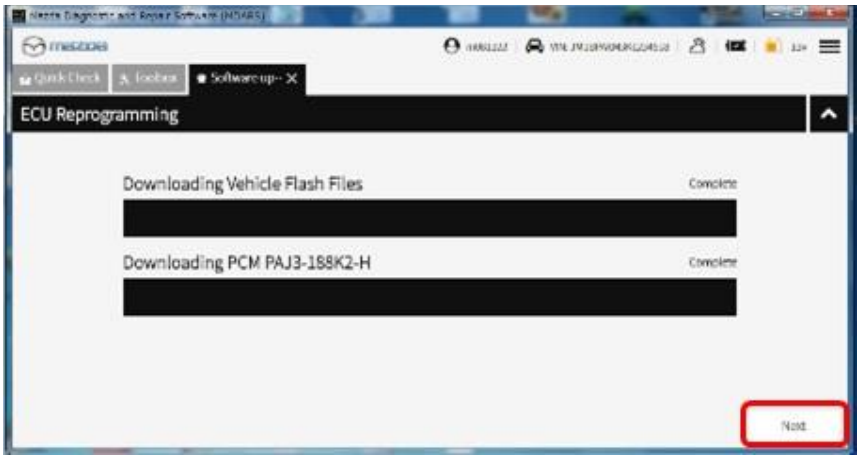
8. Confirm the current and new software versions, then click “Next”.
**NOTE:** When reprogramming the BCM, two softwares will be shown.




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



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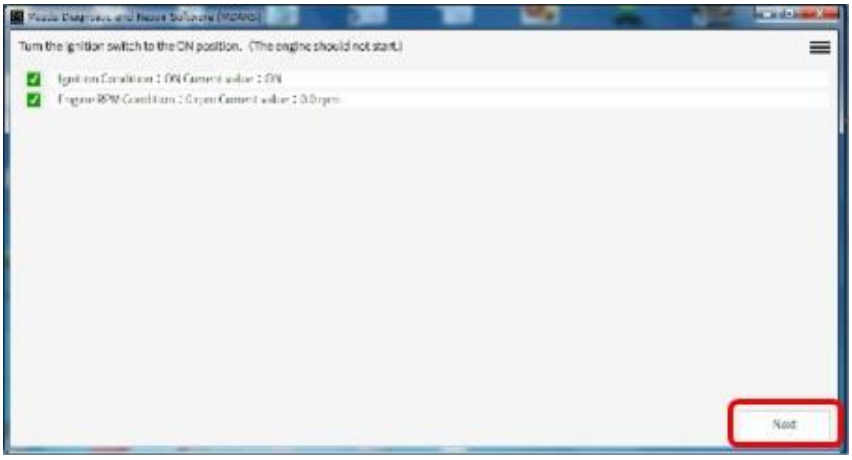
10. Read the screen instructions, then click “Next”.

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



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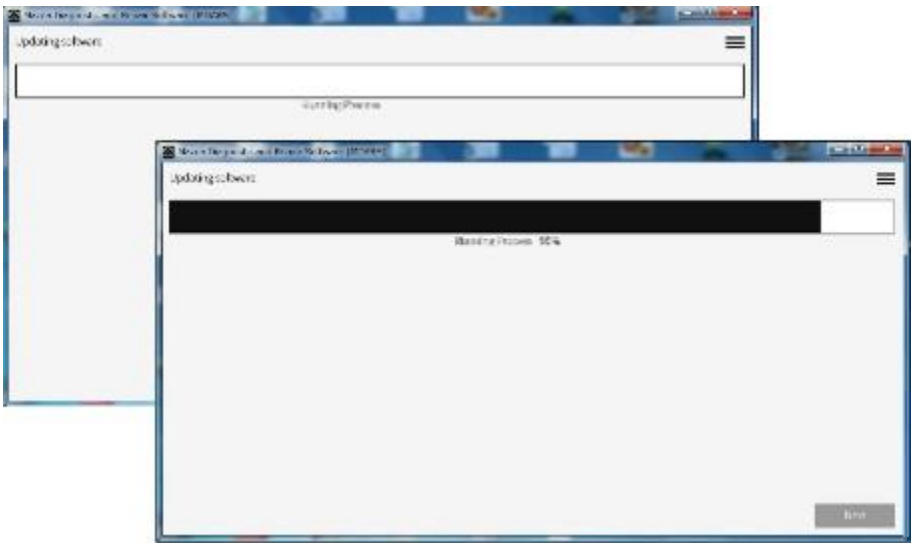
12. Wait for the reprogramming to complete.
**NOTE:**

- 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”.

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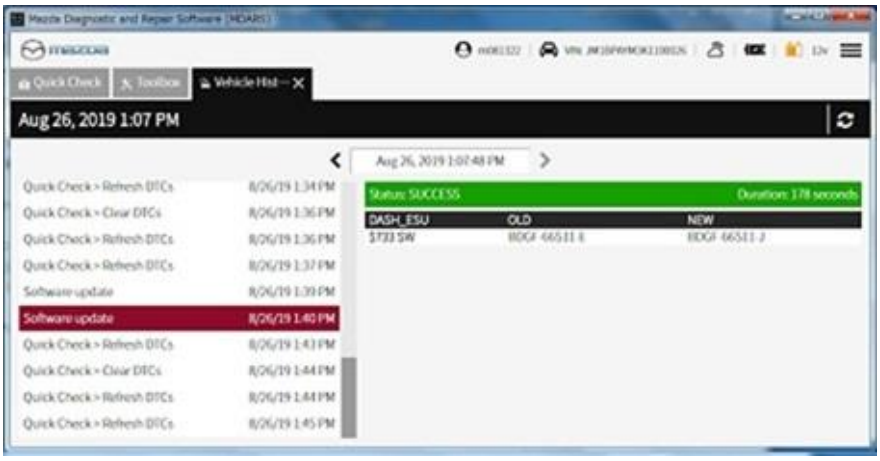
- Confirm the reprogramming on the screen and save the screen copy as a record.




## CALIBRATION INFORMATION

| Spec | Model | Body | File Name | |
| --- | --- | --- | --- | --- |
| | | | BCM_MAIN | BCM_SUB (*) |
| Japan Built | Mazda3 | 5HB | BEMD-66S02-S | BCKP-66S03- |
| | | 4SD | BCKA-66S02-V | BCKP-66S03- |
| Mexico Built | Mazda3 | 4SD | BDTS-66S02-S | BCKP-66S03- |
| | CX-30 | 5HB | DGH9-66S02-H | BCKP-66S03- |

**NOTE(*)**: For further updated BCM_MAIN file name, BCM_SUB file name may vary.

| Spec | Model | Body | File Name |
| --- | --- | --- | --- |
| | | | LF control unit (LFU) |
| All | Mazda3 | 5HB | BCWK-66S06-E |

| Spec | Model | File Name |
| --- | --- | --- |
| | | Heater control unit (CCU) |
| All | Mazda3, CX-30 | BDGG-66S12-F |



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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.

With BCM Reprogramming:

| | |
| --- | --- |
| Warranty Type | A |
| Symptom Code | 64 |
| Damage Code | 9W |
| Part Number Main Cause | 5555-67-560 |
| Quantity | 0 |
| Operation Number / Labor Hours: | Reprogramming BCM only: XXS4MAFX / 0.3 Hrs.<br>Reprogramming both units: XXS4MBFX / 0.3 Hrs. |

Without BCM Reprogramming:

| | |
| --- | --- |
| Warranty Type | A |
| Symptom Code | 64 |
| Damage Code | 9W |
| Part Number Main Cause | 5555-61-190 |
| Quantity | 0 |
| Operation Number / Labor Hours: | XXS2MXFX / 0.3 Hrs. |



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