****All Dealers: Please watch for updates to this procedure.****

Table of Contents - Links in this document are provided for all steps below

Vehicle Inspection Procedure and Preparation for Repair

1. Verify that the vehicle is within the following ranges and there is a Not Launched or OPEN 6624E and/or 6724E recall, and SSPD6 in eMDCS:

SUBJECT VEHICLES RECALL 6624E

Model	Subject VIN range	Subject production date range
2024 CX-90	JM3KK****R1 100044– 147984	From December 27, 2022 through November 9, 2023

SUBJECT VEHICLES RECALL 6724E

Model	Subject VIN range	Subject production date range
2024 CX-90	JM3KK****R1 100044 – 131022	From December 27, 2022 through September 12, 2023

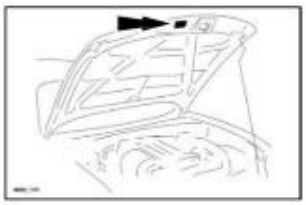
SUBJECT VEHICLES SSPD6

Model	Subject VIN range	Subject production date range
2024 CX-90	JM3 KK ****R1 100044 – 150358	From December 27, 2022 through November 13, 2023

*Only the vehicles in this range and with a "Not Launched" or "Open" status in eMDCS are affected. If the vehicle is in the range above and 6624E, 6724E, or SSPD6 is either in OPEN or Not Launched status in eMDCS, proceed to Step 2. If the vehicle does not have an OPEN or Not Launched 6624E, 6724E, or SSPD6 campaign, return the vehicle to the customer or inventory.

2. Perform an eMDCS Warranty Vehicle Inquiry and inspect the vehicle for a Campaign Label with **6624E, 6724E, or SSPD6** attached to the vehicle's hood, driver door or firewall.

NOTE: Always be sure to verify the campaign number as the vehicle may have multiple campaign labels on the hood, radiator support, and firewall or driver door jamb.

eMDCS - Warranty Vehicle Inquiry Results

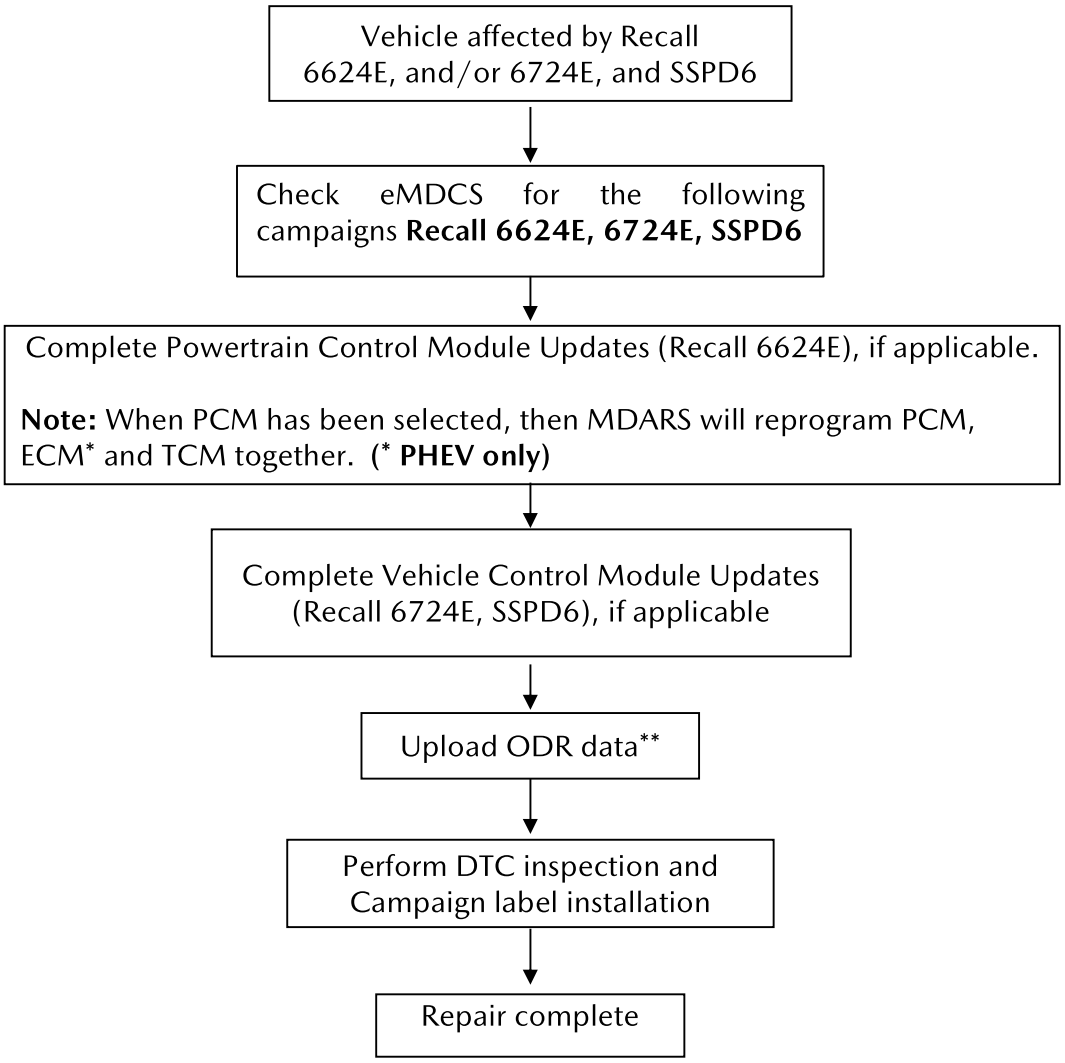
If eMDCS displays:	Campaign Label is:	Action to perform:
If no repair date is displayed on the line with CAMPAIGN 6624E, 6724E or SSPD6, the campaign has not been completed on this vehicle	Present	Fill out Dealer Recall Help on OneMazda contact or the Mazda Warranty Department at warrantydept@mazdausa.com to review vehicle history.
	Not present	Proceed to "REPAIR PROCEDURE".
If repair date is displayed for CAMPAIGN 6624E, 6724E, or any of the SSP campaigns is "CLOSED"	Present	Return vehicle to inventory or customer.
	Not present	Complete a label and apply to vehicle's hood with repair date and dealer code from eMDCS Warranty Inquiry.
CAMPAIGN 6624E, 6724E, or any of the SSP campaigns is not displayed	See Action	**The vehicle is not affected by the Recall or SSP**

Technician level required: Certified or above (does not have to be hybrid certified).

Note: Technician repairing needs to be Certified or above and does not need to be Senior or Master as long as they have had the required training for ODR – Collection of Diagnostic Information

Section A : Flow Chart

NOTE: You must clear any DTC's (diagnose and repair) before performing any of these campaigns. The recall or SSP repairs will NOT fix/clear a DTC issue. Once repaired, then start the repair process for campaigns.



NOTE: All vehicles require the upload of ODR (Manual) after the technician has completed all software updates. If ODR is not uploaded successfully, or if one or more software updates are missed, the applicable campaign(s) will remain open, the warranty claim will not accept, and your dealer will have to contact the customer to bring back the car to correct the concern.

---------END OF SECTION A---------

Section B : Repair Procedure Recall 6624E

Note: this procedure can be skipped in following cases

- **In Warranty Vehicle Inquiry eMDCS, Repair date is displayed for 6624E and Campaign label is present.**
- **6624E is not displayed under the campaign section in Warranty Vehicle Inquiry.**

Service caution during reprogramming for ECU(s)

During reprogramming, connect battery charger to the vehicle to stabilize voltage fluctuation. If missing, it may cause damage to ECUs due to decreasing voltage.
7th generation vehicle will control to turn on headlight forcibly during reprogramming due to change CAN communication. **Please use the "Reflash" setting in the charger, which will keep the voltage stable. The setting voltage must be between 12 -13V.**

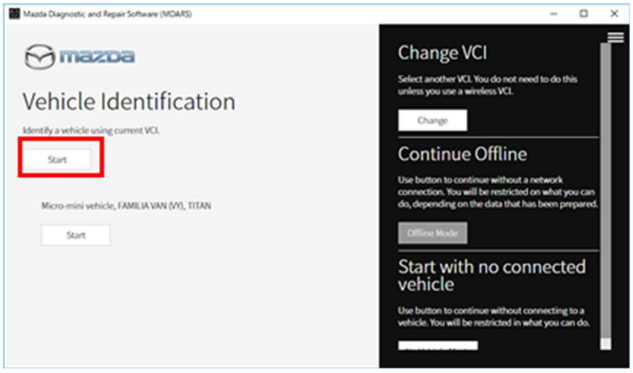
PHEV VEHICLE NOTE: Make sure that HV charging cable is not connected to HV battery charging port.

Vehicle Identification

Connect MDARS with the DLC cable and VCM-Ⅱ to the vehicle, then set the ignition to the ON position.

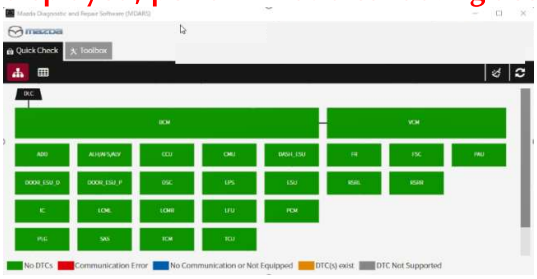
CAUTION: Connect the DLC cable and the VCM-Ⅱ to the vehicle with the ignition OFF. The CAN bus line might detect some noise and it might cause a diagnostic error when connecting the DLC cable with the ignition ON.

1. Click the "Start" button.

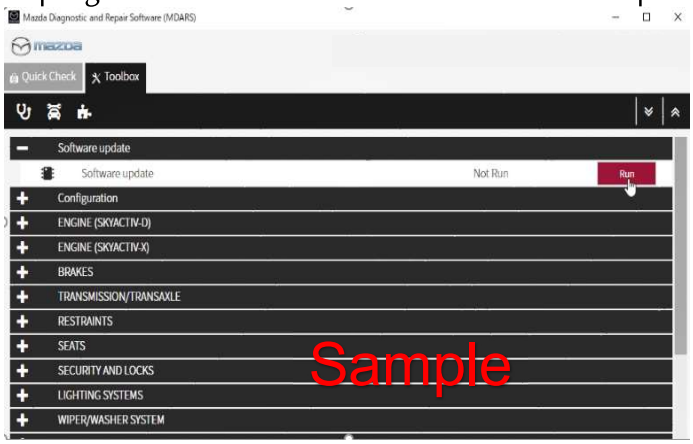


2. The Vehicle Identification process will start and automatically inspect every connection and then collect the vehicle information.

3. Verify the DTC according to the directions on the quick check screen. **If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.**



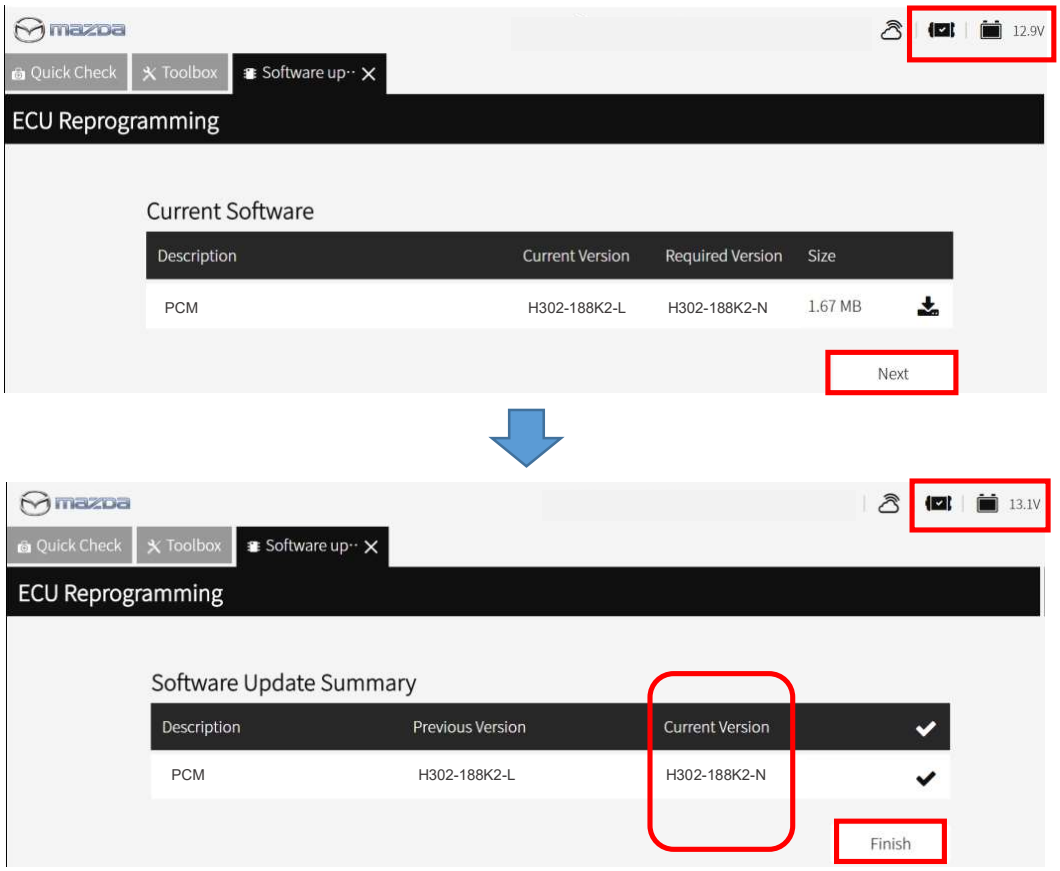
4. Reprogram PCM as below: There is 'Software update' on 'Toolbox' tab. Select 'Run'.



5. Select required module on 'ECU Reprogramming' screen.
   Start Reprogramming.
   - **PCM (Powertrain Control Module)**

   NOTE: If the software is already at the latest calibration level, MDARS will not reprogram that subject ECU. This is normal behavior.

6. After completion of software update, the previous and current software version are shown. Check current version at ''Calibration File information" below. Then, click on "Finish" to exit the ECU reprogramming.



Calibration file information

NOTE: - If the calibration file has the suffix in the table or later, the unit is already modified.

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
PCM	H301-18881	H301-188K2-N	5	H3T MHEV AWD Lo
		H302-188K2-N		H3T MHEV AWD
PCM	MS01-186B1-	MS05-186K2-S	7	PHEV w 1500W PSW
		MS05-186K2-S		PHEV w/o 1500W PSW
ECM*	PXGH-18881-	PXRC-188K2-R		PHEV

*ECM and TCM will be automatically reprogrammed when performing PCM software update. There is no need to perform ECM or TCM software update individually.

TCM Initial Learning after TCM reprogramming

Warning

- When performing the initial learning, apply the parking brake securely and block the front and rear wheels using wheel blocks so that the vehicle does not move. Otherwise, the vehicle may move which could lead to an accident because the gears are forcibly changed with the engine running and the shift lever in the drive position while in the initial learning.

Note:

- While the initial learning is being performed, the following phenomena may occur.
  - Shift shock occurs intermittently.
  - Indications such as selector lever positions differ from those displayed normally.

Preparation before servicing

7. Switch the ignition ON (engine on)/main power ON (READY on).

8. Apply the parking brake.

9. Shift the selector lever to P range, and set the wheel blocks for both the front and rear wheels.

10. The ATF temperature is 45°C to 105°C as an execution condition for AT initial learning, but after learning starts, the ATF temperature may drop to 44°C and learning may be interrupted, so learning should be started after raising the temperature to 50°C or higher.

Initial learning procedure

11. Connect the M-MDS to the DLC-2 (if it was disconnected for any reason).

12. Open the engine hood. (To ensure that the engine starts. If engine hood is opened, EV mode does not work)

13. Switch the ignition ON (engine off).

14. Perform the following procedure using the M-MDS.
    (1) Press [Start] for the vehicle identification.
    (2) Press the [Toolbox] tab.
    (3) Press the [Work Support] icon. 
    (4) Press [TRANSMISSION/TRANSAXLE].
    (5) Press [Run] for Initial learning of AT.

15. Perform the automatic transmission initial learning.

16. Using the M-MDS, verify that TCM DTC P06B8:00 has not been stored. (See DTC INSPECTION.)
    - If DTC P06B8:00 is displayed, switch the ignition off/main power OFF and repeat the procedure from Step 18.
    - If any other DTCs are displayed, repair or replace the malfunctioning location according to the applicable DTC troubleshooting of workshop manual.

17. Additionally, the following two items need to be learned.

Powertrain start-up learning (only M-HEV)

12. Start the engine.
13. After holding the idling for 5 seconds or more, turn the ignition switch OFF and hold it for 5 seconds or more.
14. Repeat steps (1) and (2) above for 3 times.

Shift range learning

15. Start the engine.
16. Switch to 'Sport Mode'

17. While idling, depress the brake and perform the following steps.
    (1) Move the shift lever in "D".
    (2) Move the shift lever from "D" to "R" and wait 5 seconds *
    (3) Move the shift lever from "R" to "D" and wait 5 seconds *
    *Do not stop in N range while moving the shift lever.
    (4) Repeat steps from i) to iii) for 5 times.

Note for Customers:

- In addition to the above learning, TCM also performs learning automatically while the vehicle is being driven.
- Immediately after reprogramming and initial learning, the driving learning will be reset. Therefore, it is important to explain the following points to customers.

Explanation to customers

- To improve shift feel, the vehicle learns the timing of engaging the clutch while driving.
- This reprogramming will improve the shift feel and optimize by learning.
- However, the learning values is reset to default.
- Once the learning values were reset, a slight shift shock might be felt intermittently, however by proceeding to drive the vehicle, the automatic learning will occur to improve shift performance, but it may take a few days.

18. Go to Section B on next page for 6724E and/or SSPD6 update if applicable.
If no other campaigns, then: Click here to move to, ODR (Manual) update.

Section B : Repair Procedure Recall 6724E & SSPD6

Note: this procedure can be skipped in the following cases:

- **In Warranty Vehicle Inquiry, the repair date is displayed for 6624E and SSPD6 "CLOSED" status, or Campaign label is present for the two campaigns.**
- **Both 6624E and SSPD6 are not displayed on eMDCS.**

Service caution during reprogramming for ECU(s)

During reprogramming, connect battery charger to the vehicle to stabilize voltage fluctuation. If missing, it may cause damage to ECUs due to decreasing voltage.
7th generation vehicle will control to turn on headlight forcibly during reprogramming due to change CAN communication. **Please use the "Reflash" setting in the charger, which will keep the voltage stable. The setting voltage must be between 12 -13V.**

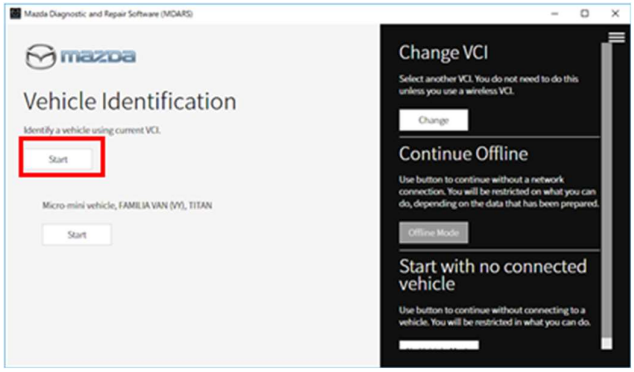
NOTE: Make sure that HV charging cable is not connected to HV battery charging port.

Vehicle Identification

Connect MDARS with the DLC cable and VCM-Ⅱ to the vehicle, then set the ignition to the ON position.

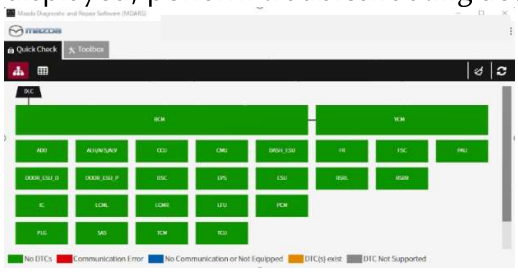
DLC CABLE AND VCM-II CAUTION: Connect the DLC cable and the VCM-Ⅱ to the vehicle with the ignition OFF. The CAN bus line might detect some noise and it might cause a diagnostic error when connecting the DLC cable with the ignition ON.

1. Click the "Start" button.

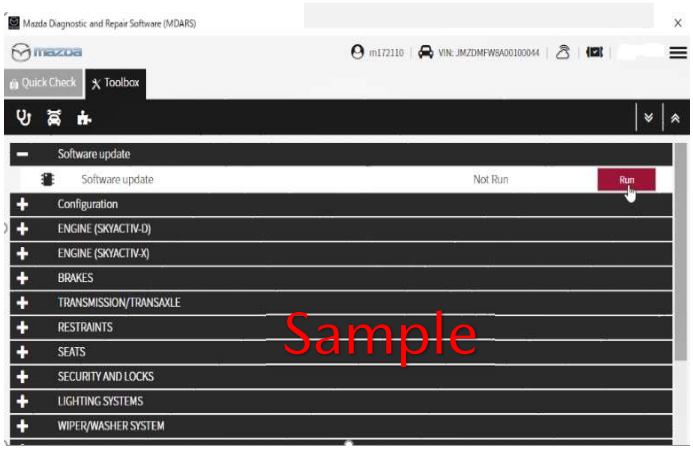


2. The Vehicle Identification process will start and automatically inspect every connection and then collect the vehicle information.

3. Verify the DTC according to the directions on the 'Quick Check' screen. If any DTCs are displayed, perform troubleshooting according to the corresponding DTC.



4. Reprogram VCM as below. Choose 'Software update' on the 'Toolbox' tab, Select 'Run'.



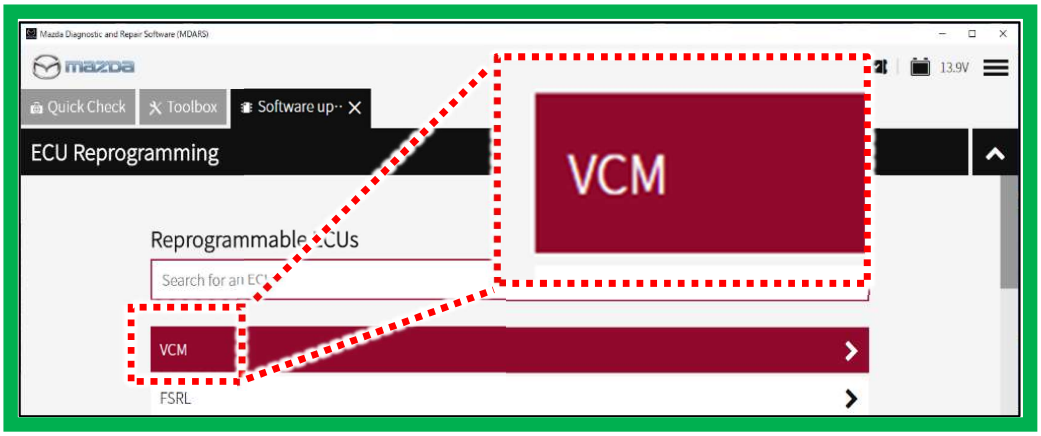
5. Select required module on 'ECU Reprogramming' screen.
Start Reprogramming. - **VCM (Vehicle Control Module)**

NOTE:

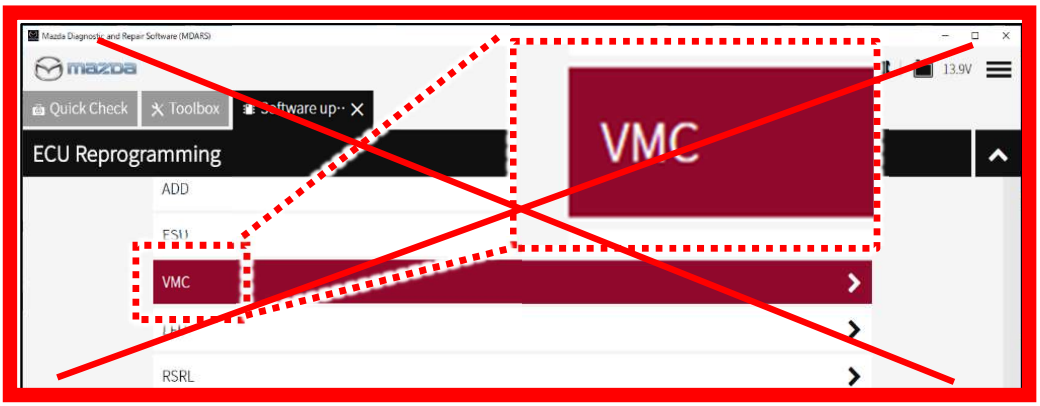
If the software is already at the latest calibration level, MDARS will not reprogram that subject ECU and is normal behavior.

IMPORTANT: VCM and **VMC** modules have similar names but have different functions. When reprogramming, check carefully to avoid making mistakes in the reprogramming module.

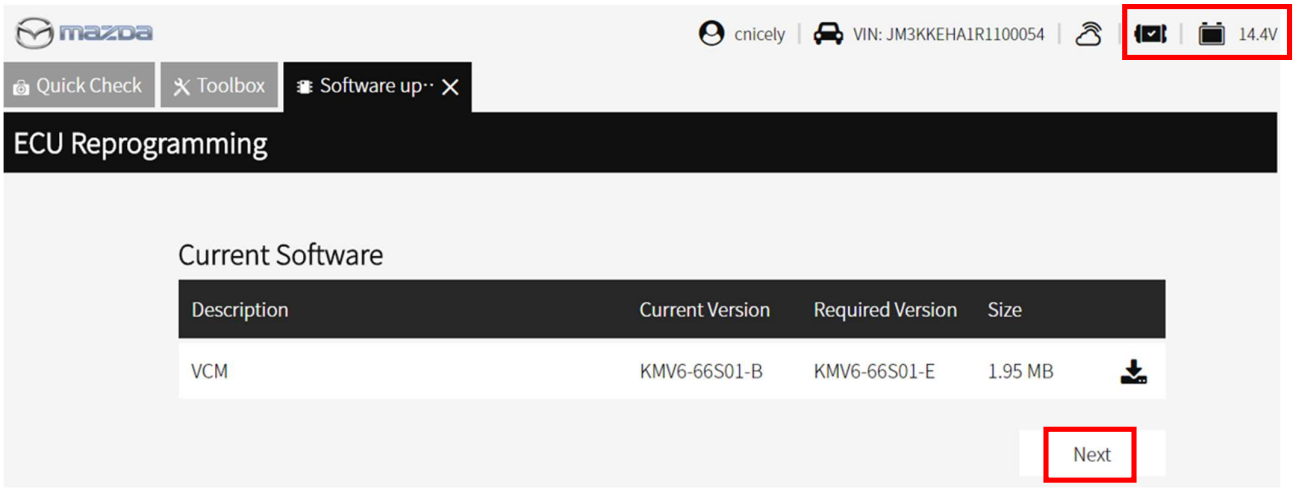
GOOD

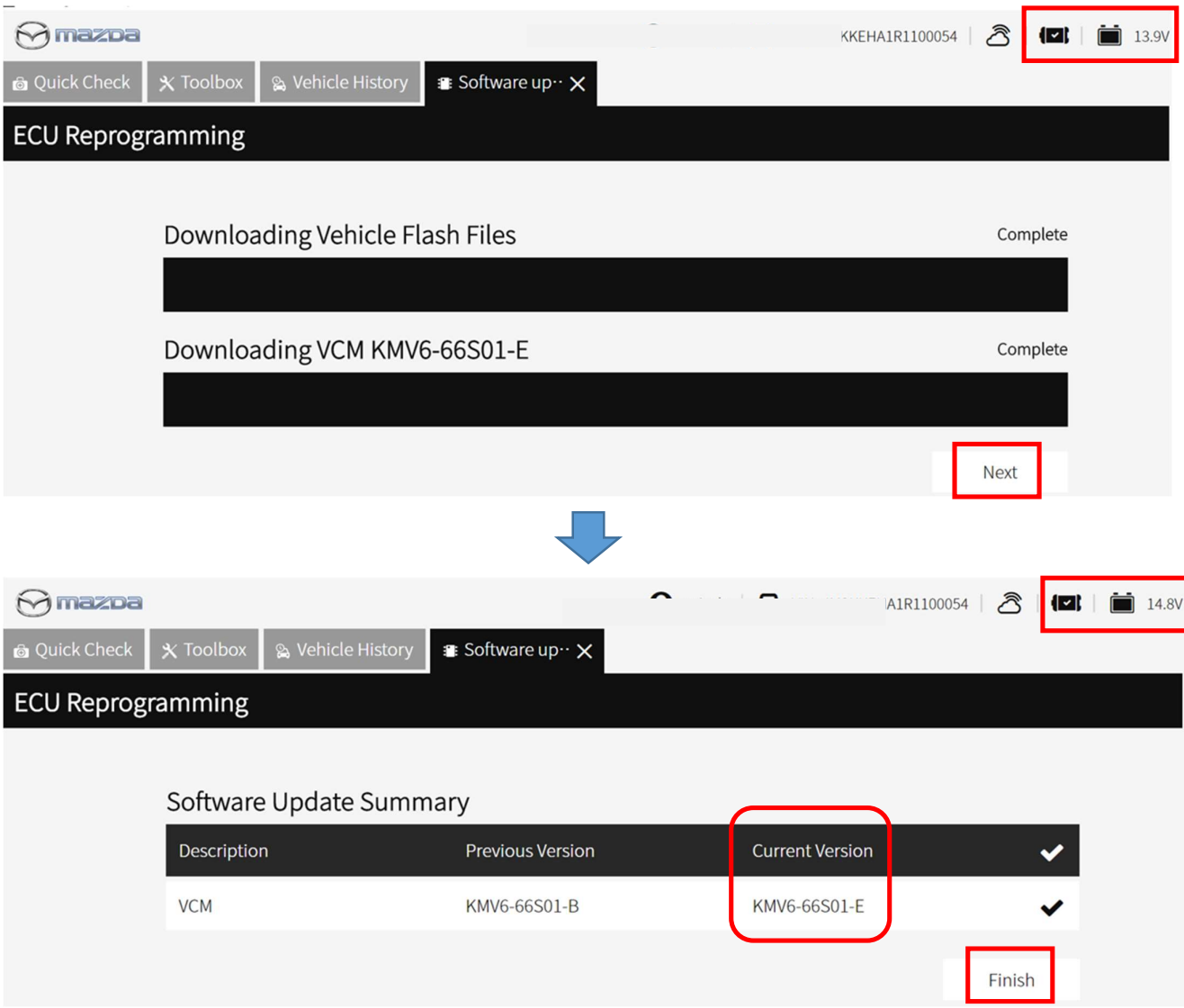


NO GOOD



6. After completion of the software update, the previous and current software versions are shown. Check the current version under ''Calibration File information" below. Then, click "Finish" to exit the ECU reprogramming.





Calibration file information

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
VCM	KR9P-67560-	KMV6-66S01-E	3	-

NOTE: If the calibration file suffix is equal to or greater than shown in the table, the module is already modified but ODR (Manual) update is still required.

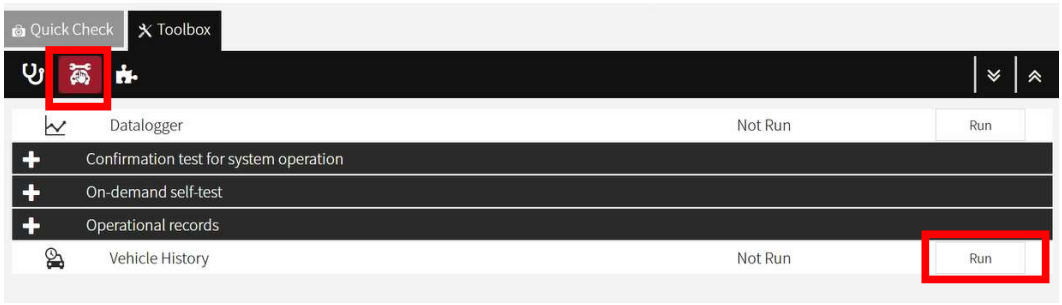
Go to ODR (Manual) Update.

ODR (Manual) Update

WARNING! FAILURE TO PERFORM AN ODR (MANUAL) UPDATE WILL RESULT IN CLAIM DENIAL, CAMPAIGN REMAINING IN OPEN STATUS AND VEHICLE HAVING TO COME BACK TO REDO THE ODR DATA PUSH

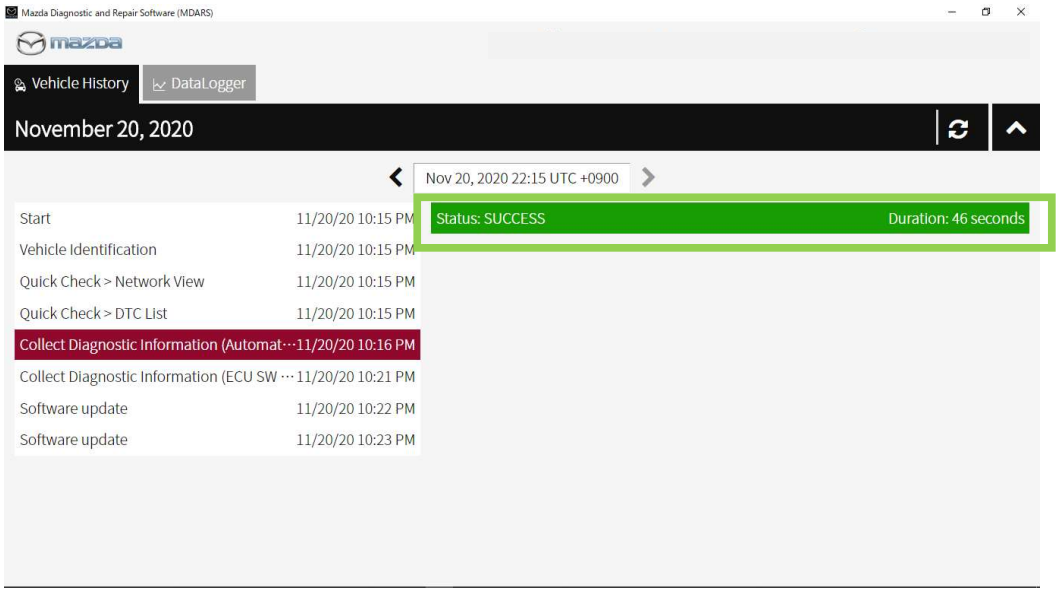
Upload ODR Data - Check for ODR collection result after reprogramming all required modules with vehicle verification. Then proceed to perform an ODR (Manual) Update

A. Open the vehicle history on toolbox tab.



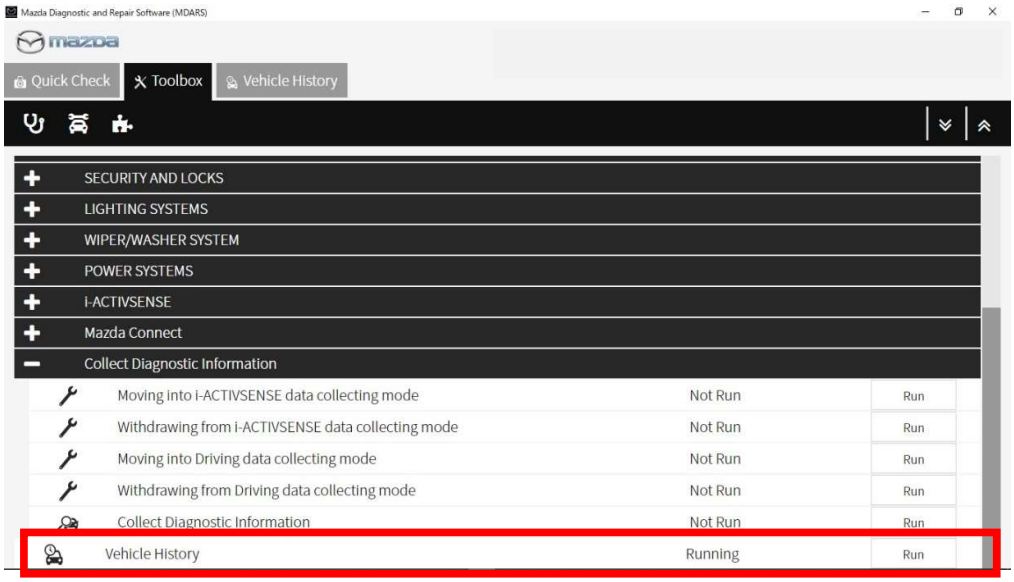
B. Click the 'Collect Diagnostic Information' and the make sure the status is 'SUCCESS' In green. **NOTE:** Verify by selecting 'Collect Diagnostic Information' **after all required modules are updated.** It is not necessary to confirm the 'Collect Diagnostic Information' after required module reprogram every time.

Only the latest "Collect Diagnostic Information" is the considered valid and that needs to show "SUCCESS"

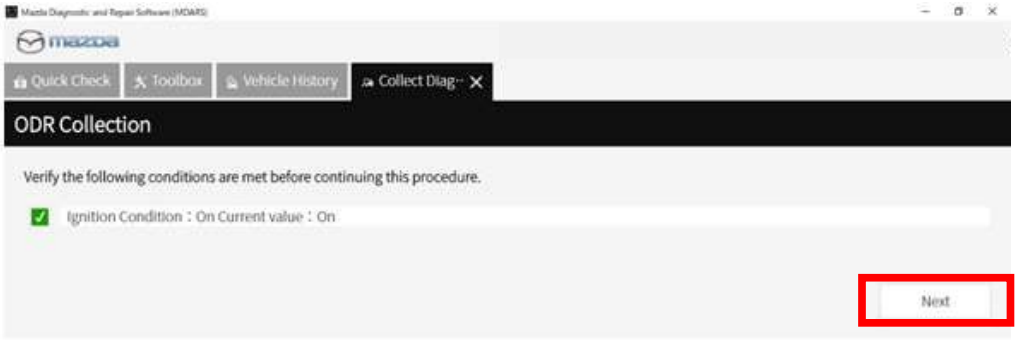


CAUTION: If the status is 'FAILURE', the ODR (latest vehicle information) has not been submitted to the server, continue with steps below.

C. 'Collect Diagnostic information' then click 'Run' at the tool box tab.

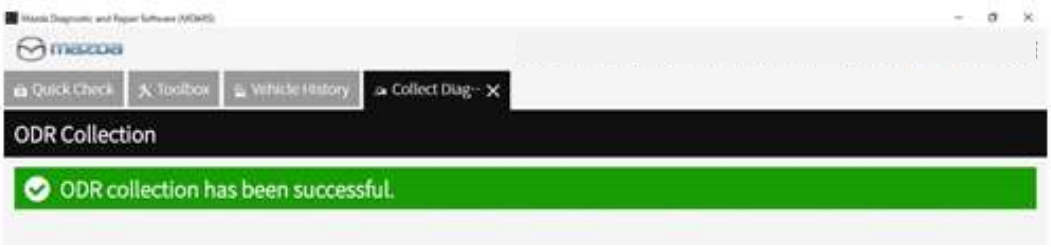


D. Click 'Next'

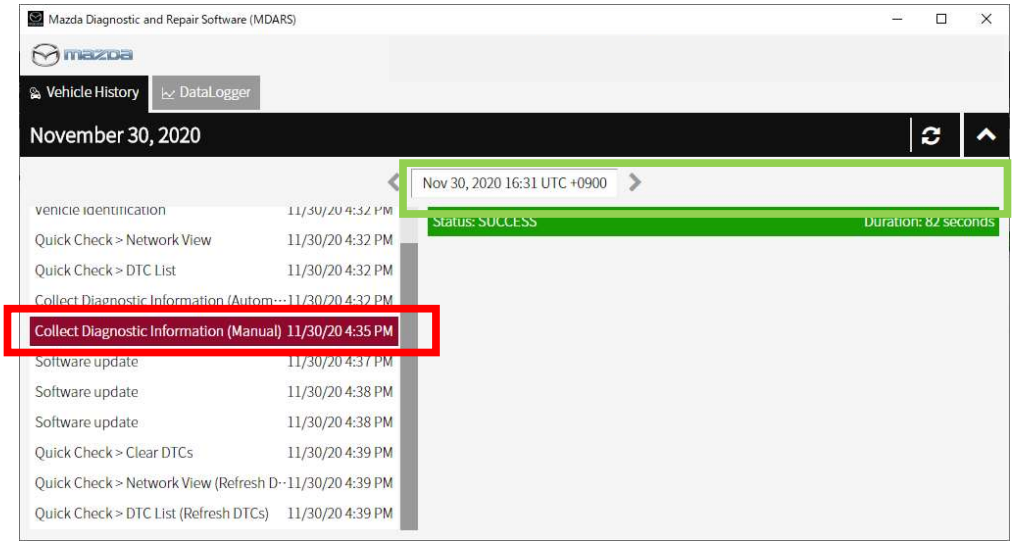


E. This may take around 60 seconds.

F. MDARS has collected ODR data and confirmation has been sent to the server.



G. Check to make sure "Collect Diagnostic Information (Manual) appears and Status shows 'SUCCESS' in green. ***If this step is not completed, your warranty claim will not be approved and the customer will need to return for a re-repair.***



DTC inspection

1. Connect MDARS to the DLC-2 and turn on the MDARS application.
   Check and erase DTC by using MDARS.

2. Confirm all DTCs were erased.
   Note:
   - After the reprogram, pending DTC P2610:00 [PCM] may be stored without MIL illumination. Since this DTC may turn to a current DTC depending on operations after the reprogramming, clear DTC after all repair work done.
     - DTC P2610:00 can be cleared by performing the engine start and stop procedure.
       1) Start the engine (5 second).
       2) Stop the engine.
       3) Clear the DTC recorded in the memory by MDARS.
       4) Perform the KOER self-test by MDARS.

3. Disconnect the MDARS from the DLC-2.

Note: If any DTCs should remain after performing DTC erase, diagnose the DTCs according to the appropriate troubleshooting section of the Workshop Manual.

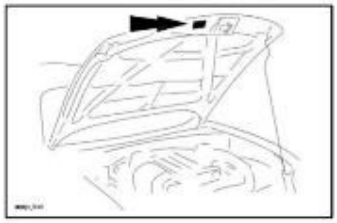
----------END OF SECTION B----------

GO TO SECTION C. CAMPAIGN LABEL INSTALLATION

C. Campaign Label Installation

1. Fill out a Black "Campaign Label" (9999-95-055A-06) with Campaign #: "6624E, 6724E, SSPD6", your dealer code, and the repair date. **It is OK to bundle multiple campaigns on one label as long as each campaign is legible.** Use more than one label if necessary. For example, if you repair "6624E, 6724E, SSPD6", then have one label with 2 Safety/Emission Recall and the second label with SSPD6.

2. Affix it to the hood as shown. If you cannot place the label here, the radiator support, firewall or driver door jamb are acceptable locations:



END OF REPAIR PROCEDURE