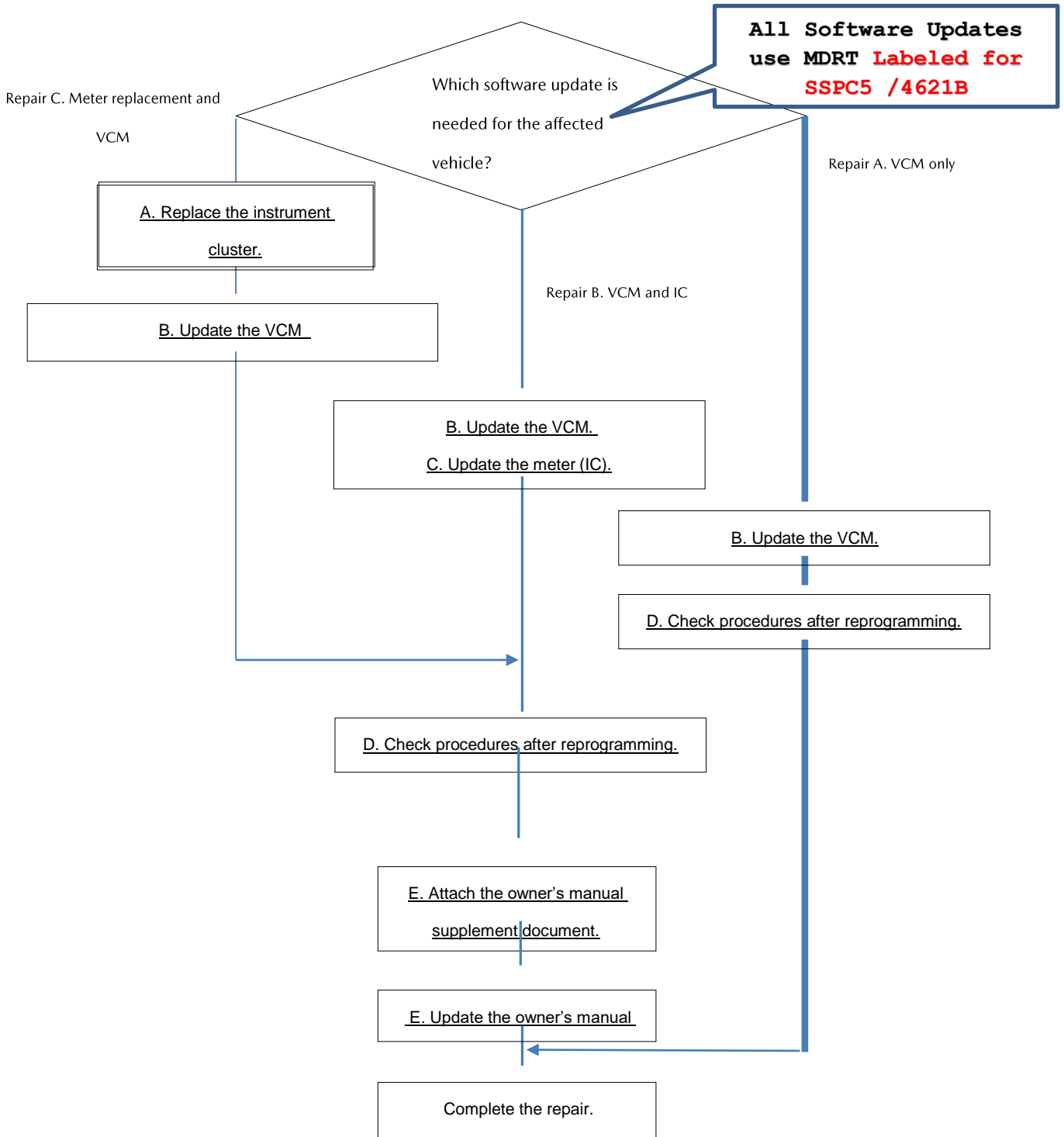


1. Flowchart - READ SERVICE CAUTION FOR PROGRAMMING!



Failure to follow Service Cautions may cause Module Damage!

## 2. VEHICLE INSPECTION PROCEDURE

Verify that the vehicle is within the following ranges:

2019-2020 Model Year Mazda3 vehicles, equipped with smart brake support (SBS)

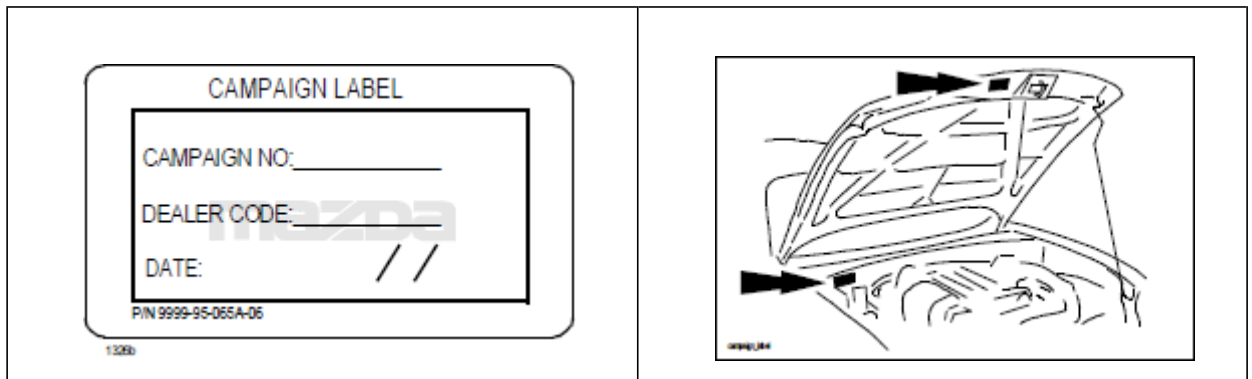
Model	Subject VIN range	Subject production date range
Mazda3 built at MC	JM1 BP**** K1 100042 – 147655 JM1 BP**** L1 147656 – 154264	From September 25, 2018 through October 19, 2019
Mazda3 built at MMVO	3MZ BP**** KM 100048 – 115055 3MZ BP**** LM 115095 – 124858	From January 15, 2019 through October 23, 2019

The asterisk symbol "\*" can be any letter or number.

- If the vehicle is within the above ranges, proceed to **Repair Validation and Repair Procedure A, B or C below depending on the vehicle.**
- If the vehicle is not within the above ranges, return vehicle to the customer or inventory.

Perform a Warranty Vehicle Inquiry using your eMDCS System and inspect vehicle for Campaign Label Recall 4219L attached to the vehicle's hood or bulkhead. Refer to eMDCS System - Warranty Vehicle Inquiry Results table below.

NOTE: Be sure to verify Recall number as the vehicle may have multiple Recall labels.



**eMDCS System - Warranty Vehicle Inquiry Results:**

If eMDCS displays:	Campaign Label is:	Action to perform:
RECALL 4219L OPEN	Present	Email Dealer Recall Help or Contact Warranty Hotline at (877) 727-6626 option 3 to update vehicle history.
	Not present	Proceed to "REPAIR VALIDATION AND PROCEDURES".
RECALL 4219L CLOSED	Present	Return vehicle to inventory or customer.
	Not present	Proceed to "3. CAMPAIGN LABEL INSTALLATION".
RECALL 4219L IS NOT PRESENT	Does not apply	Recall does not apply to this vehicle. Return vehicle to inventory or customer.
<b>Repair Validation – Failure to follow Service Caution may lead to module damage!</b>		<b>Repair Procedure - Follow Steps</b>
<p>Repair A – <u>Use VIN lookup tool to match VIN to Repair</u> Or Match VIN to Repair A VIN list</p> <p>Vehicle requires VCM software update ONLY.</p> <p>Repair A: MMVO Production LM118755 – 124858 Production Dates: 8/5/19 through 10/23/19</p> <p>MC Production L1150242 – 154264 Production Dates: 7/30/19 through 10/19/19</p>		<p><b>Proceed to Service Caution for Reprogramming Pages 6 - 7</b></p> <p>'B. Reprogram the VCM.' <b>Page8-11</b></p> <p>'D. Check procedures after reprogramming.' <b>Page 12</b></p>

<p>Repair B – <u>Use VIN lookup tool to match VIN to Repair</u>  Or Match VIN to Repair B VIN list</p> <p>Vehicle requires Instrument Cluster software update, VCM software update, and CMU electronic owner’s manual update.</p> <p>Repair B:</p> <p>MMVO Production  KM100048 – 114618</p> <p>Production Dates: 1/15/19 through 7/01/19</p> <p>VIN Ending in LM115095 – 118752</p> <p>Production Dates: 7/01/19 through 7/25/19</p>	<p><b>Proceed to Service Caution for Reprogramming Pages 6 - 7 then</b></p> <p>‘B. Reprogram the VCM.’  <b>Page 8-11</b></p> <p>‘C. Reprogram the meter(IC).’  <b>Page 8-11</b></p> <p>‘D. Check procedures after reprogramming.’ <b>Page 12</b></p> <p>‘E. Update the CMU electronic Owner’s manual.’ <b>Page 12</b></p>
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<p>MC Production  VIN Ending in K1101936 – 147544  Dates: 11/5/18 through 6/28/19  VIN End in L1147656 – 150225  Dates: 6/29/19 through 7/30/19</p>	<p>'F. Attach the owner's manual supplement.' <b>Page 12</b></p>
<p>Repair C – <u>Use VIN lookup tool to match VIN to Repair</u>  Or Match VIN to Repair C VIN list</p> <p>Vehicle requires Instrument Cluster replacement, VCM software update, and CMU electronic owner's manual update.</p> <p>Repair C: MC Production  K1100042 – 102178  Dates: 9/25/18 – 11/5/18</p>	<p><b>**No need to reprogram the meter (IC)**</b>  <b>Proceed to Service Caution for Reprogramming Pages 6 &amp; 7 then</b>  'A. Replace the IC.' <b>Page 5</b> 'B. Reprogram the VCM.' <b>Page 8</b> 'D. Check procedures after reprogramming.' <b>Page 12</b>  'E. Update the CMU electronic owner's manual.' <b>Page 12</b>  'F. Attach the owner's manual supplement.' <b>Page 12</b></p>

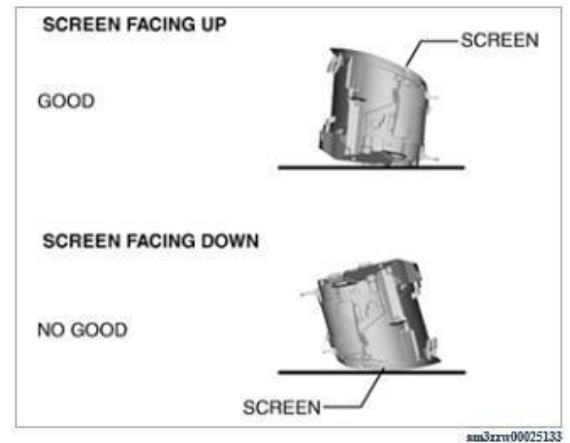
## REPAIR C ONLY

### A. Replace the instrument cluster (see [INSTRUMENT CLUSTER REMOVAL/INSTALLATION](#))

- When replacing the instrument cluster, perform the configuration to assure that the system operates correctly. (See [CONFIGURATION](#).)

#### Caution

- If the instrument cluster is left for a long time with its screen facing down, grease applied to the needles may spill and the needles may not operate smoothly. When storing the instrument cluster, store it with its screen facing upward.



#### 1. Perform the following procedure.

##### (a) Perform manual configuration using the following procedure.

- 1) Connect MDARS to the DLC-2.
- 2) Switch the ignition ON (engine off or on).
- 3) Perform vehicle identification.
- 4) Select [Configuration] using MDARS.
- 5) Select [IC].
- 6) Perform manual configuration following the instructions on the screen.

##### (b) Switch the ignition OFF.

##### (c) Switch the ignition ON (engine off or on) to complete the instrument cluster automatic configuration.

## Service Caution for Reprogramming

Do NOT touch the MDRT while Green or Blue light is blinking with frequent beep sound.

- During reprogramming operation, center display and instrument cluster may blink. This is NOT abnormal.
- If procedures are not followed, **the MDRT can cause an error DTC before** reprogramming. If the tool is erased, you may have to perform other USB updates again.
- DTC P:2610 may stored after reprogramming. Turn the engine-on and stay 5 seconds on idle. After then turn IG-OFF. Turn IG-ON and re-connect the MDRT. **MDRT will erase the DTC** automatically.

NOTE: Poor connection between the vehicle and MDRT and/or low voltage may result in abnormal termination and/or data corruption.

- a. During reprogramming, connect the DCA8000 battery charger using the Reflash mode



- b.



- c.

**Before reprogramming, pay attention to the vehicle condition and PC environment.**

- a. Turn off all the electrical loads, especially pay attention to A/C (blower), audio, rear defogger and headlights.
- b. Perform self-test and verify no DTC is stored. If any DTC is stored, fix the concern and delete the DTC.
- c. Disconnect all non-genuine aftermarket accessories.

**VCM AND IC REPROGRAMMING**

**B. Reprogram the VCM (Vehicle control module) and IC (Instrument Cluster) using MDRT also used for SSPC5 and Recall 4621B**

Thoroughly read the service cautions on the prior pages to avoid module damage!

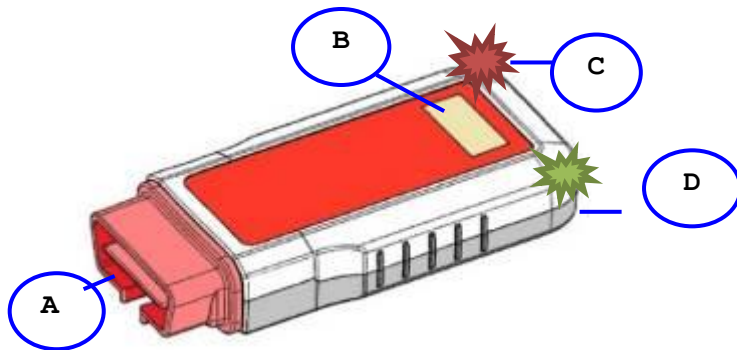
MDRT will determine if only the VCM needs updating or both the VCM and IC need updating.

**CAUTION:** The tool must be stored in your Mazda Tool Shed – any misplacement or failure to return the tool will result in a \$1,000 charge to the dealer. If your tool does not work, please fill out the Dealer Recall Help Form on MXConnect with the reason of tool failure AND the TOOL BARCODE # (see below).





1. Check if any warning lamps are on or flashing in the instrument cluster, repair it according to the Workshop Manual **before** reprogramming.
2. Reprogram the VCM & IC (If required) with Mazda Diagnostic Reprogramming Tool (MDRT).



A	OBDII connector
B	Display
C	LED light (Red)
D	LED light (Green or Blue)

LED lights show the configuration status.

\*There are two LED types for MDRT.

1. Green & Red (Serial number up to 02217)
2. Blue & Red (Serial number after 02218)

#### Handling Caution

Take care when handling the MDRT tool to avoid damage

- Avoid exposing it to high heat.
- Avoid exposing it to water.

To avoid module damage during reprogramming.

- Do not connect MDRT tool with the ignition on
- Do not disconnect MDRT from OBDII connector.
- Do not start engine.
- Do not turn IG-Off.

Otherwise a module replacement may be required.

#### NOTE

When performing reprogramming with an MDRT:

- Verify that the room fuse is installed.
- Turn off all electric-type loads such as air-conditioning or the audio system and then connect battery charger.
- Do NOT touch the MDRT while Green or Blue light is blinking or when you hear a "beep" sound.
- During the reprogramming operation, the center display and instrument cluster may blink, which is NORMAL.

#### VCM and IC reprogramming procedure

#1. Turn the ignition off.

**CAUTION: Connecting the MDRT3 tool with ignition ON may damage the VCM and/or IC**

#2. Connect the MDRT to the **Data Link Connector (DLC) -2.**

Note: Wait until the green/blue and the red LED turn on with "Ready" and "IG OFF" on the display

#3. Switch the ignition to on (Engine not running)

#4. Wait and Monitor the MDRT display.

Note:

- **The reprogramming needs approximately 10-20 minutes\*** (Pulsing beeps will sound during reprogramming)
- When the reprogramming has successfully completed, the display shows "Repro OK" and in the bottom row of the tool, green or blue LED lights will be blinking.
- \* If it completes very quickly, read display and check troubleshooting chart.  
(DO NOT DISCONNECT UNTIL YOU ARE SURE OF ITS STATUS AND IGNITION IS OFF)

**Caution: VCM - If the reprogramming fails, restart the procedure from Step 1. Switch the ignition to off and try again**



SECUL\_NG

Displayed 'SECUL\_NG'  
-Restart from '#1 Switch the ignition to off' and complete reprogram.

REPRO\_OK  
XXXX-X

Displayed 'REPRO\_OK'  
-Confirm the FILENAME and Suffix and proceed '#5 Switch the ignition to off'

Please refer to the chart  
Displayed message after  
reprogramming' below.  
Note: It may display  
( )

- #5. Turn the ignition off.
- #6. Disconnect the MDRT.

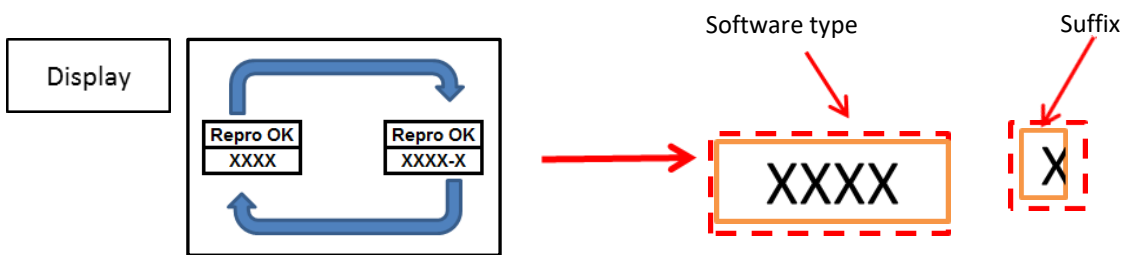
Displayed message after reprogramming			
Country	Model	Software type	Suffix
U.S.A/Canada		VCM	
	Mazda3 (BP) 4SDN	BCKA	P
	Mazda3 (BP) 5HB	BEMD	N
	Mazda3 (BP) 4SDN (Mexico built)	BDTS	L
		Meter (IC)	
	Mazda3 (BP)	BDGF	L

Refer to troubleshooting chart if display reads other than REPRO\_OK or SECUL\_NG.

- Do not disconnect until the ignition is off under any circumstance.
- Do not turn off ignition until programming is complete.
- Do not start vehicle during programming.

### How to verify the reprogramming results by display

Confirm that the display shows a message after completing reprogramming.



Lower message on the display indicates each of the soft type & suffix

If a suffix becomes higher, Reprogramming is completed.

## Troubleshooting

The number is related to the step number in the reprogramming procedure.  
Text in **bold** mean the most possible cause.

No.	Technician's operation	Vehicle status	MDRT status	LED status		Beep sound	Display
				G or B	Off		
3-1	IG-ON	IG-ON	<b>MDRT malfunction.</b>	R	Illuminate	Continuously beeping	Data Fail
3-2	<b>IG-ON with MDRT not securely connected</b>	IG-ON	No power supplied.	R	Off	No beep	
4-1	IG-ON	<b>Not a subject vehicle</b>	MDRT can't identify vehicle. MDRT performs only deleting DTC.	R	Blinking at intervals of 1 sec	Continuously beeping	VIN_NG No Target
4-2	IG-ON	<b>IG-ON Batt. Voltage: 11 V or lower SOC: 75 % or lower</b>	Check battery voltage. Stop reprogramming.	R	Blinking at intervals of 1 sec	Continuously beeping	Repro NG BATCHK
4-3	<b>Poor MDRT connection during reprogramming</b>	IG-ON	No power supplied.	R	Off	No beep	
4-4	Monitoring MDRT	<b>IG-ON</b>	Finish reprogramming DTCs have been detected	R	Blinking at intervals of 1 sec	Pulsing beeps	Rep Succ DTC!!
4-5	IG-ON	<b>IG-ON Reprogramming failed</b>	Verify reprogramming result.	R	Illuminate	Continuously beeping	Repro NG XXXXX

### NOTE

In case of "No. 4-1", verify the vehicle is subject to the 4219L.

In case of "No. 3-1", it may be caused by one of the following concerns: [\(see below\)](#)

- Data in the Module is broken. The possible causes are as follows.

1. MDRT has been connected to the OBDII connector with the IGN already turned on.
2. MDRT has been disconnected from OBDII connector during reprogramming.
3. Engine has been started or IG is turned off during reprogramming.

- MDRT malfunctions.

- Verify the current file name in the vehicle by log view screen.

After VCM reprogramming, verify the calibration file name with the chart below in the screen of the (VCM) FILENAME.

**Note: If VCM software update failure occurs, go to Service Alert [SA-017/20](#)**

### Calibration files information

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

Country	Model	VCM filename after reprogramming	Specification
U.S.A/Canada	Mazda 3 (BP)	BCKA-66S01-P	4SD
		BEMD-66S01-N	5HB
		BDTS-66S01-L	4SD (Mexico built)

**Note: If IC software update failure occurs, go to Service Alert [SA-017/20](#).**

After IC reprogramming, verify the calibration file name at current version with the chart below in the screen of the (IC) FILENAME.

### Calibration files information

#### NOTE:

- If the calibration file is with the suffix in the table or later, the IC already has the modified calibration.

Country	Model	Meter (IC) filename after reprogramming
U.S.A/Canada	Mazda3 (BP)	BDGF-66S14-L

### c. Check procedures after reprogramming

1. Check for DTC and confirm there is no stored DTC.
  - DTC P2610:00 may be stored. If so, please start the engine and clear the DTC. NOTE: **DTC U2120:00, U2030:51 or/and U2500:82 (Related DTCs of Forward sensing camera) may be stored and i-ACTIVSENSE warning light (amber) may turn on after driving. These DTCs may not be stored just after reprogramming. It may be stored after driving. To avoid stored DTC, you need to put the FSC into sleep mode.**
2. Put the Forward Sensing Camera (FSC) into sleep mode as follows:
  - Disconnect MDRT or MDARS if replacing the IC for repair C
  - Turn the ignition off and get out of the car
  - Close and lock all doors
  - Allow the vehicle to sit in this condition for 10 minutes or more
3. Verify the repair by starting the engine and making sure there is no MIL illumination or abnormal warning lights present.

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

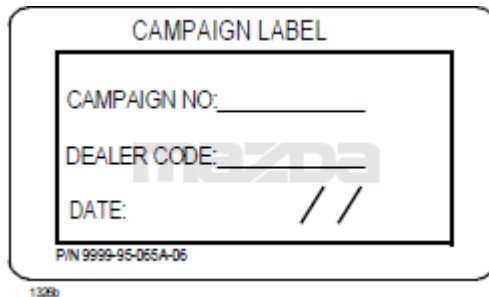
**D. Update the owner’s manual (OM) using USB – (see [ELECTRONIC OWNERS MANUAL UPDATE PROCEDURE](#))**

**E. Attach the Owner’s Manual Supplement**

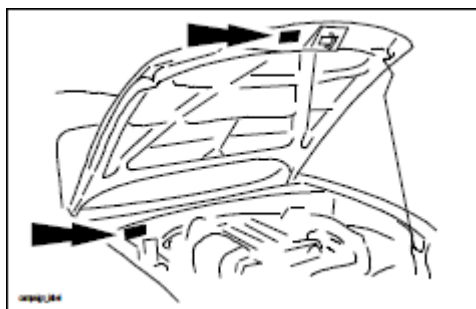
1. Place the supplement in the owner’s manual inside the storage pouch. This has been shipped to your dealership.
2. Give the copy of the Customer Acknowledgement Form along with the repair order to the service consultant so the customer can sign and acknowledge they have received the paper owner’s manual update and keep the copy for the dealer records.
3. Proceed to step 3, Campaign Label Installation

**3. CAMPAIGN LABEL INSTALLATION:**

1. Fill out a blue “Campaign Label” (9999-95-065A-06) with Campaign No: “4219L”, your dealer code, today’s date.



2. Affix it to the hood or bulkhead as shown:



3. Return the vehicle to customer.