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MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULEREPROGRAMMINGPage 1 of 27

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6223J Safety Recall – 2024 CX-90 and Mazda 3 View Monitor Camera Rear and 360 Camera View Images May Not Display
<u>6323J Safety Recall – 2024 CX-90 PHEV Failsafe Logic May</u> <u>Cause Total Loss of Drive Power</u>
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ODR DATA UPLOAD (critical step for all campaigns)
FINAL CLEARING OF SLEEP MODE FOR RECALL 6223J AND DTCS

A. VEHICLE INSPECTION PROCEDURE AND PREPARATION FOR REPAIR

1. Verify that the vehicle is within the following ranges and there is a Not Launched \underline{or} OPEN 6223J and/or 6323J recall in eMDCS:

SUBJECT VEHICLES RECALL 6223J

Model	Subject VIN range	Subject production date range
2024 CX-90 All powertrain	JM3 KK ****R1 100044 – 132978	From December 27, 2022 through September 5, 2023
2024 MAZDA3	JM1 BP****R1 650006 - 657565	From May 25, 2023 through August 23, 2023

SUBJECT VEHICLES RECALL 6323J

Model	Subject VIN range	Subject production date range
2024 CX-90 PHEV	JM3 KK ****R1 1000454 – 118462	From December 28, 2022 through June 20, 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 6223J and/or 6323J is OPEN or Not Launched in eMDCS, proceed to Step 2. If the vehicle <u>does not</u> have an OPEN or Not Launched 6223J and/or 6323J campaign, return the vehicle to the customer or inventory.

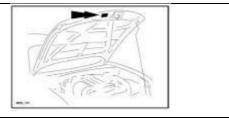


MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULEREPROGRAMMINGPage 2 of 27

2. Perform an eMDCS Warranty Vehicle Inquiry and inspect the vehicle for a Campaign Label with **6223J and/or 6323J** 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, 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 6223J, and/or 6323J or any of the SSP campaigns has not been completed	Present	Fill out Dealer Recall Help on OneMazda contact or the Mazda Warranty Department at <u>warrantydept@mazdausa.com</u> to review vehicle history.
on this vehicle	Not present	Proceed to "REPAIR PROCEDURE".
If repair date is displayed for	Present	Return vehicle to inventory or customer.
CAMPAIGN 6223J and/or 6323J or any of the SSP campaigns is "CLOSED"	Not present	Complete a label and apply to vehicle's hood with repair date and dealer code from eMDCS Warranty Inquiry.
CAMPAIGN 6223J and/or 6323J 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.

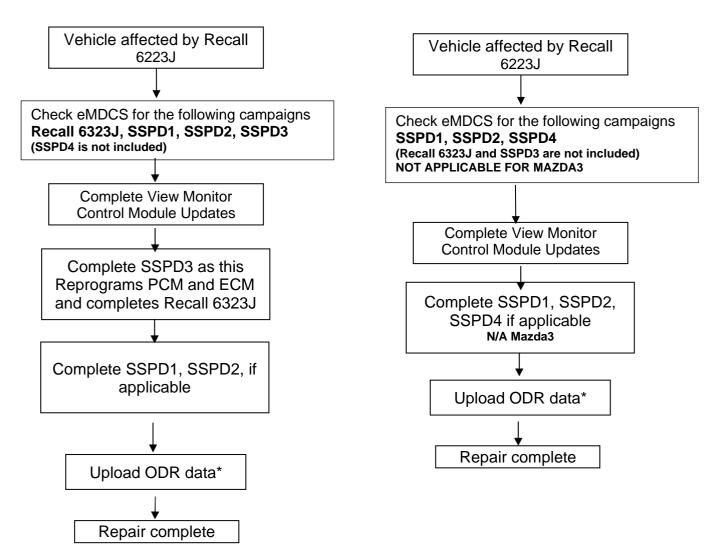
Note: Technician repairing needs to be Certified or above and does not need to be Senior or Master as long as they have had the required training for ODR – Collection of Diagnostic Information

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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.

CX-90 PHEV

CX-90 TURBO AND TURBO S Mazda3

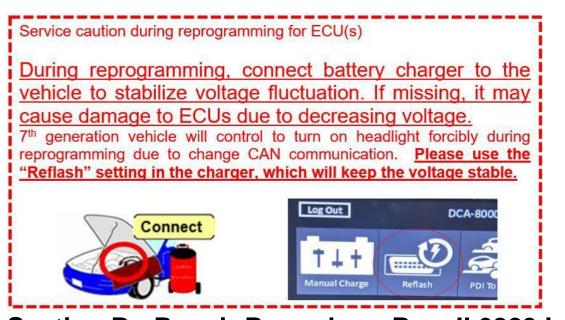


*NOTE: <u>All vehicles require the upload of ODR after the technician has completed all</u> software updates. If ODR is not uploaded successfully, or if one or more software updates are missed, the applicable campaign(s) will remain open, the warranty claim will not accept, and your dealer will have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

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



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 4 of 27

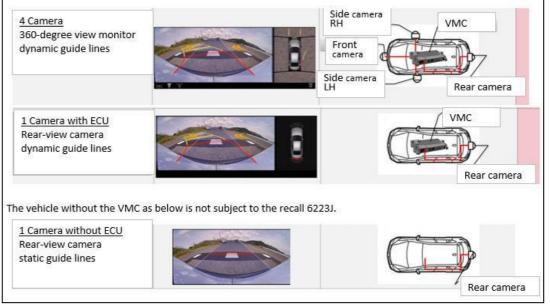


Section B : Repair Procedure Recall 6223J

NOTE:

- 1. Make sure that HV charging cable is not connected to HV battery charging port.
- 2. Recall 6223J applies to vehicles with a Rear View (one camera) or a 360 Degree Camera

(four cameras) with a VMC – View Monitor Control Module - NOT VCM!



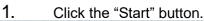
Vehicle Identification

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

CAUTION: DO NOT UDPATE THE VCM – Vehicle Control Module. 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.

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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 VMC - View Monitor Control Module as below There is 'Software update' on 'Toolbox' tab. Select 'Run'.



- 5. Select required module on 'ECU Reprogramming' screen. Start Reprogramming. VMC (View Monitor Control Module)
- a. NOTE: if software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR transmission).

MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 6 of 27

- 6. After completion of software update, the previous and current software version are shown. Check current version at "Calibration File information" below. NOTE: The software may be updated, if it is the current version proceed to the next step, ODR data transmission.
 - **a.** Then, click on "Finish" to exit the ECU reprogramming and disconnect the 12V battery charger.

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- 14.6V mazba ත (23) O cnicely A VIN: JM3KKEHA7R1100074 Quick Chec Software up. × ECU Reprogramming **Current Software** Description Current Version Required Version Size VMC KDNP-66UK2-D KDNP-66UK2-E 8.39 MB ± VMC KDNP-66UK3-A KDNP-66UK3-B Next mazoa (Z) 12.9V O cnicely VIN: JM3KKEHC6R1100052 වී Software up. × CU Reprogramming Result for writing RxSWIN. MZD-R000152 0000000120 -MZD-R00013H 0000000158 -MZD-R000079 00000000120 Next CX-90 Shown
- **b.** Then, perfrom the ODR update procedure (Step 7).



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Quick Check ECU Reprog	X Toolbox 🔹 Software up	×	cnicely 🚗 VIN: JM3KKEHC6R1100052	2 12.9 V
	Software Update Sum	mary		_
	Description	Previous Version	Current Version	✓
	VMC	KDNP-66UK2-D	KDNP-66UK2-E	~
	VMC	KDNP-66UK3-A	KDNP-66UK3-B	
				Finish
	3		9 cnicely 🖨 VIN: JM3KKEHA7R1100074	🖄 🖾 🛅 14.4V
la Quick Check	🗙 Toolbox 📲 Software up	×		

Calibration file information

NOTE: If software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR transmission).

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
	KDNP-66UU0	KDNP-66UK2-E		CX-90
	KDNP-00000	KDNP-66UK3-B		4 Camera
VMC	KEME-66UU0	KEME-66UK2-E		CX-90
(View Monitor	KEWIE-00000	KEME-66UK3-B	16	1 Camera
Control	BHSC-66UU0	BHSC-66UK2-B	16	Mazda3
Module)	BHSC-00000	BHSC-66UK3-B		4 Camera
	BHSD-66UU0	BHSD-66UK2-B		Mazda3
	60000	BHSD-66UK3-B		1 Camera

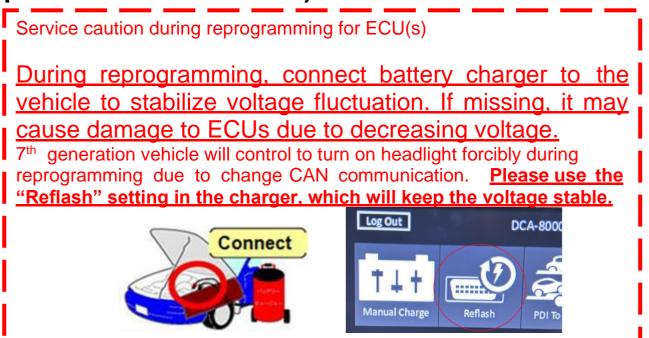
7. PERFORM OTHER REQUIRED SOFTWARE UPDATES AND THEN PERFORM ODR DATA UPLOAD

a. <u>CLICK HERE TO GO TO INSTRUCTIONS FOR ODR DATA UPLOAD</u>

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Section B : Repair Procedure SSPD3 & Recall 6323J SSPD3 contains a later calibration of the same two modules, so this will also repair Recall 6323J. (Steps 1-4 do not need to be done if already performed Recall 6223J)



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: DO NOT UPDATE THE VCM – Vehicle Control Module.

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.



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

Mazda Dagnostic and Repair Software (MDARS)	- • ×
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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.

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Quick Check	大 Toolbox						
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PLG	545	104	100				- I

4. Reprogram PCM and ECM as below There is 'Seftware undate' on 'Teelbay' tab. Select

There is 'Software update' on 'Toolbox' tab. Select 'Run'.

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👜 Quic	k Check X Toolbox		
ų	ž r		× *
-	Software update		
	Software update	Not Run	Run
+	Configuration		•
+	ENGINE (SKYACTIV-D)		
+	ENGINE (SKYACTIV-X)		
+	BRAKES		
+	TRANSMISSION/TRANSAXLE		
+	RESTRAINTS		
+	SEATS	Campala	
+	SECURITY AND LOCKS	Sample	
+	LIGHTING SYSTEMS		
+	WIPER/WASHER SYSTEM		

- 5. Select required module on 'ECU Reprogramming' screen. Start Reprogramming.
 - PCM
 - ECM

NOTE: If software is already the latest version, MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step. By reprogramming either PCM or ECM, another module will be reprogrammed at the same time. Confirm PCM and ECM software are required version or later suffix at step 6.



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 10 of 27

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 and disconnect the 12V battery charger.

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Quick Check	★ Toolbox 🖀 Software	up X					
CU Repro	gramming						
	Current Software						
	Description		Current Version	Required Version	Size		
	PCM		MS06-186K2-L	MS06-186K2-N	1.17 MB	±	
	Dependent Software						
	ECM		PXRC-188K2-L	PXRC-188K2-N	1.05 MB	±	
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	MZD-R000152 -MZD-R00013H -MZD-R000079		00000000160 00000000122	VIN: JM3KKEH	HA7R1100074 2	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Result for writi	Ing RxSWIN. -MZD-R000152 -MZD-R00013H -MZD-R000079 X Toolbox X Toolbox x Toolbox x Toolbox		0000000160 0000000122 Q cnicely	VIN: JM3KKEH	HA7R1100074 2	Ŝ (¶21 ►	
Result for writi	Ing RxSWIN. -MZD-R000152 -MZD-R00013H -MZD-R000079 Software update S Description	ummary Previous	0000000160 0000000122	Current Version	HA7R1100074 2		
Result for writi	Ing RxSWIN. -MZD-R000152 -MZD-R00013H -MZD-R000079 x Toolbox & Software C framming Software Update S Description PCM	Summary Previous MS06-18	0000000160 0000000122 © cnicely Version 6K2-L	Current Version MS06-186K2-N	HA7R1100074 2		
Result for writi	Ing RxSWIN. -MZD-R000152 -MZD-R00013H -MZD-R000079 Software update S Description	ummary Previous	0000000160 0000000122 © cnicely Version 6K2-L	Current Version	HA7R1100074 2		Next

Calibration file information

NOTE: - If the calibration file is updated to the latest version (suffix) in the table or later, the unit is already updated. Please continue to the next step (ODR data transmission.

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
ECM	PXGH-18881	PXRC-188K2-M or greater	4	-
РСМ	MS01-186B1	MS05-186K2-M or greater	4	PHEV AWD 1500W PSU
PCM	10001-10001	MS06-186K2-M or greater	4	PHEV AWD

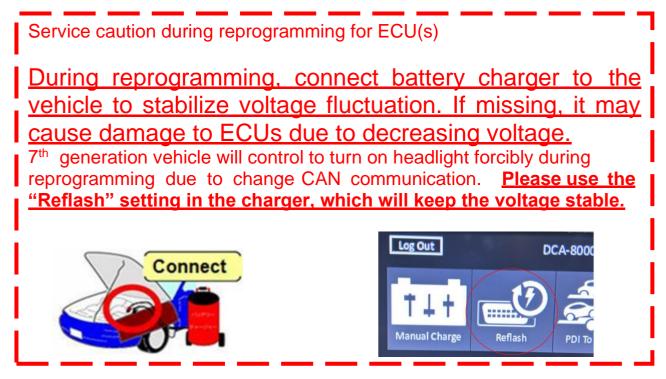


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7. PERFORM OTHER REQUIRED SOFTWARE UPDATES AND THEN PERFORM ODR DATA UPLOAD

b. <u>CLICK HERE TO GO TO INSTRUCTIONS FOR ODR DATA UPLOAD</u>

Section B : Repair Procedure SSPD4 (Steps 1-4 do not need to be done if already performed another update)



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.





MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 12 of 27

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

	 X Toolbox Software up. X 	O cnicely	A VIN: JM38KEHA7R1100074	8	14.4V
COLUMN .	ogramming				
co kepic	granning				
Result for w	vriting RxSWIN.				
. Hesser for H					
	• •MZD-R000152	0000000122			
		0000000122 00000000160			
	-MZD-R000152			_	
	-MZD-R000152 -MZD-R00013H	00000000160			

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'.

Mazda Diagnostic and Repair Software (MDARS)	
	🛛 m172110 🚔 VIN: JMZDMFW8A00100044 🖄 💷
🙃 Quick Check 🗙 Toolbox	
で 減 事	¥ :
- Software update	
Software update	Not Run Run
+ Configuration	
+ ENGINE (SKYACTIV-D)	
+ ENGINE (SKYACTIV-X)	
+ BRAKES	
+ TRANSMISSION/TRANSAXLE	
+ RESTRAINTS	
+ SEATS	
+ SECURITY AND LOCKS	
+ LIGHTING SYSTEMS	
+ WIPER/WASHER SYSTEM	

5. Select required module on 'ECU Reprogramming' screen. Start Reprogramming.

- PCM

NOTE: If software is already the latest version, MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR data transmission).

 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 and disconnect the 12V battery charger.



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💮 mazba		O cnicely	🗛 VIN: ЈМЗККЕНС	6R1100052 🕭	🖾 📺 12.9V
👼 Quick Check	★ Toolbox Software up… ×				
ECU Reprogra	amming				
	Current Software				_
	Description	Current Version	Required Version	Size	
	РСМ	H302-188K2-K	H302-188K2-L	1.67 MB	
				Next	ר
Quick Check	X Toolbox ≇ Software up… X	O cnicely	🗛 VIN: ЈМЗККЕНС	6R1100052 🕭	🗹 🛅 13.1V
ECU Reprogr					
	Software Update Summa	ry			
	Description	Previous Version	Current Version	•	*
	PCM	H302-188K2-K	H302-188K2-L	•	•
				Finish	

Calibration file information

NOTE: - If software is already the latest version (suffix), MDARS will not reprogram the S

s <u>ub</u>	ject EC	U. This is	normal,	please	proceed	to tl	he next st	ep.

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
		H301-188K2-L	_	H3T MHEV AWD LO
PCM	H301-18881	H302-188K2-L	7	H3T MHEV AWD HI

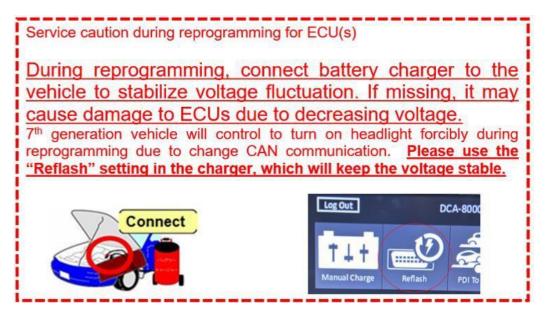
7. PERFORM OTHER REQUIRED SOFTWARE UPDATES AND THEN PERFORM ODR DATA UPLOAD

<u>CLICK HERE TO GO TO INSTRUCTIONS FOR ODR DATA UPLOAD</u>



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Section B : Repair Procedure SSPD1 (Steps 1-4 do not need to be done if already performed another update)



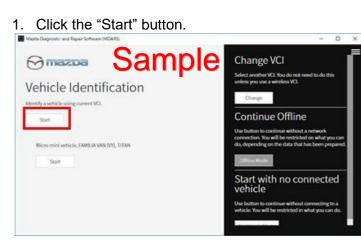
NOTE: Make sure that HV charging cable is not connected to HV battery charging port.

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.





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

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3. Verify the DTC according to the directions on the quick check screen.

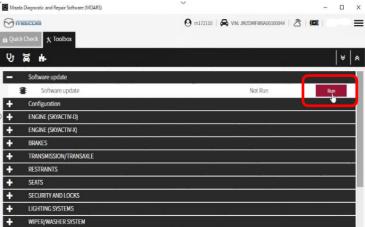


NOTE: This campaign will not repair existing DTC(s).

- If any of the following DTC's are stored, clear the DTC(s).
 - <u>U3000:01-0B:FSRR</u> Front side radar sensor (RH) internal malfunction.
 - <u>U3000:01-0B: RSRL</u> Rear side radar sensor (LH) internal malfunction
 - <u>B14F1:04 [VMC]</u> Front side radar sensor (LH)/(RH) internal malfunction or poor installation
 - <u>B1542:00</u>-0B:VMC Rear side radar sensor related malfunction
 - <u>B14F2:04</u>-0B:VMC Rear side radar sensor (LH)/(RH) internal malfunction or poor installation

Did the DTC(s) clear?

- Yes Go to next step.
- No Does vehicle have a history of battery discharge?
 - Yes Replace the Side Radar Sensor(s) related to the DTC stored.
 - **NOTE**: If replacement part is not available, order part and continue with repairs (Do Not Hold Vehicle).
 - No Perform needed repair per MGSS troubleshooting.
- 4. Reprogram Side Radar as below. If there is 'Software update' on 'Toolbox' tab. Select 'Run'.





MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 16 of 27

- 5. Select required module on 'ECU Reprogramming' screen.
- 6. Start Reprogramming.

cCheck X Toolbox 😹 Software up. X	O cnice	ely 🖨 VIN: JM3KKE	ٹے HC6R1100052	
Kineck X Toolbox Software up X eprogramming				
Current Software				
Description	Current Version	Required Version	Size	
FSRL	KR9P-67YK2-J	KR9P-67YK2-L	702.18 KB	÷
Dependent Software				
FSRR	KR9P-67YK2-J	KR9P-67YK2-L	702.18 KB	÷
RSRL	KR9P-67YK2-J	KR9P-67YK2-L	702.18 KB	*
RSRR	KR9P-67YK2-J	KR9P-67YK2-L	702.18 KB	*
			Nevt	
			Next	

Side Radar Sensor ECU Programming	Applicable Vehicle	Not Applicable
NOTE: Not all trims have Front Side Radar • FSRR (Front Side Radar Right) • FSRL (Front Side Radar Left)	Standard PT • 3.3 Turbo Premium Plus High PT • 3.3 Turbo S Premium • 3.3 Turbo S Premium Plus PHEV • PHEV Premium Plus	Standard PT • 3.3 Turbo Select • 3.3 Turbo Preferred • 3.3 Turbo Preferred Plus • 3.3 Turbo Premium High PT • 3.3 Turbo S PHEV • PHEV Preferred • PHEV Premium
 RSRR (Rear Side Radar Right) RSRL (Rear Side Radar Left) 	All	N/A – All vehicles have Rear Side Radar Sensors

NOTE: If software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR data transmission).

7. 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 and disconnect the 12V battery charger.



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 17 of 27

Reprogrammi	ng				
(eprogramm	Пġ				
It for writing RxSW	IN.				
1170	000153	0000000	00120		
	R000152 R00013H	0000000			
	R000079	0000000			
					Next
Massa Diagnostic and R					- 1
	a		cnicely 🖨 VIN: JM3KKEHC6R11	00052 👌 💷	- f 13.1V
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Contraction of the Chief	Software Update Description FSRL	re up X Summary Previous Version KR9P-67YK2-J	Context Version KR9P-67YK2-L	00052 3 1 (CE) 1	- c

Calibration file information

NOTE: - If software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR data transmission).

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Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.)	Note
FSRR FSRL RSRR RSRL	KR9P-67Y30	KR9P-67YK2-L	16	-

8. PERFORM OTHER REQUIRED SOFTWARE UPDATES AND THEN PERFORM ODR DATA UPLOAD

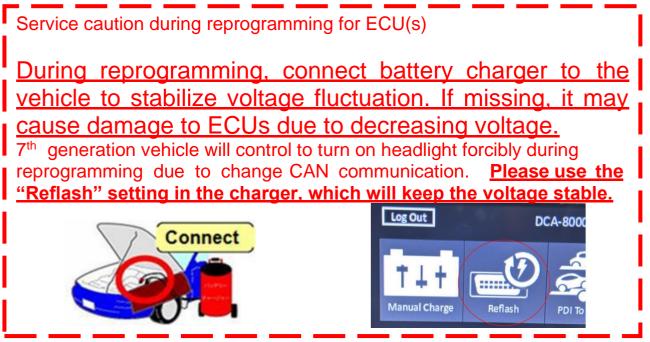
<u>CLICK HERE TO GO TO INSTRUCTIONS FOR ODR DATA UPLOAD</u>



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULEREPROGRAMMINGPage 18 of 27

Section B: Repair Procedure SSPD2 – (Steps 1-4 do not need to be done if already performed another update)

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.

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Quick Check	* Toolbox	Software up ×						
ECU Reprog	gramming							
and the second								
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Result for wri	ting RxSWIN.							
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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.

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к	104	LONR	<u>uv</u>	PCH				
PLG	545	TOM	100					- 1

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

Mazda Diagnostic and Repair Software (MDARS)	×
Binazoa	
Quick Check X Toolbox	
안 볼 #-	* *
Software update	
Software update	Not Run Run
+ Configuration	
+ ENGINE (SKYACTIV-D)	
+ ENGINE (SKYACTIV-X)	
+ BRAKES	
+ TRANSMISSION/TRANSAXLE	
+ RESTRAINTS	Sample
+ SEATS	oampio
+ SECURITY AND LOCKS	
+ LIGHTING SYSTEMS	
WIPER/WASHER SYSTEM	

Select required module on 'ECU Reprogramming' screen. Start Reprogramming.
 TCM

NOTE: software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR data transmission).

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 and disconnect the 12V battery charger.



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 20 of 27

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Quick Check	★ Toolbox 🔹 Software up	×				
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	Current Software			40		
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			H328-21PS1-G	H328-21PS1-J	1.23 MB	
27-5	90 Turbo	Suom			Next	1
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Calibration File Information:

NOTE: - If software is already the latest version (suffix), MDARS will not reprogram the subject ECU. This is normal, please proceed to the next step (ODR data transmission).

Module	Target ECU (Hardware #)	Target Software file #	Reprogramming Time (min.) PLUS RELEARN	Note
		H327-21PS1-J		H3T MHEV AWD LO
ТСМ	RZ01-219E1	H328-21PS1-J	35m H3T MHEV	H3T MHEV AWD HI
		PXPN-21PS1-G	27m PHEV	PHEV AWD

Proceed to TCM Initial Learning after reprogramming

TCM Initial Learning after reprogramming

Warning

• When performing the initial learning, apply the parking brake securely and block the front and rear wheels using wheel chocks 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

- 8. Switch the ignition ON (engine on)/main power ON (READY on).
- 9. Apply the parking brake.
- 10. Shift the selector lever to P range, and set the wheel chocks for both the front and rear wheels.
- 11. 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

- 12. Connect the M-MDS to the DLC-2.
- 13. Open the engine hood. (To ensure that the engine starts. If engine hood is opened, EV mode does no work)
- 14. Switch the ignition ON (engine off).
- 15. Perform the following procedure using the M-MDS.
 - i) Press [Start] for the vehicle identification.
 - ii) Press the [Toolbox] tab.
 - iii) Press the [Work Support] icon.



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27D3

- iv) Press [TRANSMISSION/TRANSAXLE].
- v) Press [Run] for Initial learning of AT.
- 16. Perform the automatic transmission initial learning.
- 17. 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 15.
 - If any other DTCs are displayed, repair or replace the malfunctioning location according to the applicable DTC troubleshooting of workshop manual.
- 18. Disconnect the M-MDS and perform following learning procedure.

PowerTrain start-up learning

- (1) Switch the ignition ON. Either "Engine run" or "READY ON (NOT Engine run)" is fine.
- (2) After holding the idling or READY ON for 5 seconds or more, turn the ignition switch OFF and hold it for 5 seconds or more.
- (3) Repeat steps (1) and (2) above for 3 times.

Shift range learning

- (1) Switch the ignition ON. Either "Engine run" or "READY ON (NOT Engine run)" is fine.
- (2) While idling or READY ON, depress the brake and perform the following steps.
 - i) Move the shift lever in "D".
 - ii) Move the shift lever from "D" to "R" and wait 5 seconds *
 - iii) Move the shift lever from "R" to "D" and wait 5 seconds *

* Do not stop in N range while moving the shift lever.

(3) Repeat steps i) to iii) for 5 times.

Note:

In addition to the above learning, TCM also performs learning while driving automatically. Immediately after reprogramming and initial learning, the above driving learning will be reset. Therefore, it is important to explain the followings 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 would be reset to initial once.

Once the learning values were initialized, a slight shift shock might be felt intermittently, however by proceeding the learning by driving. It may take a few days but it will be improved.

PERFORM OTHER REQUIRED SOFTWARE UPDATES AND THEN PERFORM ODR DATA UPLOAD (next page)

WARNING! FAILURE TO UPLOAD ODR DATA WILL RESULT IN CLAIM DENIAL, CAMPAIGN REMAINING IN OPEN STATUS AND VEHICLE HAVING TO COME BACK TO REDO THE DATA PUSH

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3%Da

Upload ODR Data

Check ODR collection result after reprogramming all required modules with vehicle verification.

7. Open the vehicle history on toolbox tab.

💩 Quick (Check X Toolbox		
ស	<u>а</u>		× ×
\sim	Datalogger	Not Run	Run
+	Confirmation test for system operation		
+	On-demand self-test		
+	Operational records	_	
S.	Vehicle History	Not Run	Run

8. Click the 'Collect Diagnostic Information' and the status has 'SUCCESS' on green.

NOTE:

Status: FAILURE

Verify the "Collect Diagnostic Information" <u>after all required modules are updated</u>. Not necessary to confirm the 'Collect Diagnostic Information' after required module reprogram <u>every time</u>.

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

Mazda Diagnostic and Repair Software (MDARS)			- @ ×
😪 mazba			
🔉 Vehicle History 🛛 🗠 DataLogger			
November 20, 2020			2 ^
	<	Nov 20, 2020 22:15 UTC +0900	
Start	11/20/20 10:15 PM	Status: SUCCESS	Duration: 46 seconds
Vehicle Identification	11/20/20 10:15 PM-		
Quick Check > Network View	11/20/20 10:15 PM		
Quick Check > DTC List	11/20/20 10:15 PM		
Collect Diagnostic Information (Aut	omat…11/20/20 10:16 PM		
Collect Diagnostic Information (EC	J SW … 11/20/20 10:21 PM		
Software update	11/20/20 10:22 PM		
Software update	11/20/20 10:23 PM		

******If the status is 'FAILURE', the ODR (latest vehicle information) has not been submitted to the server. Perform following process.





MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 24 of 27

(1) 'Collect Diagnostic information' then click 'Run' at the tool box tab.

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uick Che	eck 🗙 Toolbox 🐁 Vehicle History		
			1
) ä	<u>й</u> .		×
S	ECURITY AND LOCKS		
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W	VIPER/WASHER SYSTEM		
P	OWER SYSTEMS		
i-	ACTIVSENSE		
М	lazda Connect		
C	ollect Diagnostic Information		
٢	Moving into i-ACTIVSENSE data collecting mode	Not Run	Run
٢	Withdrawing from i-ACTIVSENSE data collecting mode	Not Run	Run
4	Moving into Driving data collecting mode	Not Run	Run
٢	Withdrawing from Driving data collecting mode	Not Run	Run
Q	Collect Diagnostic Information	Not Run	Run
2	Vehicle History	Running	Run

(2) Click 'Next'

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mazo	a			
Quick Chec	k 🛪 Toolbox	Sa Vehicle History	🔉 Collect Diag 🗙	
ODR Colle	ction			
Verify the fol	lowing condition:	s are met before conti	nuing this procedure.	
	1	Current value : On		
				Next

(3) It may take around 60 seconds.

Aazda Diagnostic and Repair Software (MDARS)		- 0
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Quick Check 🗙 Toolbox 📓 Vehicle History 🔉 Collect Diag 🗙		
DR Collection		
Collect Diagnostic Information		
	3s	
		_
		Next

(4) MDARS has collected ODR and sent to the server.



MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULEREPROGRAMMINGPage 25 of 27

(5) Go back to step 7 and 8 to confirm the Collect Diagnostic Information (Manual) status shows 'SUCCESS' on green.

Mazda Diagnostic and Repair Software	10193 1200 10			
😚 mazba		O m172110	│ 🛱 VIN: JMZDMFWG600200003 │ 💍	No Vehicle Mode
🔉 Vehicle History 🛛 🗠 DataLogger				
November 30, 2020				C 🗘
	<	Nov 30, 2020 16:31 UTC +0900	>	
venicle identification	11/30/20 4:32 PM	Status: SUCCESS		Duration: 82 seconds
Quick Check > Network View	11/30/20 4:32 PM			
Quick Check > DTC List	11/30/20 4:32 PM			
Collect Diagnostic Information (Aut	tom…11/30/20 4:32 PM			
Collect Diagnostic Information (Ma	nual) 11/30/20 4:35 PM			
Software update	11/30/20 4:37 PM			
Software update	11/30/20 4:38 PM			
Software update	11/30/20 4:38 PM			
Quick Check > Clear DTCs	11/30/20 4:39 PM			
Quick Check > Network View (Refre	esh D…11/30/20 4:39 PM			
Quick Check > DTC List (Refresh DT	Cs) 11/30/20 4:39 PM			

Proceed to clearing Sleep Mode after VMC Update (Recall 6223J) and DTC Clear

Sleep mode after reprogramming VMC (View Monitor Control Module)

Note:

When vehicle was reprogrammed multiple times, the 360° View Monitor may stop its operation such as stop displaying camera output in the center display. Therefore, after reprogramming the VMC, put it into sleep mode to reset the reprogramming count.

Note:

Disconnect battery charger before starting "Sleep mode for CAN communication". DCDC converter and the power supply from the battery charger may be interfered and it may causes damages of the battery charger. In addition, warning light may illuminate and DTCs may be stored. (Ex. P0DAA)

Sleep mode for CAN communication

- 9. Perform the following operation.
 - Switch the ignition off/main power OFF.
 - Remove all of the remote transmitters from the vehicle, lock all doors, and then wait for 5 min.

DTC inspection

Note:

Disconnect battery charger before starting engine at next step because the power supply from the DCDC converter and the power supply from the battery charger may interfere and damage the battery charger. Then warning light comes up and DTCs are stored. (Ex. P0DAA)

MULTIPLE CAMPAIGNS REPAIR PROCEDURE AND MULTIPLE MODULE REPROGRAMMING Page 26 of 27

10. Verify the repair by starting the engine. If subject vehicle is PHEV, proceed with following steps. Make sure there is no MIL illumination or abnormal warning lights present.



<How to start the engine in PHEV>

(10-1) Switch to 'Sport Mode' and shift to 'D' range

(10-2) Confirm Engine RPM is shown correctly in IC.

(10-3) Shift to 'P' range then stop the engine. Turn ignition off.

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.

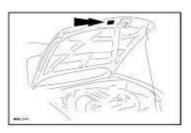
- 11. If any DTCs should remain after performing DTC erase, diagnose the DTCs according to the appropriate troubleshooting section of the Workshop Manual.
- 12. Disconnect the MDARS from the DLC-2.
- 13. Move to Section C. Campaign Label(s) installation. You must install a label for all campaigns or highlight multiple campaigns on one label.

C. CAMPAIGN LABEL INSTALLATION

a. Fill out a Black "Campaign Label" (9999-95-055A-06) with Campaign #: "6223J, 6323J, SSPD1, SSPD2, SSPD3, SSPD4", 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 6223J, 6323J and SSPD1, then have one label with 2 Safety Recall and the second label with SSPD1.

CAMPAIGN NO:		
DEALER CODE:		
DATE:	11	

b. 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:



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End of Repair Procedure.