# Service Alert

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



Subject:	
MAZDA CONNECT SYMPTOM TROUBLESHOOTING (7TH GENERATION VEHICLES)	Service Alert No.: SA-027/21
	Last Issued : 04/07/2021

#### **BULLETIN NOTES**

This service alert supersedes the previously issued service alert listed below. The changes are noted in Red text.

Previous Service Alert:	Date(s) Issued:
SA-027/20	10/16/20, 09/22/20, 09/11/20, 07/16/20, 06/23/20, 04/08/2 0, 03/19/2020 and 02/11/20
SA-042/19	12/12/19 and 09/25/19

# **APPLICABLE MODEL(S)/VINS**

2019-2021 Mazda3 2020-2021 CX-30 2021 CX-5 2021 CX-9

#### DESCRIPTION

Customers having MAZDA CONNECT concerns should have their vehicle repaired using the following repair procedure.

### **REPAIR PROCEDURE**

### NOTE: Before proceeding:

- Document the vehicle current MAZDA CONNECT CMU software version.
- Confirm that the Connectivity Master Unit (CMU) is updated to the latest software version.
  - Go to MGSS -> Infotainment -> MAZDA CONNECT Updates
  - Go to TSB 16-001/20 to view MAZDA CONNECT CMU software fix list.
- Confirm that the customers device is compatible. Go to connect.mazda.com -> Support -> Compatibility.
- Confirm that the customers device is updated to the latest software version.
- If CMU log data collection is necessary, collect the data and continue troubleshooting using this document. If no failure is found, release the vehicle to the customer and inform them that the infotainment system data is being analyzed. Hotline will contact you at a later date with the results.
- Apple Carplay/Android Auto FAQ, go to SA-001/19.

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#### No. 1 Blank Screen

Step	Inspection	Result	Action
1	Is the Bear View Camera displayed?	Yes	Go to step 2.
1	Is the Rear View Camera displayed?	No	Refer to No. 2. Rear View Camera is not displayed
2	Press and hold the Power Button. Is the	Yes	Normal Operation
	screen displayed correctly?	No	Go to step 3.
3	Press the "HOME" button. Is the HOME	Yes	Normal Operation
5	screen displayed correctly?	No	Go to step 4.
4	Using M-MDS, are any infotainment	Yes	Go to MGSS for DTC diagnosis
	system DTC's stored?	No	Go to step 5.
5	Is there a device connected to the USB	Yes	Go to step 6.
5	port?	No	Go to step 7.
	Disconnect the USB device. Does the	Yes	USB device is not compatible
6	display function properly after USB device is disconnected?	No	Go to step 7.
7	Is the connector for the Center Display	Yes	Go to step 8.
inserted correctly		No	Insert the connector correctly.
8	Are the connectors for the CMU		Go to step 9.
0	inserted correctly?	No	Insert the connectors correctly.
	Is the CMU voltage out (PWR CTRL	Yes	Go to step 10.
9	OUT) at 0920-101A Terminal 1S, SB wire, of the CMU normal?	No	Go to step 11.
	Swap the Center Display with good	Yes	Check / Replace the Center Display.
	known vehicle. Is the screen display normal?	No	Go to step 11.
	Swap the CMU with good known vehicle. Is the screen display normal?	Yes	Check / Replace the CMU.

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	Retrieve the data log if possible before replacing the CMU     Document date and time of the condition
No	Repair / Replace wiring harness. Go to MGSS View Content -> Wiring Diagram -> Body and Accessories -> Entertainment System.

# No. 2 Rear View Camera is not displayed

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment	Yes	Go to MGSS for DTC diagnosis
ı	system DTC's stored?	No	Go to step 2.
2	Is the vehicle equipped with 360	Yes	Go to step 3.
	View Monitor?	No	Go to step 4.
3	ls the Front Camera and Side	Yes	Check / Replace the 360 View Monitor control unit.
, 	Cameras displayed normally?	No	Go to step 4.
4	Are images other than the Rear	Yes	Go to step 5.
	View Camera displayed?	No	Go to No. 1 Blank Screen.
5	Is the connector for the Rear View	Yes	Go to step 6.
	Camera Inserted correctly?	No	Insert the connector correctly.
6	Is the connector for the Center	Yes	Go to step 7.
	Display Inserted correctly	No	Insert the connector correctly
7	Are the connectors for the CMU	Yes	Go to step 8.
	Inserted correctly	No	Insert the connectors correctly
8	Swap the Rear View Camera with good known vehicle. Is the screen	Yes	Check / Replace the Rear View Camera See TSB 09-021/19
	display normal?	No	Go to Step 9
9	Swap the CMU with good known vehicle. Is the screen display normal?	Yes	Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
		No	Repair / Replace wiring harness. Go to MGSS View Content -> Wiring Diagram -> Body and Accessories - > Entertainment System.

# No. 3 Rebooting

Step Inspection	Result Action	
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1	Is the customers device a Doro 7050, 7060 phone that is connected by bluetooth?	Yes	Update CMU software version to 7000C0A-NA01_11006 or later.	
	10.33	No	Go to next step	
2	Using M-MDS, are any infotainment system	Yes	Go to MGSS for DTC diagnosis	
2	DTC's stored?	No	Go to step 3.	
		Yes	Go to step 4.	
3	Does the reboot continue after removing the Navigation SD card?		Check / Replace the Navigation SD card. Go to SA-014/21 if applicable	
		Yes	Go to step 5.	
4	Is there a device connected to the USB port?		Go to step 6.	
E	Disconnect the USB device. Does the reboot stop	Yes	USB device is not compatible	
5	after USB device is disconnected?	No	Go to step 6.	
		Yes	Go to step 7.	
6	Does the reboot continue after ignition key OFF then back ON?	No	Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU.  Document date and time of the condition	
7	Does the reboot continue after vehicle battery disconnect?	Yes	Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU Document date and time of the condition  No repair needed.	

# No. 4 Infotainment System Has No Sound

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment	Yes	Go to MGSS for DTC diagnosis
Ľ	system DTC's stored?	No	Go to step 2.
2	Is sound normal other than navigation	Yes	Go to step 3.

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	guidance?	No	Go to step 4.
2	Can you hear the voice after raising the		Normal Operation.
3	navigation volume?	No	Go to step 5.
4	Can you hear sound after turning on audio	Yes	Normal Operation.
4	mode?		Go to step 6.
	Replace the Navigation SD Card. Can you hear voice after Navigation SD Card replacement?		Complete
5			Check / Replace the CMU. Retrieve  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
6	Can you hear sound after raising the	Yes	Normal Operation
0	volume of audio?	No	Go to step 7.
7	<< Source: USB/iPod >> Are there any problems with the media and the music files? << Source: Radio >> Are there any problems with the antenna and the reception? << Source: Bluetooth Audio >>		<< Source: USB/iPod >> Check the media and the compatible files. << Source: Radio >> Check the antenna, the reception, and the Remote Tuner side. << Source: Bluetooth Audio >> Check the Bluetooth connection and the Bluetooth device.
	Are there any problems with Bluetooth?	No	Go to step 8.
8	Go to MGSS "DIAGNOSTIC ASSIST FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment - > Active Speaker Check Function -> Speaker Inspection.	Pass	Retrieve the data log if possible before replacing the CMU     Document date and time of the condition
	Did the Speaker Inspection Pass?		Go to step 9.
0	Is the connector for the Speaker(s) that	Yes	Go to step 10.
9	failed inserted correctly?	No	Insert the connector correctly.
10	Is the connector for the amplifier inserted	Yes	Go to step 11.
10	correctly?	No	Insert the connector correctly.
11	Are the CMU connectors inserted	Yes	Go to step 12.
	correctly?	No	Insert the connectors correctly.
12	Swap speakers from good known vehicle.	Yes	Check / Replace the speakers.
	Can you hear sound?	No	Go to step 13.
13	Swap the Amplifier from known good vehicle. Can you hear sound?	Yes	Check / Replace the Amplifier.
14	Swap the CMU from known good vehicle. Can you hear sound?	No Yes	Go to step 14. Check / Replace the CMU.

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	Retrieve the data log if possible before replacing the CMU     Document date and time of the condition
No	Repair/Replace wiring harness. Go to MGSS View Content -> Wiring Diagram -> Body and Accessories -> Entertainment System.

#### No. 5 Commander Switch Does Not Work

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment system	Yes	Go to MGSS for DTC diagnosis
'	DTC's stored?		Go to step 2.
2	Does the Commander Switch work correctly?		Go to step 3.
	Does the Commander Switch work correctly?	No	Go to step 4.
3	Does the Steering Wheel Switch work	Yes	Normal Operation.
3	correctly?	No	Go to step 5.
4	la fues E12 missing?	Yes	Go to SA-025/19.
4	Is fuse F13 missing?	No	Go to step 8.
	Go to MGSS "DIAGNOSTIC ASSIST	Pass	Go to step 6.
5	FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment -> Steering SW Inspection -> Did the Steering SW Inspection Pass?		Go to MGSS STEERING SWITCH INSPECTION.
6	Is the connector for the CMU inserted	Yes	Go to step 7.
0	correctly?		Insert the connector correctly.
7	Swap the CMU from known good vehicle.  Does the Steering Wheel Switch work correctly?		Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU.  Document date and time of the condition
			Repair/Replace wiring harness. Go to MGSS View Content -> Wiring Diagram -> Body and Accessories -> Entertainment System.
8	Go to MGSS "DIAGNOSTIC ASSIST FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment -> Touch Pad/Commander Inspection - > Commander switch inspection.	Pass	Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU.  Document date and time of the condition

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	Did the Commander switch inspection Pass?	Fail	Go to step 9.
0	Is the connector for the Commander Switch	Yes	Go to step 10.
9	inserted correctly?	No	Insert the connector correctly.
10	Are the CMI Leannesters inserted correctly?	Yes	Go to step 11.
10	Are the CMU connectors inserted correctly?	No	Insert the connectors correctly.
	Swap the Commander Switch with good	Yes	Check / Replace the Commander Switch.
11	known vehicle. Does the Commander Switch work correctly?		Go to step 12.
12	Swap the CMU from known good vehicle. Does the Commander Switch work correctly?	Yes	Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
		No	Repair/Replace wiring harness. Go to MGSS View Content -> Wiring Diagram -> Body and Accessories -> Entertainment System.

# No. 6 Bluetooth device will not pair

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment	Yes	Go to MGSS for DTC diagnosis
1	system DTC's stored?		Go to step 2.
2	Is Bluetooth enabled on the customers	Yes	Go to step 3.
_	device?	No	Enable Bluetooth on the customers device.
2	Is the customers device paired to the	Yes	Go to step 4.
3	vehicle?	No	Pair the customers device to the vehicle.
	la the quaternara device calcuted in	Yes	Go to step 5.
4	Is the customers device selected in MAZDA CONNECT settings?	No	Select the customers device from Bluetooth settings.
	Delete the device from MAZDA CONNECT		Normal Operation
5	5 and then re-pair it.  Does Bluetooth work correctly?	No	Go to step 6.
	Go to connect.mazda.com -> Support ->	Yes	Go to step 7.
6	Compatibility. Is the customers device compatible?	No	The customers device is not compatible.
		Yes	Go to step 8.
7	Does the same symptom occur on another same model/year vehicle?		Check / Replace the CMU.  • Document device model, software

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			version and occurrence of the condition.  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
		Yes	Vehicle operation is normal.
IIA I	Reboot the customers device. Does Bluetooth work correctly?	No	Check / Replace the CMU.  Document device model, software version and occurrence of the condition. Retrieve the data log if possible before replacing the CMU Document date and time of the condition

### No. 7 Incorrect GPS position

Step	Inspection	Result	Action
	Go to MAZDA CONNECT -> Navi menu, Travel Information -> Where Am I? -> Settings -> GPS information -> Check Available Satellites.		Normal Operation.
	Or		
1	Go to MGSS "DIAGNOSTIC ASSIST FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment -> Navi System		Go to step 2.
	Inspection -> Check GPS Received Level.  Does the Navi system show correct vehicle position?		
	Using M-MDS, are any of the following DTC's stored? - B119F:13, GPS antenna signal circuit malfunction (short to power or open circuit) - B119F:2B, GPS antenna signal circuit malfunction (short to ground)		Go to step 3.
			Go to step 8.
3	Is the CDS antenna connector secured properly?	Yes	Go to step 4.
3	Is the GPS antenna connector secured properly?		Insert the connector correctly.
4	Is the GPS wiring harness open or shorted?		Repair / Replace GPS wiring harness.
			Go to TSB 09-021/20.
5	Did TSR 00 021/20 resolve the concern?	Yes	Repair Complete
5	Did TSB 09-021/20 resolve the concern?		Go to step 6.
6	Are the CMU connectors secured properly?	Yes	Go to step 7.

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		No	Insert the connectors correctly.
7	Is the CMU wiring harness open or shorted?		Repair / Replace CMU wiring harness.
	,	No	Go to step 8.
		Yes	Repair completed.
8	Replace GPS antenna. Does the Navigation system show correct position?	No	Retrieve the data log if possible before replacing the CMU     Document date and time of the condition
9	Using M-MDS, is DTC B119F:49 stored?	Yes	Go to step 10.
9	(Communication error with GNSS)	No	Go to step 12.
10	And the CMILL commenters appropriately are supplied.		Go to step 11.
10	Are the CMU connectors secured properly?	No	Insert the connectors correctly.
		Yes	Repair / Replace CMU wiring harness.
11	Is the CMU wiring harness open or shorted?		Check / Replace the CMU.  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
	Check / Replace the CMU. Retrieve CMU data log if	Yes	Repair completed.
12	possible before replacing CMU. Did DTC B119F:49 clear?		Repair / Replace GPS antenna.
	possible before replacing CMU.		Document date and time of the condition  Repair completed.  Repair / Replace GPS antennation

**NOTE:** Remove aftermarket GPS devices that may interfere with vehicle GPS antenna. Example: Some radar detectors may emit radio waves that interfere with the vehicle GPS antenna.

#### No. 8 Voice Recognition Does Not Work

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment system DTC's stored?		Go to MGSS for DTC diagnosis
ı			Go to step 2.
II I		Pass	Go to step 3.
2	[CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment -> Steering SW Inspection -> Did the Steering SW Inspection Pass?	ı⊢aıı ı	Go to MGSS STEERING SWITCH INSPECTION.

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Go to MGSS "DIAGNOSTIC ASSIST FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment -> Microphone Inspection -> Did the Microphone Inspection Pass?	Pass	Retrieve the CMU.     Retrieve the data log if possible before replacing the CMU     Document date and time of the condition
	ll⊢aii i	Go to MGSS MICROPHONE INSPECTION.

#### No. 9 Cannot Make a Hands-Free Call

Step	Inspection	Result	Action
1	Using M-MDS, are any	Yes	Go to MGSS for DTC diagnosis
infotainment system DTC's stored?	No	Go to step 2.	
2	ls Bluetooth enabled on the	Yes	Go to step 3.
	customers device?	No	Enable Bluetooth on the customers device.
	Is the customers device data	Yes	Go to step 4.
3	service strength good?	No	Move to a location where data service strength is good and retest.
	Is the customers device paired to	Yes	Go to step 5.
4	the vehicle?	No	Pair the customers device to the vehicle.
5	Is the customers device selected	Yes	Go to step 6.
J	in MAZDA CONNECT settings?	No	Select the customers device from Bluetooth settings.
	Delete the device from MAZDA	Yes	Normal Operation
6	CONNECT and then re-pair it. Does Bluetooth work correctly?	No	Go to step 7.
	Go to connect.mazda.com ->	Yes	Go to step 8.
7	7 Support -> Compatibility. Is the customers device compatible?	No	The customers device is not compatible.
8	Does the same symptom occur on	Yes	Go to step 9.
	another same model/year vehicle?	No	Go to step 10.
9	Reboot the customers device.	Yes	Vehicle operation is normal.
9	Does Bluetooth work correctly?	No	Go to step 10.
	Is the Bluetooth device in a place	Yes	Move the Bluetooth device away from hidden location.
10	where radio waves may be blocked? (Behind or under a sheet, in a box, in a purse/bag, ext.)	No	Go to step 11.
11	Is the Bluetooth device contacting	Yes	Move the Bluetooth device away from metal objects.

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	or blocked by metal objects?	No	Go to step 12.
		Yes	Disconnect other USB device.
12	device connected at the same time?	No	Go to step 13.
13	Does the problem occur in a specific geological location only?	Yes	Move to a different location. This may be caused by electrical interference by radio stations, specific small power radio stations, or amateur radio stations for mobile identification used in industrial, scientific and medical devices.
		No	Go to step 14.
14	Does the same symptom occur on	Yes	Go to step 15
14	another Bluetooth device?	No	The customers device is not compatible.
15	Does the voice recognition system operate using other functions such as Bluetooth Audio?	Yes	Check / Replace the CMU.  Document device model, software version and occurrence of the condition.  Retrieve the data log if possible before replacing the CMU  Document date and time of the condition
		No	Go to No. 8 Voice Recognition Does Not Work

### No. 10 Cannot Play Bluetooth Audio

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment system DTC's stored?	Yes	Go to MGSS for DTC diagnosis
I .		No	Go to step 2.
2	Is Bluetooth enabled on the customers device?	Yes	Go to step 3.
		No	Enable Bluetooth on the customers device.
	Is the customers device data service strength good?	Yes	Go to step 4.
3		No	Move to a location where data service strength is good and retest.
	Is the customers device battery strength good?	Yes	Go to step 5
4		No	Connect the customers device to a charger or recharge the device, then retest.
5	Is the customers device paired to the vehicle?	Yes	Go to step 6.
5		No	Pair the customers device to the vehicle.
	Is the customers device selected in MAZDA CONNECT settings?	Yes	Go to step 7.
6		No	Select the customers device from Bluetooth settings.
7	Delete the device from MAZDA CONNECT and then re-pair it.	Yes	Normal Operation

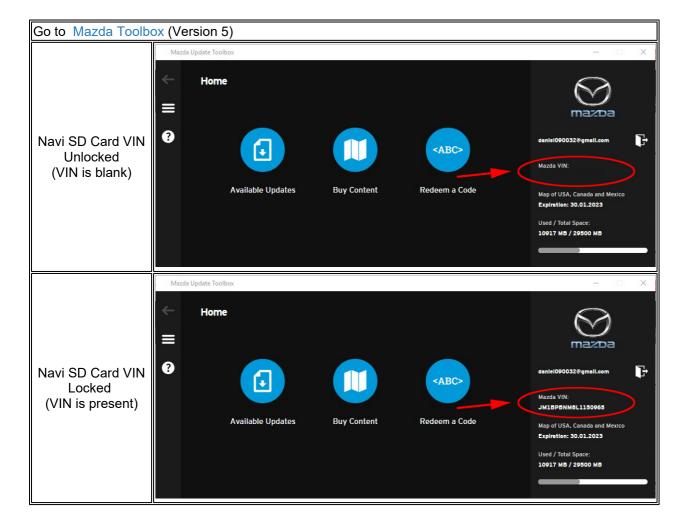
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	Does Bluetooth work correctly?	No	Go to step 8.
8	Go to connect.mazda.com -> Support -> Compatibility. Is the customers device compatible?	Yes	Go to step 9.
		No	The customers device is not compatible.
9	Does the same symptom occur on another same model/year vehicle?	Yes	Go to step 10.
		No	Go to step 11.
10	Reboot the customers device. Does Bluetooth work correctly?	Yes	Vehicle operation is normal.
		No	Go to step 11.
11	Is the Bluetooth device in a place where radio waves may be blocked? (Behind or under a sheet, in a box, in a purse/bag, ext.)	Yes	Move the Bluetooth device away from hidden location.
		No	Go to step 12.
12	Is the Bluetooth device contacting or blocked by metal objects?	Yes	Move the Bluetooth device away from metal objects.
		No	Go to step 13.
	Is a Bluetooth device and a USB device connected at the same time?	Yes	Disconnect other USB device.
13		No	Document device model, software version and occurrence of the condition.     Retrieve the data log if possible before replacing the CMU     Document date and time of the condition

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#### No. 11 How to Check Navi SD Card VIN Lock



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