# **Service Alert**

Mazda North American Operations Irvine, CA 92618-2922



Subject:

MAZDA CONNECT SYMPTOM TROUBLESHOOTING (7TH GENERATION VEHICLES)

Service Alert No.: SA-027/20

Last Issued: 10/16/2020

### **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	09/22/20, 09/11/20,07/16/20, 06/23/20, 04/08/20 and 02/11/20
SA-042/19	03/19/2020, 12/12/19and 09/25/19

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

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

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#### **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	la the Bear View Come and displayed?	Yes	Go to step 2.
1	Is the Rear View Camera displayed?		Refer to No. 2. Rear View Camera is not displayed
112	Press and hold the Power Button. Is the	Yes	Normal Operation
	screen displayed correctly?		Go to step 3.

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2	Press the "HOME" button. Is the HOME screen displayed correctly?		Normal Operation		
3			Go to step 4.		
4	Using M-MDS, are any infotainment system DTC's stored?		Go to MGSS for DTC diagnosis		
4			Go to step 5.		
Е	Is there a device connected to the USB	Yes	Go to step 6.		
3	port?		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		Insert the connector correctly.		
0	Are the connectors for the CMU inserted correctly?		Go to step 9.		
0			Insert the connectors correctly.		
	Is the CMU voltage out (PWR CTRL OUT) at 0920-101A Terminal 1S, SB wire, of the CMU normal?		Go to step 10.		
9			Go to step 11.		
	Swap the Center Display with good	Yes	Check / Replace the Center Display.		
10	0 known vehicle. Is the screen display No	No	Go to step 11.		
11	Swap the CMU with good known vehicle.	Yes	Check / Replace the CMU.  1. Retrieve the data log if possible before replacing the CMU  2. Document date and time of the condition		
	Is the screen display normal?		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
T	system DTC's stored?		Go to step 2.
2	Is the vehicle equipped with 360 View	Yes	Go to step 3.
2	Monitor?	No	Go to step 4.
3		Yes	Check / Replace the 360 View Monitor control unit.

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	Is the Front Camera and Side Cameras displayed normally?	No	Go to step 4.
4	Are images other than the Rear View Camera displayed?		Go to step 5.
4			Go to No. 1 Blank Screen.
5	Is the connector for the Rear View Camera Inserted correctly?		Go to step 6.
J			Insert the connector correctly.
6	Is the connector for the Center	Yes	Go to step 7.
O .	Display Inserted correctly		Insert the connector correctly
7	Are the connectors for the CMU	Yes	Go to step 8.
,	Inserted correctly		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
114	Swap the CMU with good known	Yes	Check / Replace the CMU.  1. Retrieve the data log if possible before replacing the CMU  2. Document date and time of the condition
	vehicle. Is the screen display normal?	No	Repair / Replace wiring harness. Go to MGSS View Content - Wiring Diagram - Body and Accessories - Entertainment System.

## No. 3 Rebooting

Step	Inspection	Result	Action
	Is the customers device a Doro 7050, 7060 phone that is connected by bluetooth?	IYAS	Update CMU software version to 7000COA-NA01_11006or later.
1	10.33	No	Go to next step
2	Using M-MDS, are any infotainment system DTC's	Yes	Go to MGSS for DTC diagnosis
۷	stored?		Go to step 3.

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2	Does the reboot continue after removing the Navigation SD card?		Go to step 4.
3			Check / Replace the Navigation SD card.
4	4 Is there a device connected to the USB port?		Go to step 5.
4			Go to step 6.
Е	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.
Does the reboot continue after ignition key OFF then back ON?		No	<ol> <li>Check / Replace the CMU.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>
/	Does the reboot continue after vehicle battery disconnect?	Yes	Check / Replace the CMU.  1. Retrieve the data log if possible before replacing the CMU  2. Document date and time of the condition
		No	No repair needed.

## No. 4 Infotainment System Has No Sound

Step	Inspection	Result	Action
1	Using M-MDS, are any infotainment system DTC's stored?		Go to MGSS for DTC diagnosis
1			Go to step 2.
2	2 Is sound normal other than navigation guidance?		Go to step 3.
2			Go to step 4.
2	Can you hear the voice after raising the	Yes	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.
5		Yes	Complete

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	Replace the Navigation SD Card. Can you		Check / Replace the CMU. Retrieve
	hear voice after Navigation SD Card replacement?	No	<ol> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>
_	Can you hear sound after raising the volume	Yes	Normal Operation
6	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 Are there any problems with Bluetooth?	Yes	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. Did the Speaker Inspection Pass?	Pass Fail	<ol> <li>Check / Replace the CMU. Retrieve</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> <li>Go to step 9.</li> </ol>
	Is the connector for the Speaker(s) that failed inserted correctly?	Yes	Go to step 10.
9		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 correctly?	Yes	Go to step 12.
	The tire civio connectors inserted 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	Yes	Check / Replace the Amplifier.
	vehicle. Can you hear sound?	No	Go to step 14.
14	Swap the CMU from known good vehicle. Can you hear sound?	Yes	<ol> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>

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	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?	Yes	Go to step 3.		
_	boes 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	Is fuse F13 missing?	Yes	Go to SA-025/19.		
4	is tuse F13 tillssliig!	No	Go to step 8.		
	Go to MGSS "DIAGNOSTIC ASSIST FUNCTION	Pass	Go to step 6.		
	[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 correctly?		Go to step 7.		
O .			Insert the connector correctly.		
<b>"</b> /	Swap the CMU from known good vehicle. Does the Steering Wheel Switch work correctly?	Yes	<ol> <li>Check / Replace the CMU.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol> Repair/Replace wiring harness. Go to MGSS		
		No	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. Did the Commander switch inspection Pass?	Pass	<ol> <li>Check / Replace the CMU.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>		

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		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 CMU connectors inserted correctly?	Yes	Go to step 11.		
10		No	Insert the connectors correctly.		
	Swap the Commander Switch with good known		Check / Replace the Commander Switch.		
1	vehicle. Does the Commander Switch work correctly?	No	Go to step 12.		
11 / 1	Swap the CMU from known good vehicle. Does the Commander Switch work correctly?	Yes	<ol> <li>Check / Replace the CMU.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>		
		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 system DTC's stored?		Go to MGSS for DTC diagnosis
			Go to step 2.
		Yes	Go to step 3.
2	Is Bluetooth enabled on the customers device?	IINO I	Enable Bluetooth on the customers device.
		Yes	Go to step 4.
3	Is the customers device paired to the vehicle?		Pair the customers device to the vehicle.
	la the gustament device colorted in MAZDA CONNECT		Go to step 5.
14 1	Is the customers device selected in MAZDA CONNECT settings?	INo I	Select the customers device from Bluetooth settings.
	Delete the device from MAZDA CONNECT and then repair it.  Does Bluetooth work correctly?		Normal Operation
II I			Go to step 6.
6		Yes	Go to step 7.

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	Go tohttp://infotainment.mazdahandsfree.comWeb Site. Is the customers device compatible?	No	The customers device is not compatible.	
			Go to step 8.	
7	Does the same symptom occur on another same model/year vehicle?	No	<ol> <li>Check / Replace the CMU.</li> <li>Document device model, software version and occurrence of the condition.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>	
			Vehicle operation is normal.	
8	Reboot the customers device. Does Bluetooth work correctly?	No	<ol> <li>Check / Replace the CMU.</li> <li>Document device model, software version and occurrence of the condition.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>	

## No. 7 Incorrect GPS position

Step	Inspection	Result	Action
	,	Yes	Normal Operation.
1	Where Am I? - Settings - GPS information - Check Available Satellites.  Or  Go to MGSS "DIAGNOSTIC ASSIST FUNCTION	No	Go to step 2.
	[CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment - Navi System Inspection - Check GPS Received Level.  Does the Navi system show correct vehicle position?		Go to step 2.

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	Using M-MDS, are any of the following DTC's stored?	Yes	Go to step 3.
	- B119F:13, GPS antenna signal circuit malfunction (short to	162	00 to step 3.
2	power or open circuit) - B119F:2B, GPS antenna signal circuit malfunction (short to ground)	No	Go to step 8.
2	la the CDC antenna commenter comment managers	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.
		No	Go to TSB09-021/20.
5	Did TSP 00 021/20 resolve the concern?	Yes	Repair Complete
3	Did TSB 09-021/20 resolve the concern?		Go to step 6.
6	Are the CMU connectors secured properly?		Go to step 7.
U	Are the civio connectors secured property:	No	Insert the connectors correctly.
7	Is the CMU wiring harness open or shorted?		Repair / Replace CMU wiring harness.
			Go to step 8.
		Yes	Repair completed.
8	Replace GPS antenna. Does the Navigation system show correct position?	No	<ol> <li>Check / Replace the CMU.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>
9	Using M-MDS, is DTC B119F:49 stored?	Yes	Go to step 10.
	(Communication error with GNSS)		Go to step 12.
10	Are the CMU connectors secured properly?		Go to step 11.
	and the conditions seemed property.	No	Insert the connectors correctly.
	Is the CMU wiring harness open or shorted?		Repair / Replace CMU wiring harness.
11			Check / Replace the CMU.  1. Retrieve the data log if possible before replacing the CMU

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		Document date and time of the condition
Check / Replace the CMU. Retrieve CMU data log if possible	Yes	Repair completed.
before replacing CMU. Did DTC B119F:49 clear?	No	Repair / Replace GPS antenna.

**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?	Yes	Go to MGSS for DTC diagnosis
1		No	Go to step 2.
		Pass	Go to step 3.
2	[CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment - Steering SW Inspection - Did the Steering SW Inspection Pass?	lFail l	Go to MGSS STEERING SWITCH INSPECTION.
3	Go to MGSS "DIAGNOSTIC ASSIST FUNCTION [CONNECTIVITY MASTER UNIT (US)]" Perform Functional Inspection/Adjustment - Microphone Inspection - Did the Microphone Inspection Pass?	Pass	Check / Replace the CMU.  1. Retrieve the data log if possible before replacing the CMU  2. Document date and time of the condition  Go to MGSS MICROPHONE INSPECTION.

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

Step	Inspection	Result	Action
1	DECL 12	Yes	Go to MGSS for DTC diagnosis
1		No	Go to step 2.
		Yes	Go to step 3.
2 Is Bluetooth enabled on the customers devi		Nο	Enable Bluetooth on the customers device.
3		Yes	Go to step 4.

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	Is the customers device data service strength	No	Move to a location where data service
	good?	110	strength is good and retest.
4	Is the customers device paired to the vehicle?	Yes	Go to step 5.
_		No	Pair the customers device to the vehicle.
	Is the customers device selected in MAZDA CONNECT settings?	Yes	Go to step 6.
5		No	Select the customers device from Bluetooth settings.
	Delete the device from MAZDA CONNECT and	Yes	Normal Operation
6	then re-pair it. Does Bluetooth work correctly?	No	Go to step 7.
	Go to http://infotainment.mazdahandsfree.com	Yes	Go to step 8.
7	Web Site. Is the customers device compatible?	No	The customers device is not compatible.
8	Does the same symptom occur on another same	Yes	Go to step 9.
O	model/year vehicle?	No	Go to step 10.
9	Reboot the customers device. Does Bluetooth work correctly?	Yes	Vehicle operation is normal.
9		No	Go to step 10.
10	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.
10		No	Go to step 11.
11	Is the Bluetooth device contacting or blocked by metal objects?	Yes	Move the Bluetooth device away from metal objects.
		No	Go to step 12.
12	Is a Bluetooth device and a USB device connected at the same time?	Yes	Disconnect other USB device.
12		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 another	Yes	Go to step 15
14	Bluetooth device?		The customers device is not compatible.

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1115	Does the voice recognition system operate using other functions such as Bluetooth Audio?	Yes	Check / Replace the CMU.  1. Document device model, software version and occurrence of the condition.  2. Retrieve the data log if possible	
			<ol> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>	
		NΟ	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	Yes	Go to MGSS for DTC diagnosis
1	stored?		Go to step 2.
		Yes	Go to step 3.
2	Is Bluetooth enabled on the customers device?	No	Enable Bluetooth on the customers device.
		Yes	Go to step 4.
3	Is the customers device data service strength good?	No	Move to a location where data service strength is good and retest.
		Yes	Go to step 5
4	Is the customers device battery strength good?	No	Connect the customers device to a charger or recharge the device, then retest.
		Yes	Go to step 6.
5	Is the customers device paired to the vehicle?	No	Pair the customers device to the vehicle.
	Is the customers device selected in MAZDA CONNECT	Yes	Go to step 7.
16	settings?	No	Select the customers device from Bluetooth settings.
	Delete the device from MAZDA CONNECT and then re-	Yes	Normal Operation
7	pair it. Does Bluetooth work correctly?	No	Go to step 8.
8		Yes	Go to step 9.

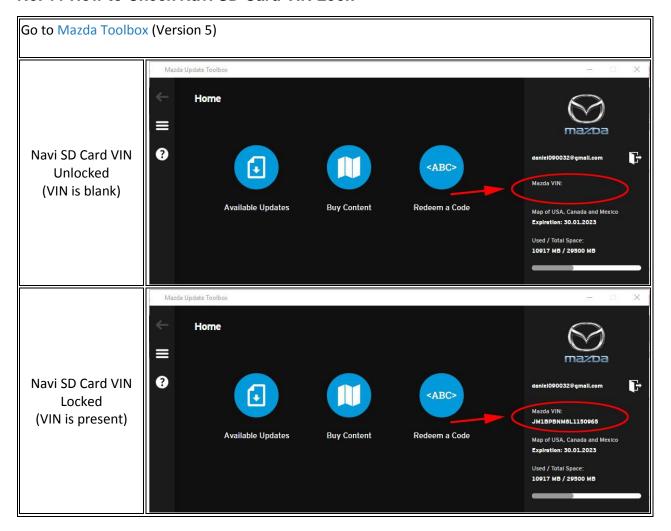
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	Go to http://infotainment.mazdahandsfree.comWeb Site. Is the customers device compatible?	No	The customers device is not compatible.	
9	Does the same symptom occur on another same	Yes	Go to step 10.	
	model/year vehicle?		Go to step 11.	
II1() I		Yes	Vehicle operation is normal.	
10		No	Go to step 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.	
		Yes	Disconnect other USB device.	
13	Is a Bluetooth device and a USB device connected at the same time?	No	<ol> <li>Check / Replace the CMU.</li> <li>Document device model, software version and occurrence of the condition.</li> <li>Retrieve the data log if possible before replacing the CMU</li> <li>Document date and time of the condition</li> </ol>	

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



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