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**DATE:** 03/10/20

**REVISED:** 11/20/20

# SERVICE BULLETIN

APPLICABILITY: 2020MY Legacy and Outback Models NUMBER: 15-261-20R

**SUBJECT:** Reprogramming File Availability for Optimization

of Gen 4 Denso CP1 Infotainment Systems

#### INTRODUCTION:

The following information announces reprogramming file availability and provides a software update installation procedure to optimize the new Gen 4 Denso CP1 Audio and Navigation head units utilized in the models listed above. As in previous models, the procedure will involve either downloading the software update files from Subarunet or using those sent directly from Nuspire to the SDS Notebook and transferring them onto a USB flash drive for head unit installation.

It is **VERY IMPORTANT** to read and understand this information completely before proceeding.

A time line chart along with a complete list of all the conditions addressed and enhancements included in this and previous Denso software updates are provided in "Appendix B" and "Appendix C" located at the end of this bulletin.

IMPORTANT NOTE: There are 4 (FOUR) FILES required to complete this update. ALL 4 update files MUST BE DOWNLOADED TOGETHER to the USB Flash Drive before starting the update. PERFORMING THIS UPDATE USING A USB FLASH DRIVE WITH ANY OF THE REQUIRED UPDATE FILES MISSING WILL LEAD TO A NON-RECOVERABLE FAILURE OF THE COCKPIT CONTROL MODULE (CCU) REQUIRING CCU REPLACEMENT.

#### **PART INFORMATION:**

**NOTE:** High Level unit is equipped with Navigation option (Map icon on Home screen)



### **ATTENTION**

The software in the STARLINK® Multimedia system on this vehicle has been recently updated. The current "STARLINK® Multimedia Owners Manual" and the "Getting Started Guide" in the vehicle, may not reflect the latest changes in features and functionality of the STARLINK® Multimedia system.

Subaru of America will have an updated electronic supplement to your "STARLINK" Multimedia manual" and "Getting Started Guide" available on-line as of June 30th.

You can download the electronic supplements by visiting us at: https://www.subaru.com/owners/index.html

You can also request a printed copy of the supplements by writing us at: https://www.subaru.com/customer-support.html

Also, you can contact us at 1-800-SUBARU3 (1-800-782-2783)





## **Materials Required:**

An empty, USB 2.0 or 3.0 storage device (flash drive) will be needed to perform the update procedure. The device should be dedicated to storing and transferring these updating files only. It must be a minimum of **16GB** or more in size and contain a NTFS file format before downloading the update files onto it. Be sure to locate and re-format any existing USB drives used for updating audio units. They must be fully cleared before adding these new update files to them.

#### **IMPORTANT NOTES:**

- **NEVER** change the update file names after downloading them.
- **NEVER** save any other files on the same flash drive.

There are various types of USB flash drive available from many suppliers. If the head unit does NOT recognize the USB drive during the reprogramming process due to Controller IC type of USB drive or Compatibility with the head unit, confirm the flash drive format is NTFS. The flash drive must be formatted for NTFS. If a recognition problem persists, use a USB flash drive from another manufacturer.

• Kingston®:

DataTraveler G3 Series DataTraveler 100 G3 DT100G3 DataTraveler SE9 Series DataTraveler SE9 G2 3.0 DTSE9G2 Digital Data Traveler 3.0 USB Flash Drive - Violet DTIG4





• SanDisk®:

Ultra Series SDCZ48-064G-J57 Cruzer Blade Series Cruzer Glide Series CZ60 SDCZ60-064G-B35



• Transcend®:

JetFlash 790 Series TS64GJF790KBE



• PNY®:

Retract USB 3.0 Flash Drive, black (P-FD64GTRTC-GE)



• Silicon Power®:

2 Pack USB 3.0/3.1 Gen1 USB Flash Drive Blaze B02



#### **SERVICE PROCEDURE / INFORMATION:**

**REMINDER:** Customer satisfaction and retention starts with performing quality repairs.

**STEP 1- VERY IMPORTANT:** Before proceeding with the software updating procedure, the currently installed software version ID **MUST** be confirmed by following the steps below:

**1a)** After starting the engine and system boot-up completes, from the HOME screen, touch the **Settings** button.



**1b)** Press the **General** button. Use the down arrow to scroll to **System Information** then press to display the System Information / Version information.





The examples below identify the head unit model and the last 6 digits signify the software version number. Examples:

- F11GHMxxx-xxx (High model software)
- F11GMMxxx-xxx (Mid model software)
- F11GBMxxx-xxx (Base model software)

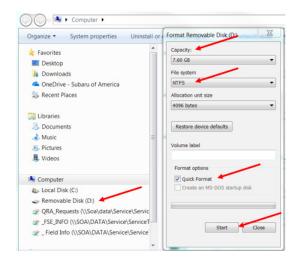
If the software version number is **020-501**, **020-502**, **020-704**, **021-503** or **021-704**, proceed to **STEP 2** below. If the software version is **022-504** or higher, **STOP** as the unit already has the latest software version installed. Proceed to the WARRANTY / CLAIM INFORMATION section of the TSB and process a Version Check Only claim.

## **STEP 2-** Prepare the USB:

**CAUTION:** Do not use any USB flash drive which utilizes file organizing software or an operating system.

**VERY IMPORTANT:** Before attempting to download any data files, confirm the PC and flash drive being used is not infected with any virus. The flash drive MUST be formatted for **NTFS**.

- Make sure the USB flash drive contains no other files.
- Right click on the corresponding "Removable Disk".
- Select "Format".
- From the File System drop-down menu, select "NTFS"
- Check the "Quick Format" box (if not already done).
- Click on "Start" to format the USB flash drive.



## **STEP 3-** Download the Update Files to the USB:

The files are available for download on Subarunet (see "A" below).

The applicable reprogramming files have also been sent directly to retailers by Nuspire in the same way a Select Monitor Update would be pushed out. (see "B" below).

Follow "A" when using files downloaded from Subarunet.

**Follow "B"** when using the files sent directly to the SDS notebook from Nuspire.

### "A" When using update files downloaded from Subarunet:

Click Here to Access the Downloads for Audio/Navigation Information on Subarunet



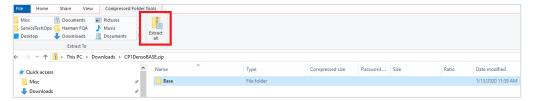
**IMPORTANT:** Files downloaded from Subarunet will be .zip files and must be unzipped before they can be used. Using the normal audio / navigation system file update download procedure: Go to Subarunet, select Service Operations and Technical>>Forms/Downloads>>**Gen 4/Denso** for Audio/Navi then click on the applicable Hyperlink to download the file(s) to your SDS Notebook or PC:

BASE-20-Legacy-Outback-Denso-CP1 AUDIO UPDATE-JUNE 2020

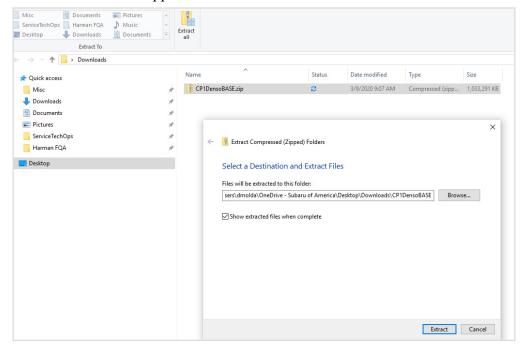
MID-20-Legacy-Outback-Denso-CP1 AUDIO UPDATE-JUNE 2020

HIGH-20-Legacy-Outback-Denso-CP1 AUDIO UPDATE-JUNE 2020

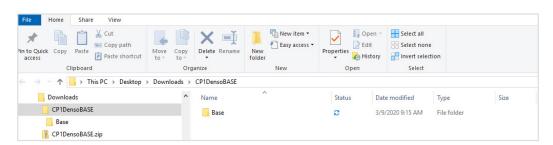
- Go to Downloads.
- CAUTION: After download is complete, NEVER change the file or folder names.
- Open / display the contents of File folder, for example: "CP1DensoBASE.zip".
- Click on "Extract All Files".



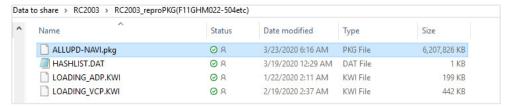
• The screen below will appear to set a destination for the extracted file.



• Double-click on the required file (for this example, select the file entitled "BASE").



• Copy all files then paste (or click / drag) it to the "clean" USB flash drive as listed (Removable Disk) in the directory.

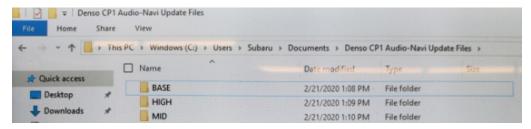


IMPORTANT REMINDER: There are 4 (FOUR) FILES required to complete this update. ALL 4 update files MUST BE DOWNLOADED TOGETHER to the USB Flash Drive before starting the update. PERFORMING THIS UPDATE USING A USB FLASH DRIVE WITH ANY OF THE REQUIRED UPDATE FILES MISSING WILL LEAD TO A NON-RECOVERABLE FAILURE OF THE COCKPIT CONTROL MODULE (CCU) REQUIRING CCU REPLACEMENT.

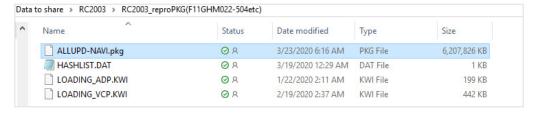
- To avoid confusion, use a permanent marker to label the flash drive with the file contents (e.g. BASE Denso CP1, MID Denso CP1 or HIGH Denso CP1).
- Go to Step 4.

### "B" When using update files sent directly from Nuspire:

• Go to My Documents on the GUI screen click on the folder "Denso CP1 Audio-Navi Update Files" to display the list of available update files shown below.



- CAUTION: After download is complete, NEVER change the file or folder names.
- Double-click on the required folder (for this example, select the file entitled "BASE") and the update file will display as shown.

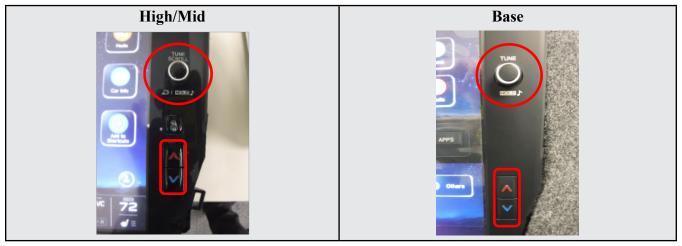


- Select all files and either copy / paste or click / drag it to the USB flash drive.
- Once all files have been loaded onto the USB flash drive, right click on the drive and select "Eject".
- Remove the USB flash drive after the prompt appears that says "Safe to Remove Hardware".
- Mark the USB to indicate the head unit it will update (BASE Denso CP1 in this example).
- Repeat the above steps to create the BASE or MID Denso CP1 and HIGH Denso CP1 USB flash drives as needed using a separate USB drive for each update folder.
- Proceed to **STEP 4** below.

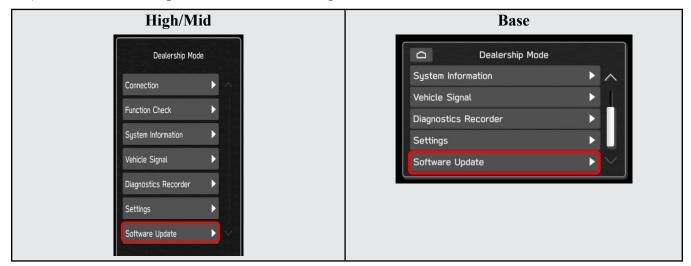
## **STEP 4-** Perform the software update.

#### **CAUTIONS:**

- Do not attempt to install the software immediately following an exchange installation. Let the system restart first and operate for 20 minutes.
- Do not attempt to install the software a second time for 30 minutes following prior software installation.
- Do not attempt to install the software for at least 30 minutes after completing a FOTA update.
- **4a)** Perform the update in a well ventilated location if updating with the engine running OR with the ignition ON and a battery charger connected.
- **4b)** PRESS and HOLD the RIGHT-side temperature control buttons (both up and down) and press the Tune / Scroll knob 6 times then release all to display the Dealership Mode Menu.



4c) Select Software Update from the Dealership Mode menu.

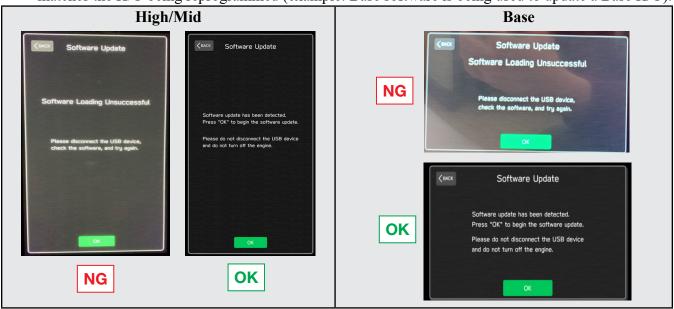


**IMPORTANT NOTE:** On a RARE occasion, the message "Software update setup is initializing..." may be displayed. Should this occur, proceed to "**Appendix A**" starting on pg. 12 of this bulletin for further instruction. For critical Service Bulletin helpful tips to prevent unnecessary hardware replacement, follow the link to an important Subarunet message: https://www.subarunet.com/home/home.html#/Announcement/83194.

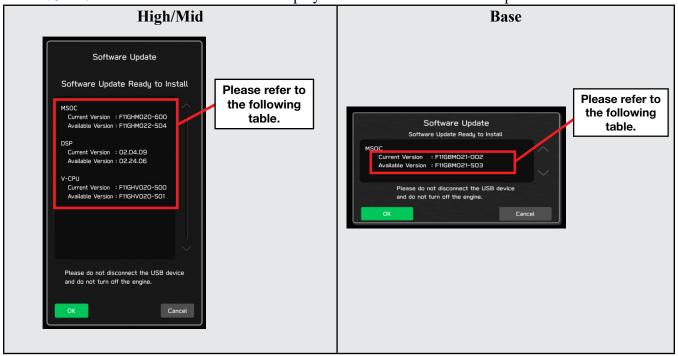
4d) The screen below will be displayed.



**4e)** Insert the H/U reprogramming USB into the USB port and press **OK**. **NOTE:** If after plugging in the USB, the screen displays a **Software Loading Unsuccessful** message, confirm the USB device has been properly formatted and the the software on the device matches the H/U being reprogrammed (example: Base software is being used to update a Base H/U).



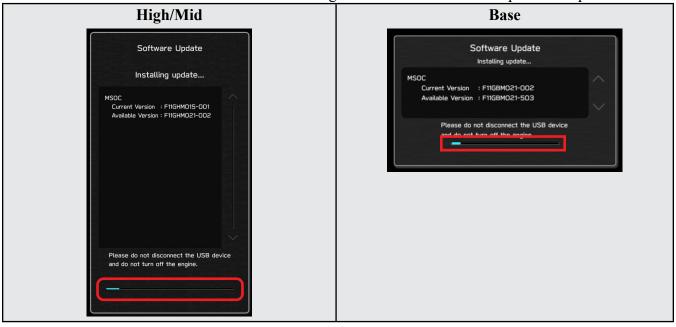
4f) The screen below will be displayed. Press **OK** to start the software update. **NOTE:** The actual software version displayed will be different from the picture shown below.



MSOC Version	Model	MSOC Version	
F11GHM020-501 or F11GHM020-502 or	Base	F11GBM020-501 or F11GBM020-502 or	
		F11G <mark>B</mark> M021-503	
	Available Ve	ersion	
	Model	MSOC Version	
	Base	F11GBM022-504	
F11GMM022-504			
lan	Current Vers	ion	
Current Version    Model   DSP Version		DSP Version	
		02.04.03	
	]   Dase	02.04.03	
Version	Available Ve	ersion	
DSP Version	Model	DSP Version	
02.24.06	Base	02.24.06	
rsion	ion		
VCPU Version	Model	VCPU Version	
F11GHV020-500	Base	F11GHV020-500	
High/Mid F11GHV020-500  Available Version		preion	
version	- I Avallable ve		
VCPU Version	Available Ve	VCPU Version	
	## WSOC Version  ## F11GHM020-501 or F11GHM020-502 or F11GHM021-503  ## F11GMM020-501 or F11GMM020-502 or F11GMM021-503  ## Version  ## WSOC Version  ## F11GHM022-504  ## F11GMM022-504  ## F11GMM022-504  ## PSOC Version  ## PSO	MSOC Version F11GHM020-501 or F11GHM020-502 or F11GHM021-503 F11GMM020-501 or F11GMM020-502 or F11GMM021-503 Version  MSOC Version F11GHM022-504 F11GHM022-504 F11GMM022-504 F11GMM022-504  Prsion  DSP Version  O2.04.03 Version  DSP Version O2.24.06  Current Version Model Base  Current Version Current Version Model Base  Current Version Model Base	

**4g)** Once the update begins, the screen below will be displayed with a progress bar. It takes about 15 to 20 minutes for the update to complete.

**VERY IMPORTANT:** NEVER turn off the ignition while the software update is in process.



**4h)** When the software update is complete, the following screen will be displayed (the actual software version will be different).



#### **IMPORTANT NOTE:**

On a rare occasions a "Software Update Incomplete" message may appear in this step which occurs due to a bug in the software update procedure. Proceed to Step 4i below to confirm the software version has been updated to the latest version.

For critical Service Bulletin helpful tips to prevent unnecessary hardware replacement, follow the link to an important Subarunet message: https://www.subarunet.com/home/home.html#/Announcement/83194.

- 4i) Select **OK** in the screen above then remove the H/U reprogramming USB from the USB port.
- 4j) Turn the Ignition OFF, open the driver's door then close the driver's door.
- **4k)** Wait for **3 minutes**, then turn the ignition ON.
- 41) Access Dealership Mode following steps provided item 4b and using the tables below, confirm the software update completed successfully.

**NOTE:** The new Software Version number must be entered when prompted at claim entry.

#### **Software Version Table**

Model	MSOC Version
High	F11GHM022-504
Mid	F11GMM022-504
Model	DSP Version
High/Mid	02.24.06
Model	MSOC Version
High/Mid	F11GHV020-501

Model MSOC Version	
F11GBM022-504	
DSP Version	
02.24.06	
VCPU Version	
F11GHV020-501	

**4m)** Turn the ignition OFF, open the driver's door then close the driver's door to complete the procedure.

#### **WARRANTY / CLAIM INFORMATION:**

For vehicles within the Basic New Car Limited Warranty period or covered by an active Subaru Added Security Gold plan, this repair may be submitted using the following claim information:

# CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

# Subaru of America, Inc. is ISO 14001 Compliant

ISO 14001 is the international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

Continued...

Bulletin Number: 15-261-20R; Revised: 11/20/20

Labor Description	Labor Operation #	Labor Time	Fail Codes
DENSO CP1 - SOFTWARE VERSION CHECK ONLY	A031-178	0.2	ZTG-48 (BASE)
DENSO CP1 SOFTWARE UPDATE-INCLUDES VERSION CHECK	A031-173	0.6	ZTS-48 (MID) ZTH-48 (HIGH)

**REMINDER:** The new Software Version number must be entered when prompted at claim entry.

**NOTE:** Retailers are now permitted to claim up to \$5.00 per claim in Sublet to help offset the cost of replacement USB drives. Repeated re-formatting of the USB drives used for reprogramming can compromise their ability to operate properly. Over time, hardware connections can loosen and stored data files can become corrupted. Retailers are responsible for replacing any worn or otherwise inoperable USB drives as needed. This compensation is intended to help defray those costs.

#### **IMPORTANT REMINDERS:**

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.

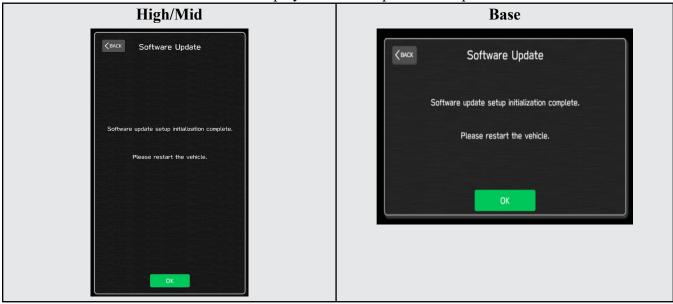
### "APPENDIX A"

Follow this procedure in the RARE case of "**Software update setup is initializing...**" message is displayed:

• If the screen shown below appears, **WAIT** for approximately 15 minutes or as long as necessary to allow the Software update setup initialization process to complete.



• The screens shown below will be displayed when the process completes.



- 1. Turn the ignition OFF, open the driver's door, close the driver's door and WAIT for 3 or more minutes before proceeding further.
- 2. Open the driver's door again and either turn the ignition ON (if a charger is connected) or start the engine.
- **3.** Go to Dealership Mode menu again (PRESS and HOLD the RIGHT-side temperature control buttons (both up and down) and press the Tune / Scroll knob 6 times then release all to display the Dealership Mode) and select Software Update as in **STEP 3** beginning on pg. 8.

**IMPORTANT NOTE:** If this procedure is required, contact Techline as additional action may be necessary.

# "APPENDIX B"

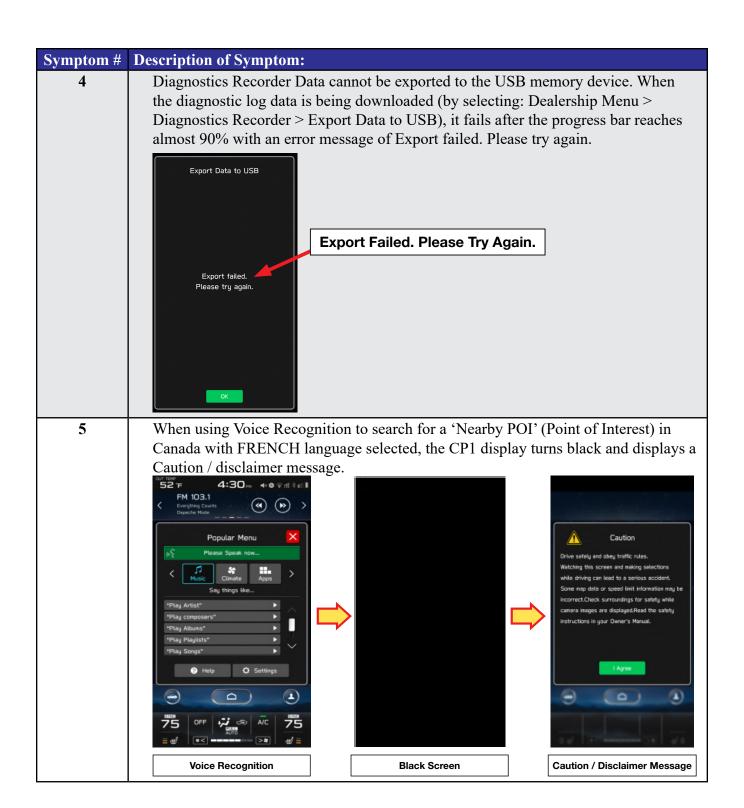
# Denso Gen 4 Software Update Timeline (TSB Number: 15-261-20)

Update #	Version	Release Date:	NEW Software Version ID #:	Conditions Addressed:
0	0	9/1/2019	F11GHM020-501/502 (High model software) F11GMM020-501/502 (Mid model software) F11GBM020-501/502 (Base model software)	- Start of Production for 20MY Outback/Legacy
1	RC1912	2/24/2020	F11GHM021-503 (High model software) F11GMM021-503 (Mid model software) F11GBM0021-503 (Base model software)	- See <b>"Conditions Addressed by Update #1"</b> as outlined in "Appendix C" below.
2	RC2003	6/24/2020	F11GHM022-504 (High model software) F11GMM022-504 (Mid model software) F11GBM022-504 (Base model software)	See <b>"Conditions Addressed by Update #2"</b> as outlined in "Appendix C" below.

# "APPENDIX C"

# **Conditions Addressed By Update #1:**

Symptom #	Description of Symptom:
1	The CP1 display and/or center Combination Meter display freezes.
	No response from touch screen or voice guidance. After switching the ignition off
	and opening the driver's door, the system does not recover**.
	Signature State St
	68 ONOR S S S
	**NOTE: After switching the ignition off and leaving the driver's door open more
	than 70 seconds, the system <i>may</i> recover after switching the ignition back on.
2	Delayed response of rear view camera guide lines.  When the rear view camera is activated and the steering wheel is turned, there is a delay before the steering-responsive guide lines respond to the steering wheel input.
	CONCENSION MATERIAL BANKS BOOK BOOK BOOK BOOK BOOK BOOK BOOK BO
3	Fuel consumption display has unnecessary 'Φ' mark when changing mileage unit to Km.
	+ 1/100km - 85.5 000km



# **Symptoms Addressed By Update #2:**

Symptom #	Description of Symptom:		
1	Several minutes after Engine start, the Center Information Display (CID) reboots.		
2	After an extended period of usage, some white blinking dots appear on the display.    Title		
3	The display screen freezes or becomes blank (black screen) after a CD is inserted.  This symptom occurs when a CD with over 99 characters of Artist Name Data is used.		
4	CID reboots. In a case where the system was shut down with SXM selected as the audio source, the CID reboots after the next start up.		
5	SXM does not resume playing instantly. In a case where the system was shut down with SXM selected as the audio source, SXM takes more than 20 seconds to resume play after the opening screen is displayed (when it normally only takes approximately 5 seconds.)		
6	Radio station does not resume playing (no audio output).  In a case where the system was shut down with Radio being selected as the audio source, audio output does not resume at the next start up. Once the audio source is changed to SXM, SXM plays normally but, if the source is changed back to the Radio, audio does not return and the radio display is also lost.		
7	Customer-selected Equalizer settings are lost. Equalizer returns to the default settings after ignition switch is turned OFF and back ON.  Sound Customization  Sound Customization  Equalizer  Balance/Fader Vocal mage Control  Balance/Fader Vocal mage Control		
8	The media source cannot be changed. Even if <radio> or <media> is selected, the media source does not change. In addition, Voice Recognition stops functioning at the same time. This condition occurs when the volume setting is continuously changed while the CID is booting.</media></radio>		

Symptom #	Description of Symptom:	
9	In a case where the system was shut down while the Navigation map screen was being	
	displayed, the display goes blank (black screen) soon after the Disclaimer screen is	
	displayed after restarting.	
10	CID reboots repeatedly after setting a destination using the Navigation system.	
11	CID reboots while using the Pandora application via CarPlay.	
12	Bluetooth connection cannot be reestablished when using certain smart phones.	
	When using Android Auto on certain smartphones, a Bluetooth connection cannot be reestablished automatically once it has been disconnected.	
13	CarPlay connection cannot be established.	
13	When connecting an iPhone via USB, "CarPlay Unavailable" is displayed and CarPlay	
	does work.	
14	The HOME screen goes blank.	
	When the screen is switched from Camera mode to HOME, no icons are displayed as	
	shown below.	
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# List of New Functions and Enhancements Included in Update #2:

Number	New Functions and Improvements:
1	The previously selected customized map orientation setting is memorized even after ignition OFF / ON. If the customer changes the map orientation setting, the change is automatically retained.
2	Pin display of POI is now available.

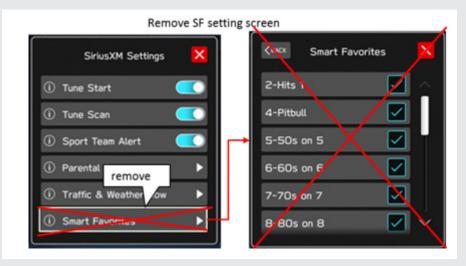
Number	New Functions and Improvements:
3	<ul> <li>In the 2D and 3D HU display mode, the vehicle position icon on the Navigation map is easier to identify: <ul> <li>Icon size increased from 7mm to 9mm.</li> <li>Icon color has been changed to Dark Blue.</li> <li>Icon position (when using route guidance) stays at the same position as when not using route guidance.</li> <li>Icon has been re-positioned 9mm higher on the display.</li> </ul> </li> </ul>
4	The ISS (Auto Start Stop) button has been moved to the upper layer in the Car Setting menu. By touching the "Car Setting" icon, the Auto Start Stop and Cruise Control Acceleration Characteristics menus can be accessed immediately, whereas selecting "Others" in the Car Setting screen was required to access these menus.    Vehicle Control   Others   Others
5	HVAC control buttons of base grade are now larger and easier to see.  Max A/C  A/C  A/C  A/C  A/C  A/C  A/C  A/C
6	Time zone and Summertime are now automatically selected.  Default setting of clock setting is Auto. The time zone is changed according to the vehicle location, and Summertime is automatically set according to the calendar.
7	Clock setting can be selected by touching the clock display in the status bar.
8	AlbumArt is displayed when music is played and now continues to be displayed when the vehicle is in motion.

Number	New Functions and Improvements:
9	CarPlay screen is now expanded from half size (horizontal) to full screen (vertical).
10	When using CarPlay or Android Auto, a "CarPlay" or "Android Auto" tab will now appear on the Media tab bar. By selecting this tab, music data and metadata can be browsed.
11	When using route guidance with CarPlay navigation, <turn by="" turn=""> descriptions will be displayed both in the Information bar of CID and in the MID located in the center of the combination meter.</turn>
12	By touching the new CarPlay button located at the top of the CID, the CarPlay menu can be accessed easily.  12:12 AM Pole CarPlay is connected.  Bluetooth USB Apple CarPlay
13	In a case where the system is shut down while is CarPlay connected, the system automatically resumes the connection at the next start up.
14	<siri> Voice Recognition function is ready to use faster than with previous version.</siri>
15	Gracenote Media Database updated to November 2019.

# **Number** New Functions and Improvements:

16

1. Sirius XM Smart Favorites menu has been removed from Sirius XM Settings



- 2. Going forward first 10 set Sirius XM presets are now smart favorites by default
- 3. Smart favorite channel has "star" added to the preset button

