

ATTENTION:

- GENERAL MANAGER
- PARTS MANAGER
- CLAIMS PERSONNEL
- SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

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QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 22MY WRX Models **NUMBER:** 15-301-22
SUBJECT: Reprogramming File Availability for Optimization of Gen 4 Denso CP1 Infotainment Systems **DATE:** 09/09/22

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.

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Service Bulletin is intended for use by trained technicians **ONLY**. It informs technicians of conditions, which may occur in some vehicles or provides information, which could assist with proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely.

A timeline 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 D**” and “**Appendix E**” located at the end of this bulletin.

IMPORTANT NOTE: The update contains 2 folders and 1 file. When performing an update, the USB must contain the matching number of folders and files and all files must be replaced. ALWAYS use the latest files together as a set.

NEVER reuse or combine files from a prior update with a newer version.

<p>CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.</p> <p>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.</p>	<p style="text-align: center;">Subaru of America, Inc. is ISO 14001 Compliant</p> <p>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.</p>
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PART INFORMATION:

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



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



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- 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



IMPORTANT NOTE: The update contains 2 folders and 1 file. When performing an update, the USB must contain the matching number of folders and files and all files must be replaced. ALWAYS use the latest files together as a set.

NEVER reuse or combine files from a prior update with a newer version.

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:

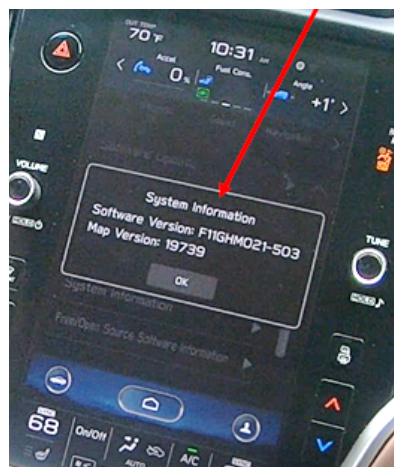
1a) After starting the engine and system boot-up completes, from the HOME screen, touch the

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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 on a WRX, the software version number

22MY Model

FB1SHMxxx-xxx(**High** model software)

FB1SMMxxx-xxx(**Mid** model software)

FB1SBMxxx-xxx(**Base** model software)

MY	Carline	Trim/Grade	Older Software Versions	Latest Software Version
22MY	WRX	BASE	101-780 091-681	121-980
		MID	101-780 091-681	121-980
		HIGH	101-780 091-681	121-980

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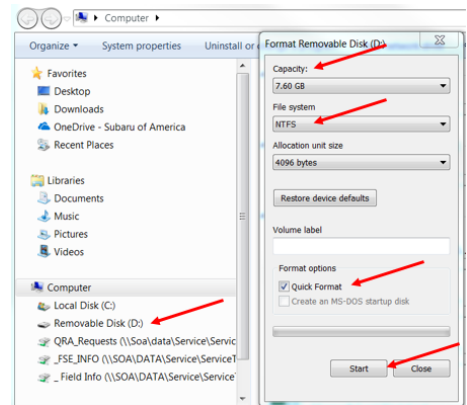
If the software version number matches “Older Software Versions” proceed to **STEP 2** below. If the software version is “**Latest Software Version**” as the unit already has the latest software version installed. Proceed to the **WARRANTY / CLAIM INFORMATION** section of the TSB and process a claim for **Version Check Only**.

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).

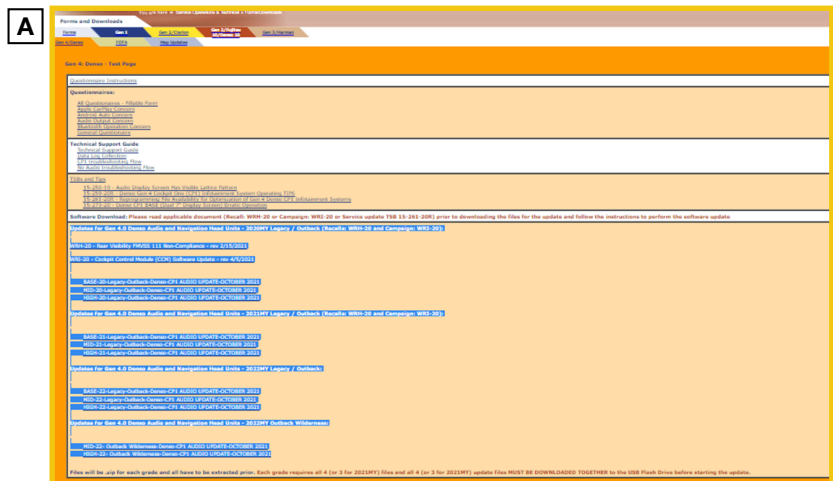
The applicable reprogramming files have also been sent directly to retailers by Nuspire in the same way a Select Monitor Update would be pushed out. (see “**B**” below).

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](#)



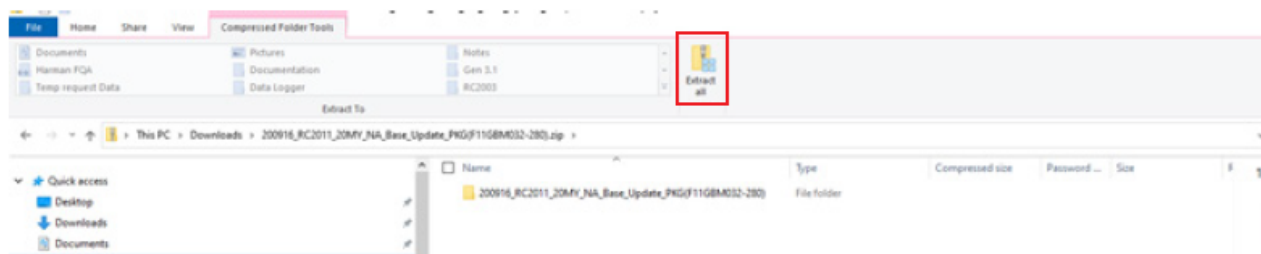
Continued...

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:

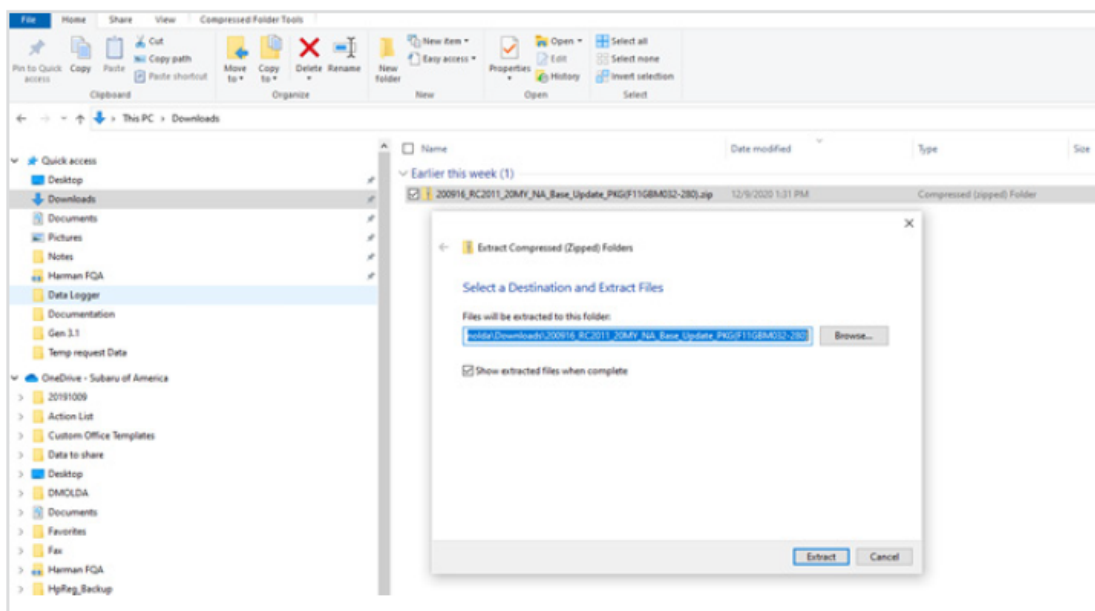
Updates for Gen 4.0 Denso Audio and Navigation Head Units - 2022MY WRX:

22-WRX-Denso-CP1 AUDIO UPDATE-August 2022

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

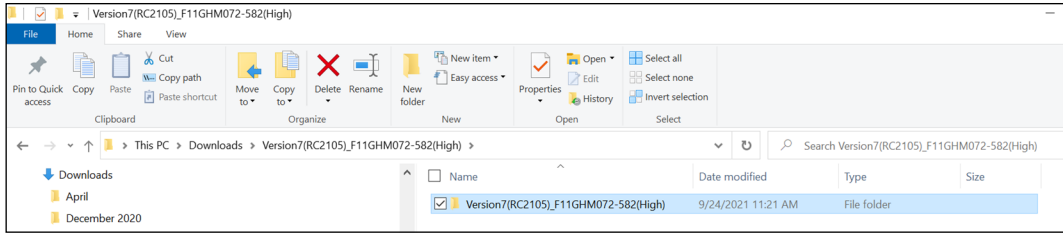


- The screen below will appear to set a destination for the extracted file.

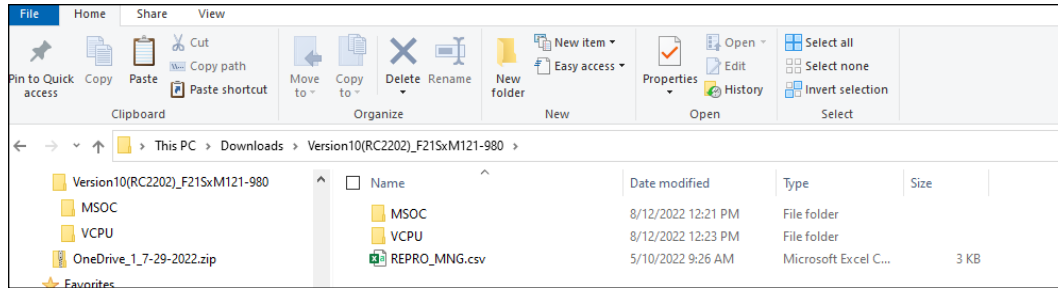


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- Double-click on the required folder (for this example, used folder titled “Version7(RC2105)_F11GHM072-582(High)”).



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



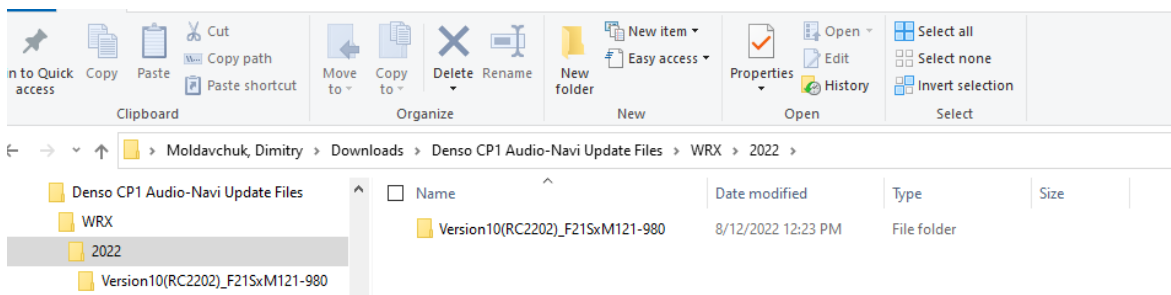
IMPORTANT NOTE: The update contains 2 folders and 1 file. When performing an update, the USB must contain the matching number of folders and files and all files must be replaced. ALWAYS use the latest files together as a set.

NEVER reuse or combine files from a prior update with a newer version.

- To avoid confusion, use a permanent marker to label the flash drive with the file contents (e.g. 2022MY WRX CP1).
- Go to **Step 4**.

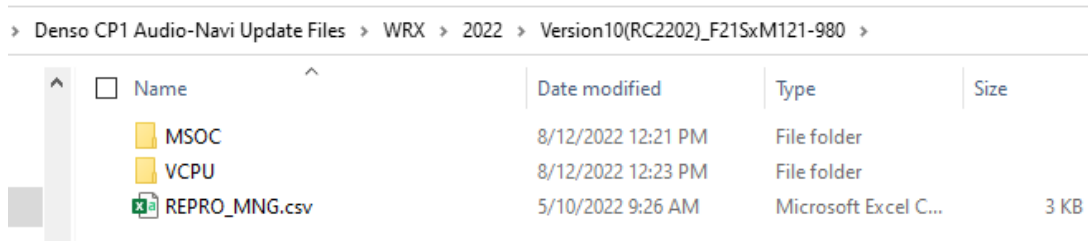
“B” When using update files sent directly from Nuspire:

- 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.
IMPORTANT: Always confirm there is a correct folder. If not, the SDS notebook hasn’t been updated with the latest release. Please contact Nuspire to request they resend the update.”



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- **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.



Name	Date modified	Type	Size
MSOC	8/12/2022 12:21 PM	File folder	
VCPU	8/12/2022 12:23 PM	File folder	
REPRO_MNG.csv	5/10/2022 9:26 AM	Microsoft Excel C...	3 KB

- Select all folders and files and either copy / paste or click / drag them to the USB flash drive.

IMPORTANT NOTE: The update contains 2 folders and 1 file. When performing an update, the USB must contain the matching number of folders and files and all files must be replaced.

ALWAYS use the latest files together as a set.

NEVER reuse or combine files from a prior update with a newer version.

- Once all files have been loaded onto the USB flash drive, right click on the drive and select “Eject”.
- **CAUTION:** NEVER change the file names.
- 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 (2022MY WRX CP1 in this example).
- Proceed to **STEP 4** below.

STEP 4- Perform the software update

CAUTIONS:

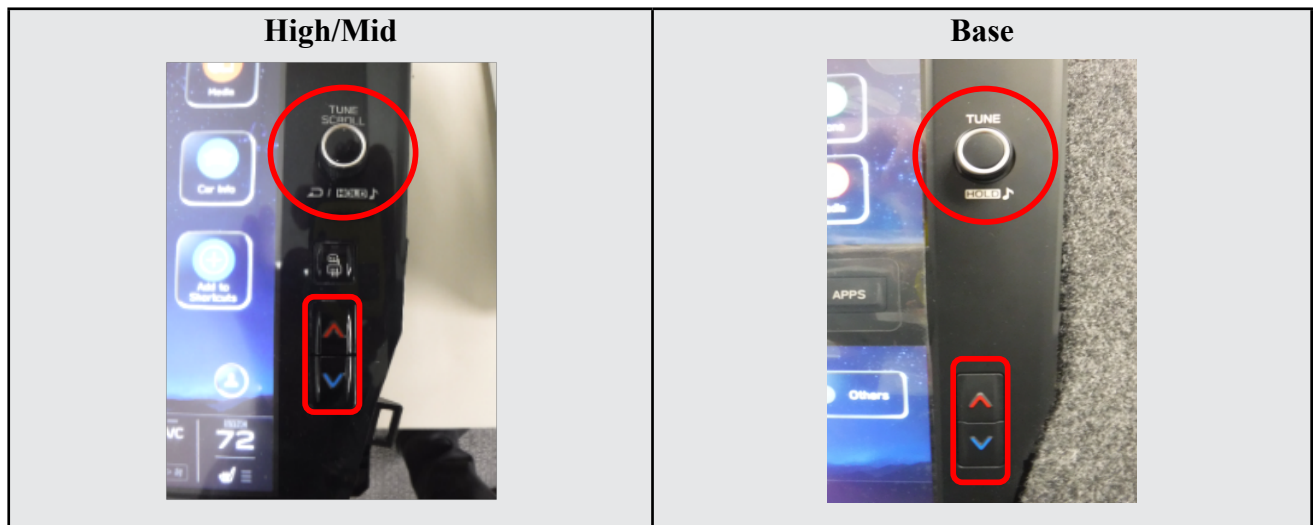
- **NEVER** attempt to install the software immediately following an exchange module installation.
Let the system restart first and operate for 20 minutes.
- **NEVER** attempt to install the software a second time for 30 minutes following a previously unsuccessful software installation.
- **NEVER** attempt to install the software for at least 30 minutes after completing a FOTA update.

Continued...

Best practice is to prevent USB software update conflicts with FOTA software update. Please confirm “Automatically Check for Update” setting is turned off following the steps below, prior to starting the software update via USB.

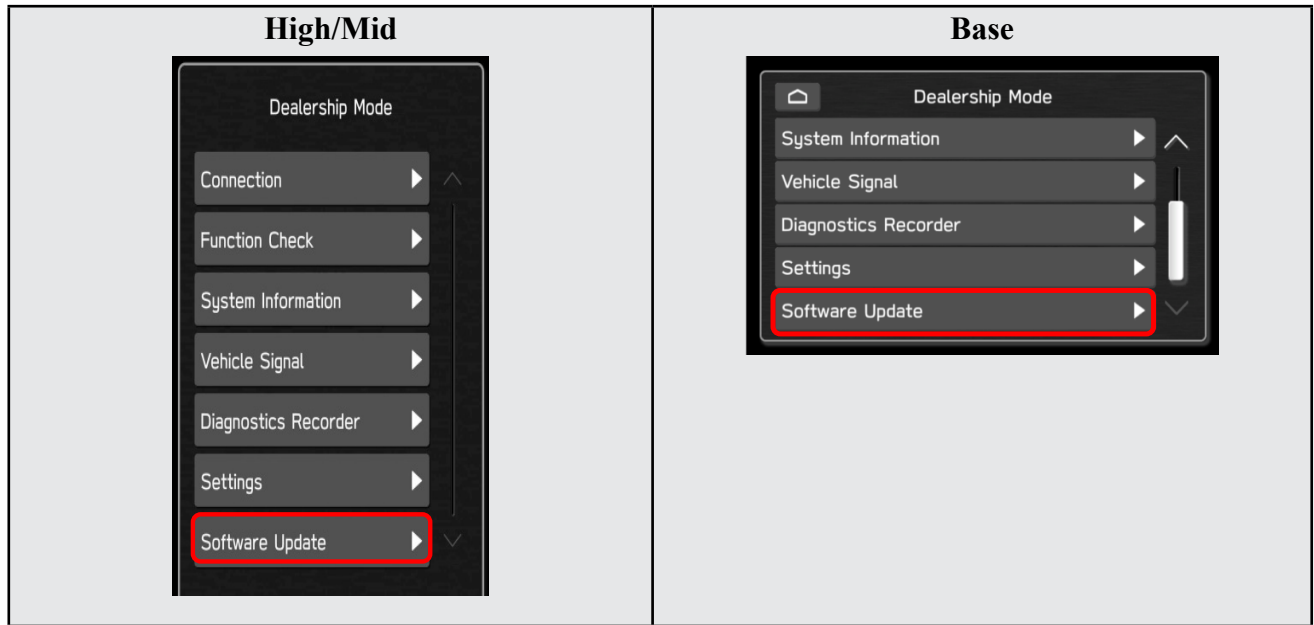


- 4a) Perform the update in a well ventilated location if updating with the engine running OR with the ignition ON and a battery charger connected.
- 4b) PRESS and HOLD the RIGHT-side temperature control buttons (both up and down) and press the Tune / Scroll knob 6 times then release all to display the Dealership Mode Menu.



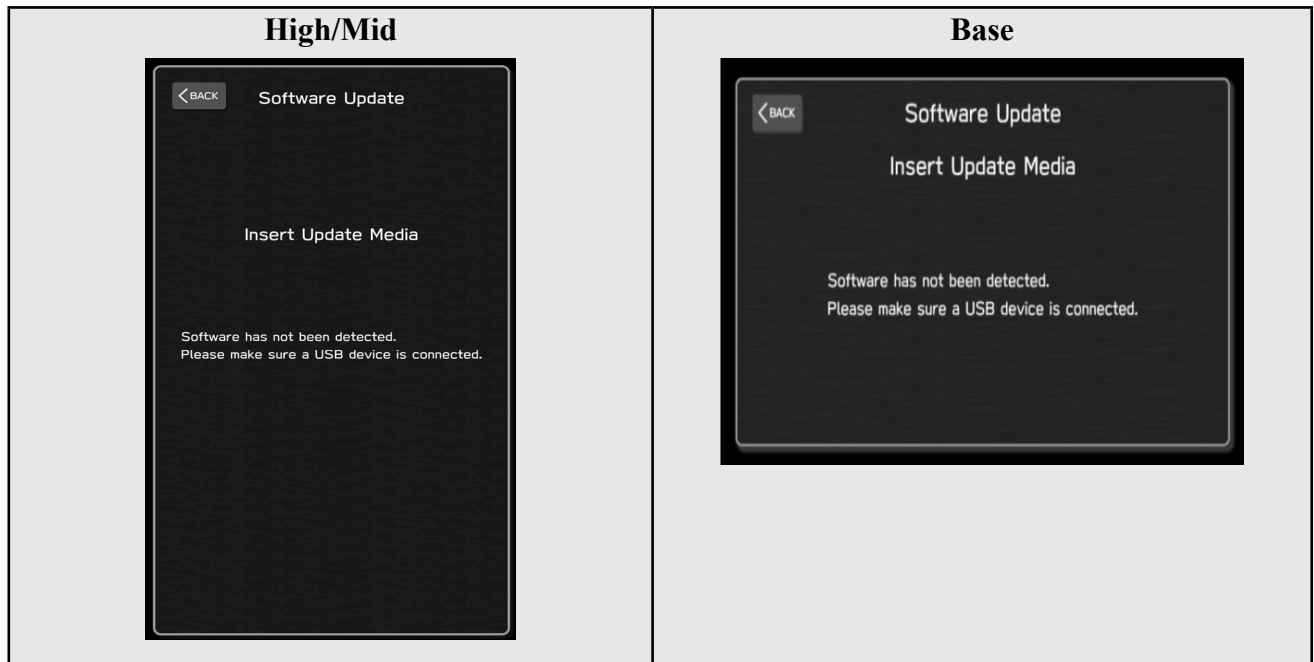
Continued...

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



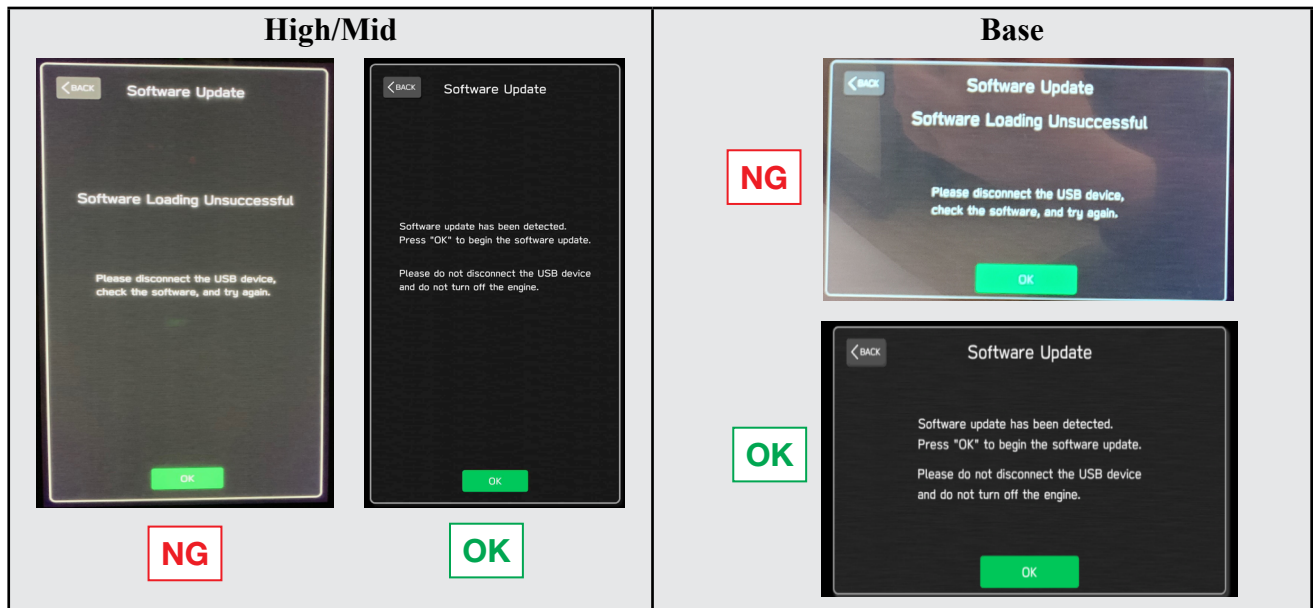
IMPORTANT NOTE: On a RARE occasion, the message “**Software update setup is initializing...**” may be displayed. Should this occur, proceed to “**Appendix A**” starting on pg. 16 of this bulletin for further instruction.

4d) The screen below will be displayed.

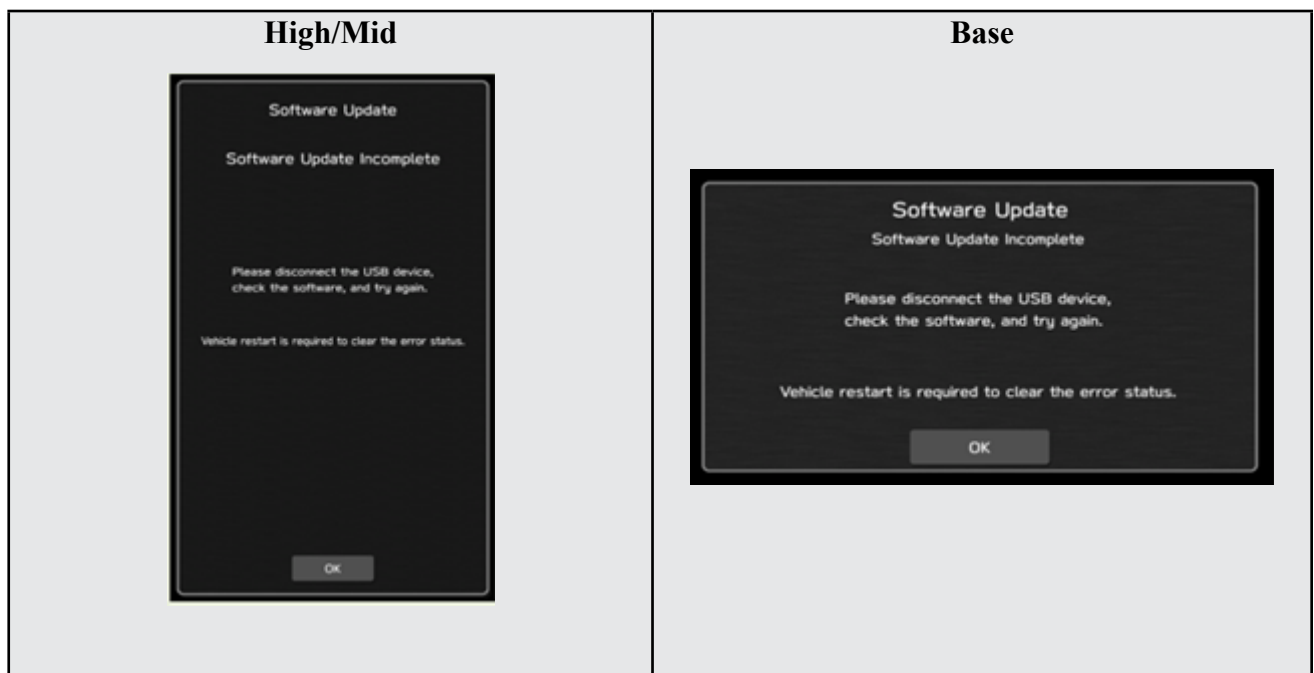


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- 4e) Insert reprogramming USB into the USB port and press **OK**.
NOTE: If after plugging in the USB, the screen displays a **Software Loading Unsuccessful** message, confirm the USB device has been properly formatted and the the software on the device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



If you get the message **Software Update Incomplete** as shown below, please don't replace the hardware but retry updating the software according to the instructions in "**Appendix B**" on pg. 17.



Continued...

- 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.



Software Version Table

Model	MSOC Version
High	F21SHM101-780
Mid	F21SMM101-780

Model	MSOC Version
High	F21SHM121-980
Mid	F21SMM121-980

Model	VCPU Version
High/Mid	F21SHV080-680

Model	VCPU Version
High/Mid	F21SHV110-780

Model	MSOC Version
Base	F21SBM101-780

Model	MSOC Version
Base	F21SBM121-980

Model	VCPU Version
Base	F21SHV080-680

Model	VCPU Version
Base	F21SHV110-780

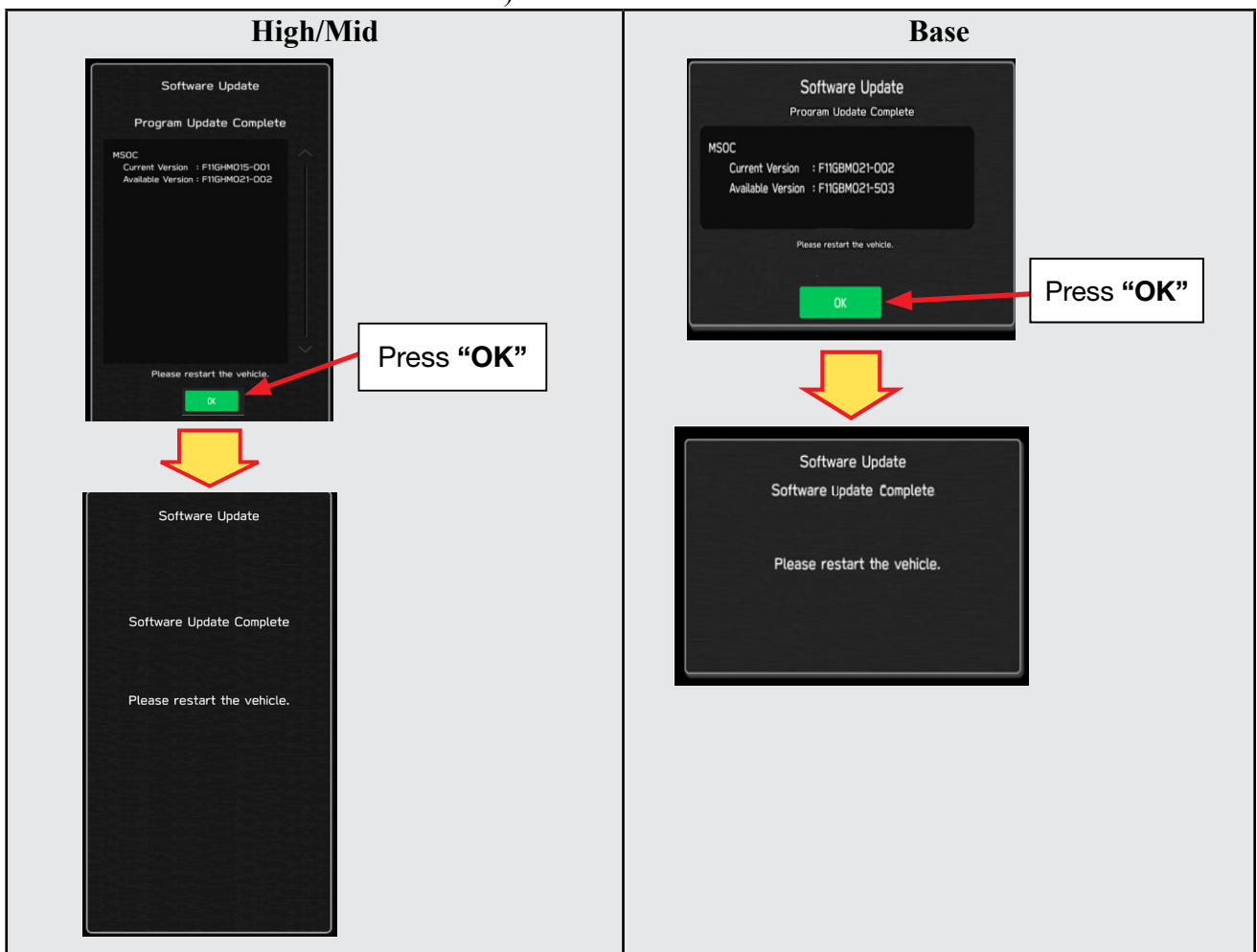
Continued...

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.

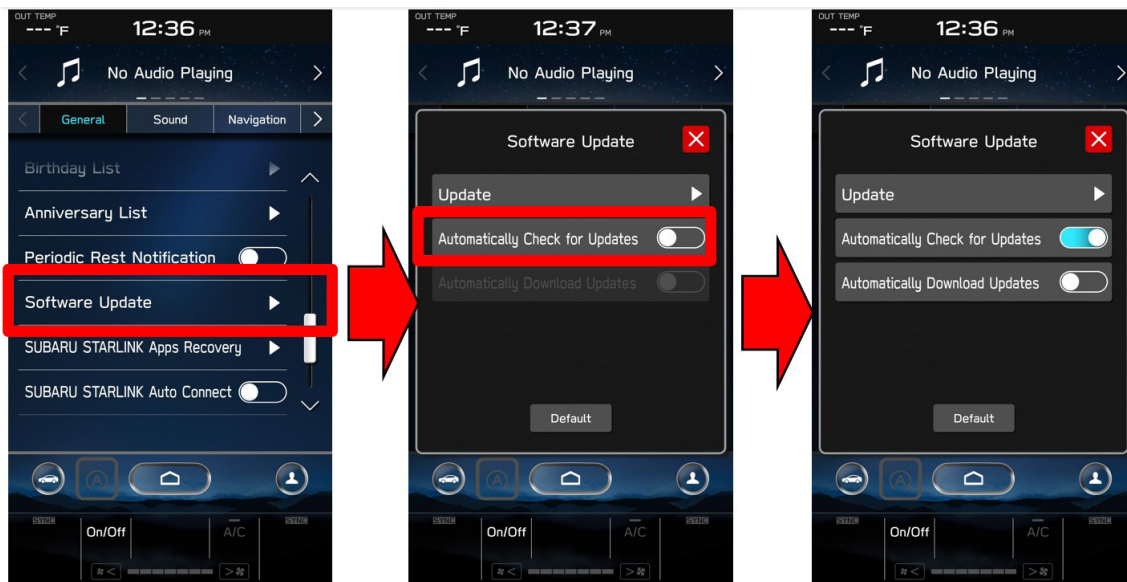
- 4i) Select **OK** in the screen above then remove the H/U reprogramming USB from the USB port.
- 4j) Turn the Ignition OFF, open the driver’s door then close the driver’s door.
- 4k) Wait for **3 minutes**, then turn the ignition ON.
- 4l) Access Dealership Mode following steps provided item **4b** 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

Version Table 22MY			Version Table 22MY		
Model	MSOC Version		Model	MSOC Version	
High	F21SHM121-980		Base	F21SBM121-980	
Mid	F21SMM121-980		Model	VCPU Version	
Model	VCPU Version		Base	F21SHV110-780	
High/Mid	F21SHV110-780				

- 4m) Enable the setting “Automatically Check for Updates” as shown in the steps below.



- 4n) Turn the ignition OFF, open the driver’s door then close the driver’s door to complete the procedure.

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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:

Labor Description	Labor Operation #	Labor Time	Fail Codes
DENSO CP1 SOFTWARE UPDATE-INCLUDES VERSION CHECK	A031-173	1.0	ZTZ-48 (BASE, MID, 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:

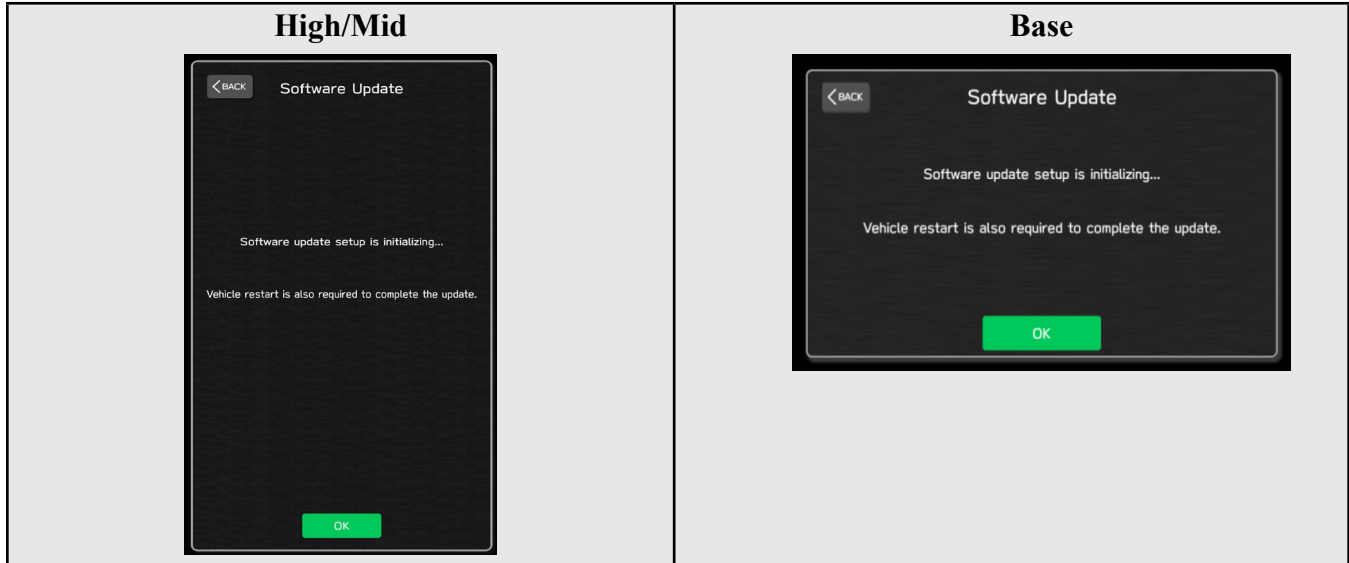
- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest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

Continued...

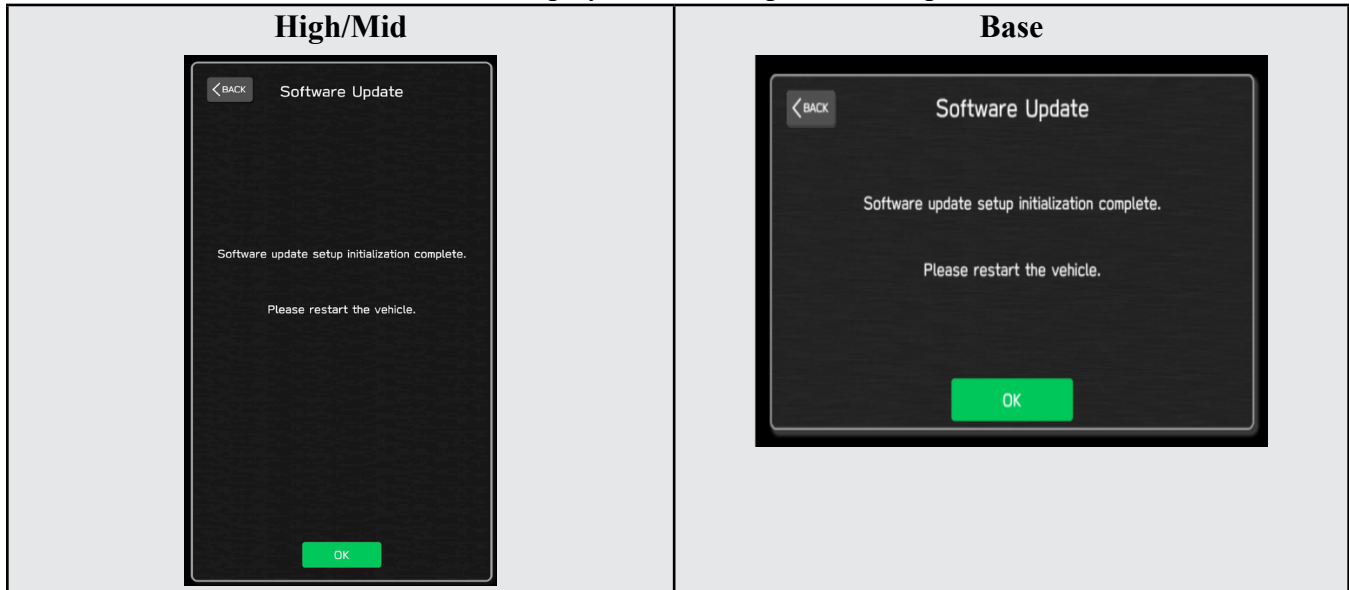
“APPENDIX A”

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 30 minutes or as long as necessary (waiting for longer than 60 minutes might indicate system malfunction). In that case please perform recovery according to the instructions in “Appendix B ” 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 4c** beginning on pg. 11.

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

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“APPENDIX B”

In case of retrying the software update after the first attempt of update fails.

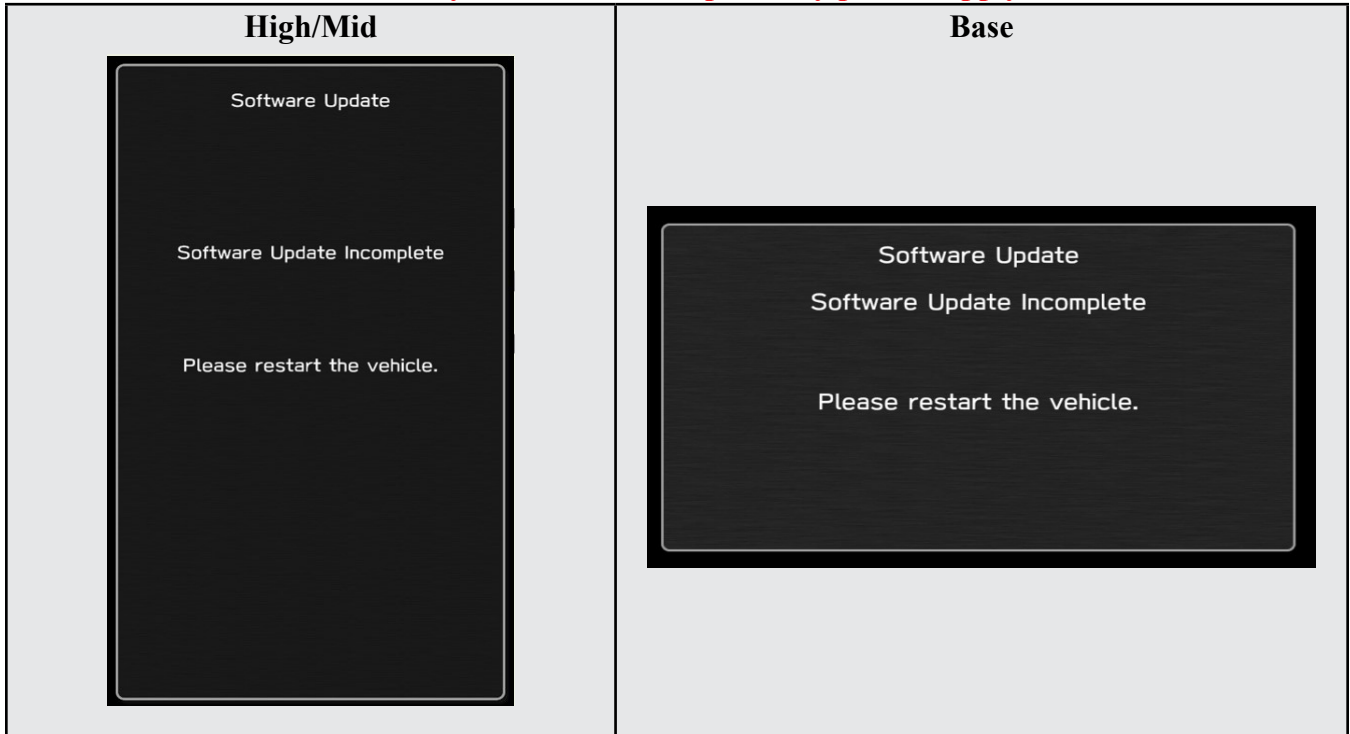
- If the first attempt of update fails with the message below, follow the steps described below 1-2 to 1-8 before retrying the software update.

1-1. Select OK in the screen below



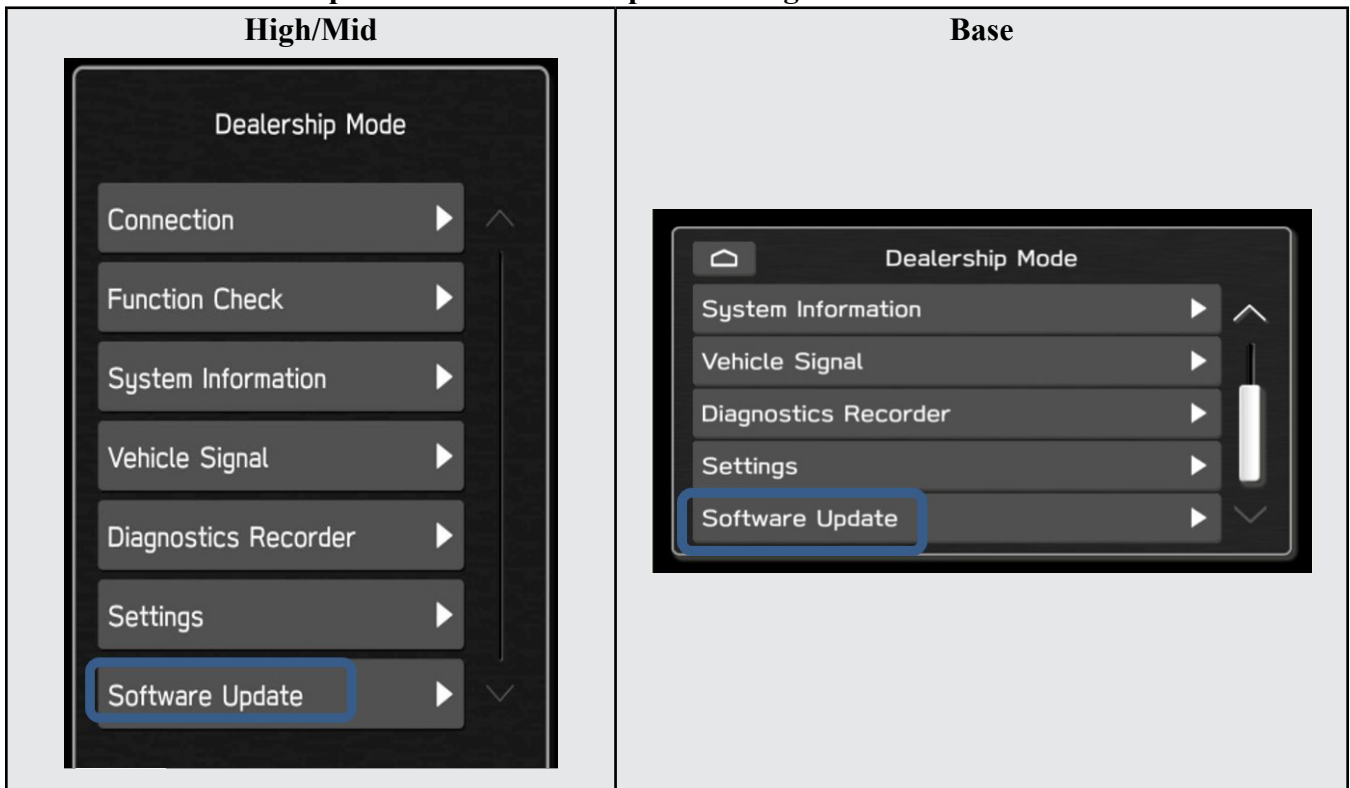
1-2. Turn the ignition switch or the engine OFF, and turn it ON again.

Caution: Do not remove battery terminal and keep battery power supply.

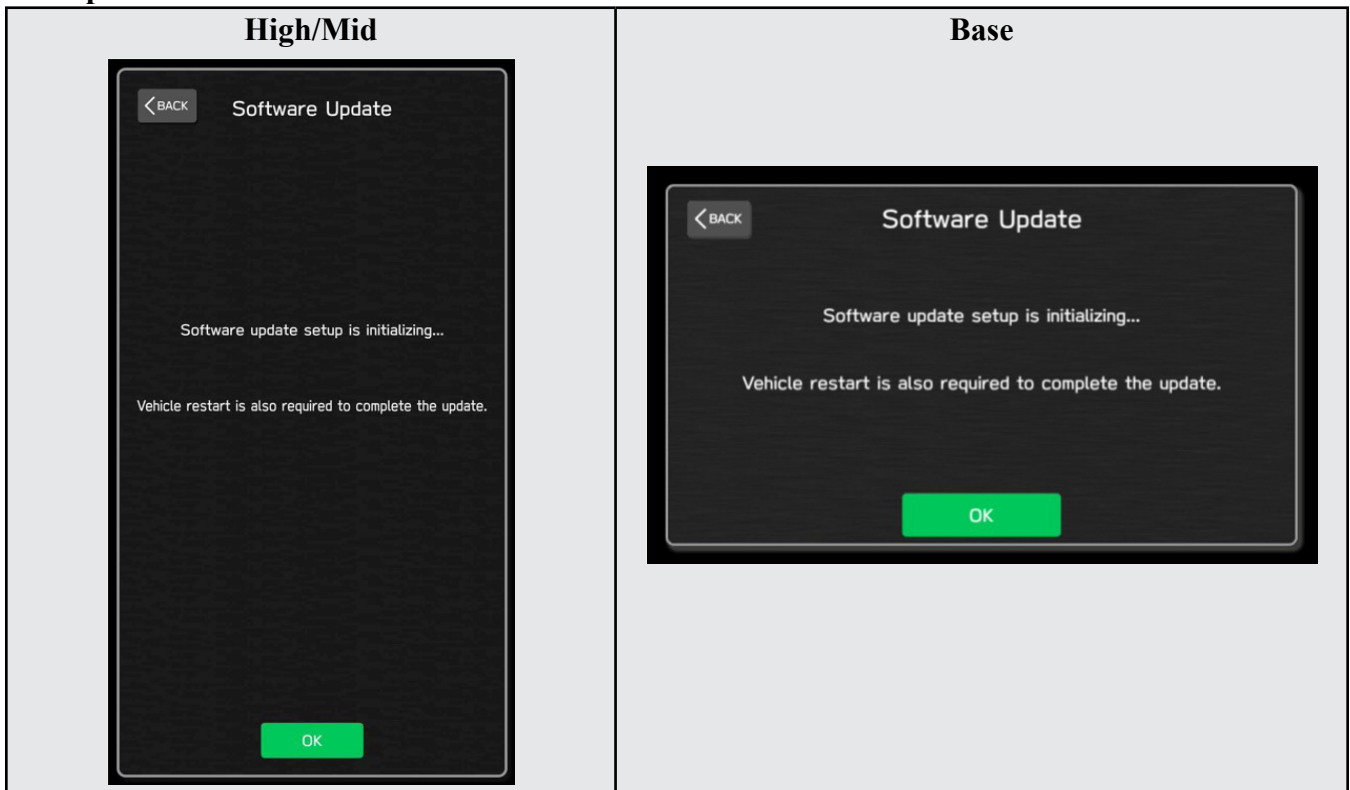


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1-3. Select Software Update in the Dealership Mode diagnostics screen.

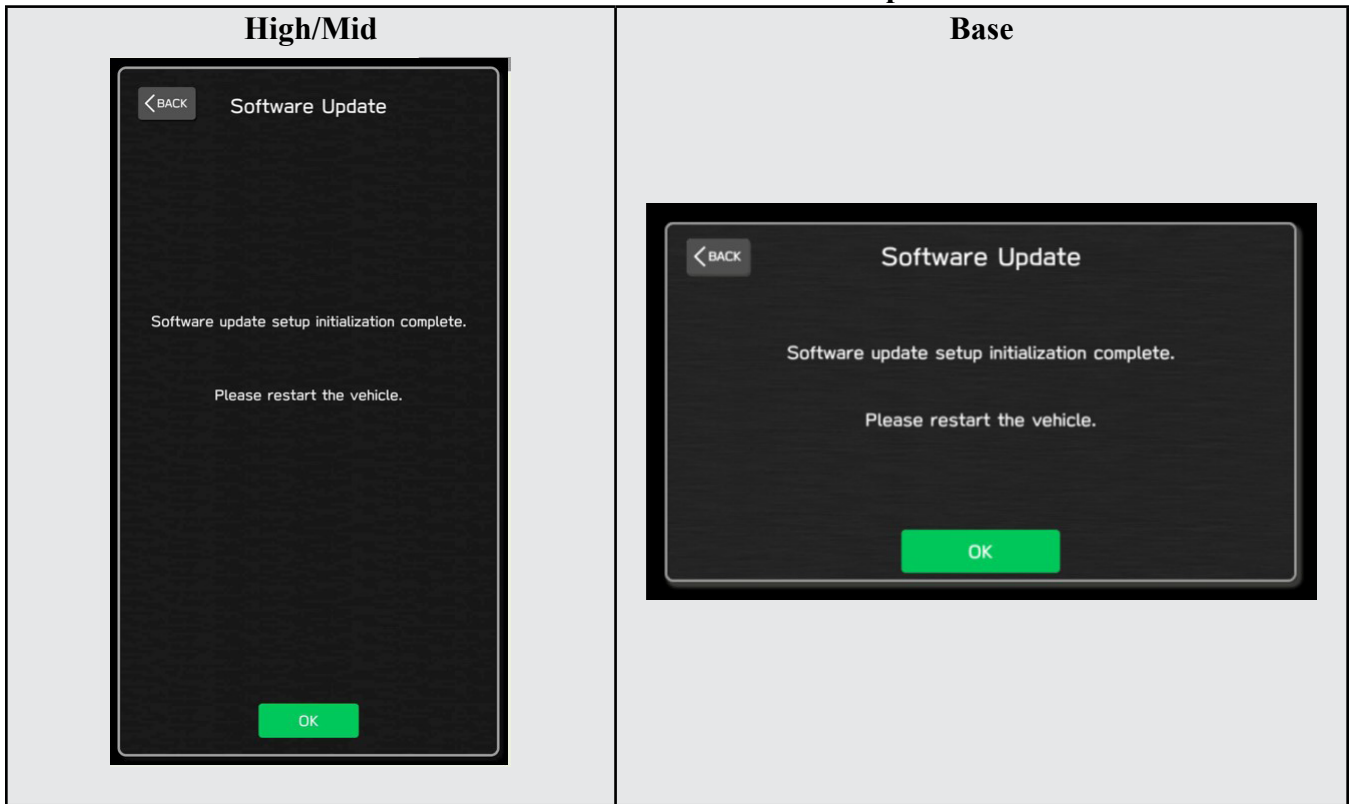


1-4. When you see the screen below, wait for approx. 15 minutes until the initialization is complete



Continued...

1-5. You will see the screen below when the initialization is complete.



1-6. Turn the ignition switch or the engine OFF, open the driver side door and close the door then wait for 3 minutes.

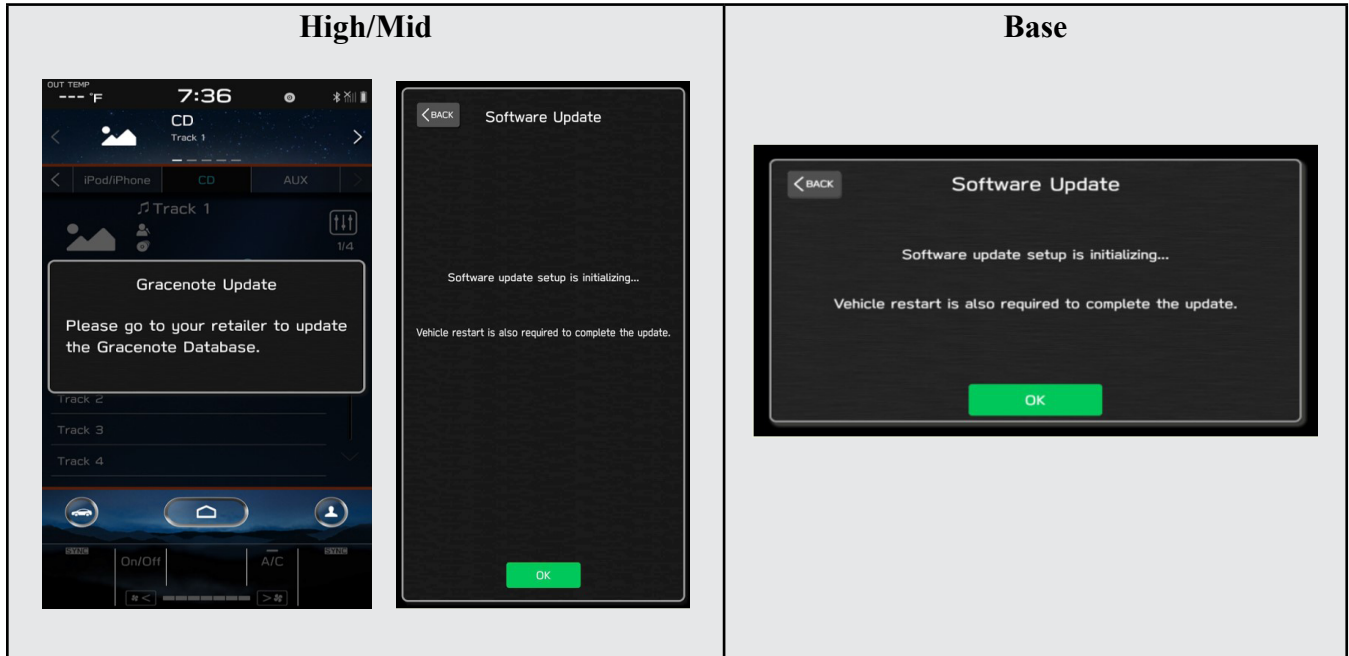
1-7. Open the driver side door then turn the ignition switch or the engine ON.

1-8. 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 4c beginning on pg. 11.

Continued...

“APPENDIX C”

In case the Gracenote update popup screen appears or software initializing screen does not go away for more than 20 minutes, please perform steps 2-1 to 2-11.



2-1. Select “Settings” in the Dealership Mode diagnostics screen.



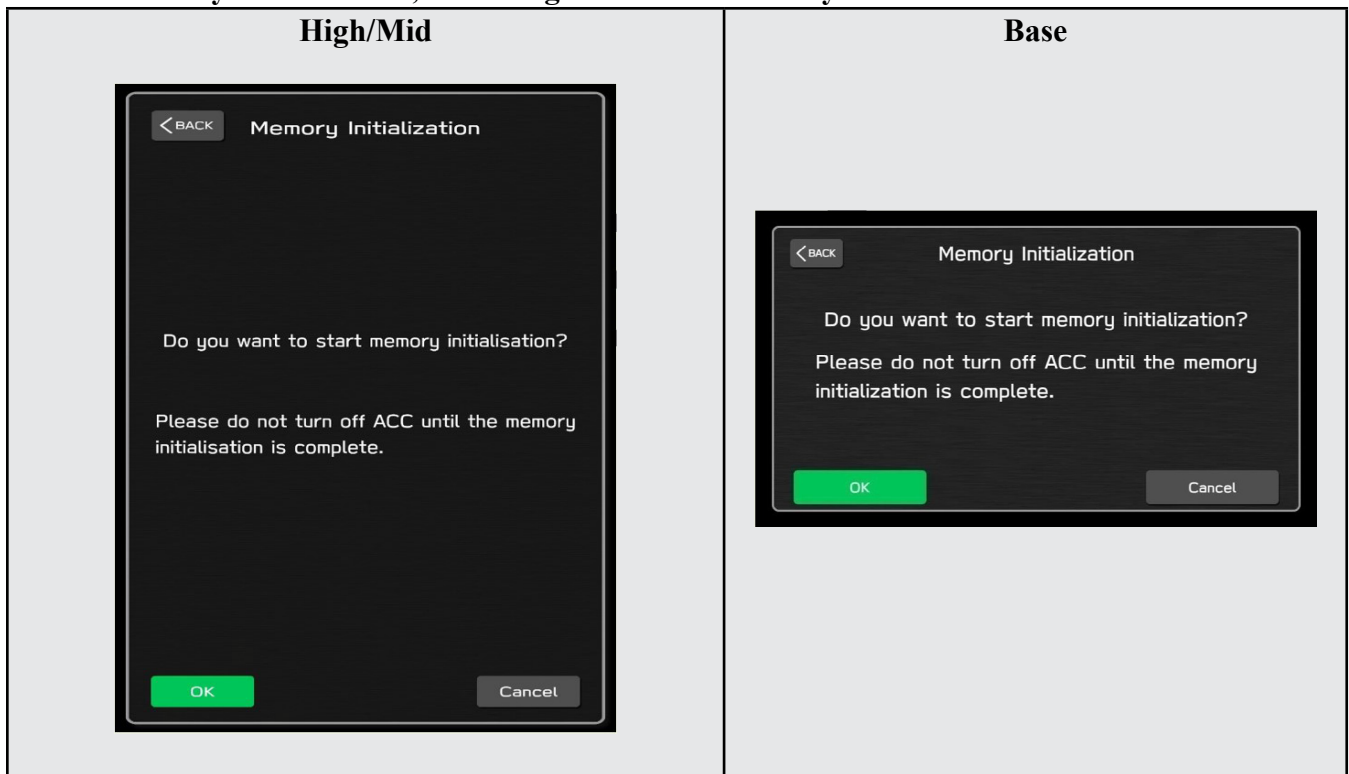
Continued...

2-2. Select “Memory Initialization”



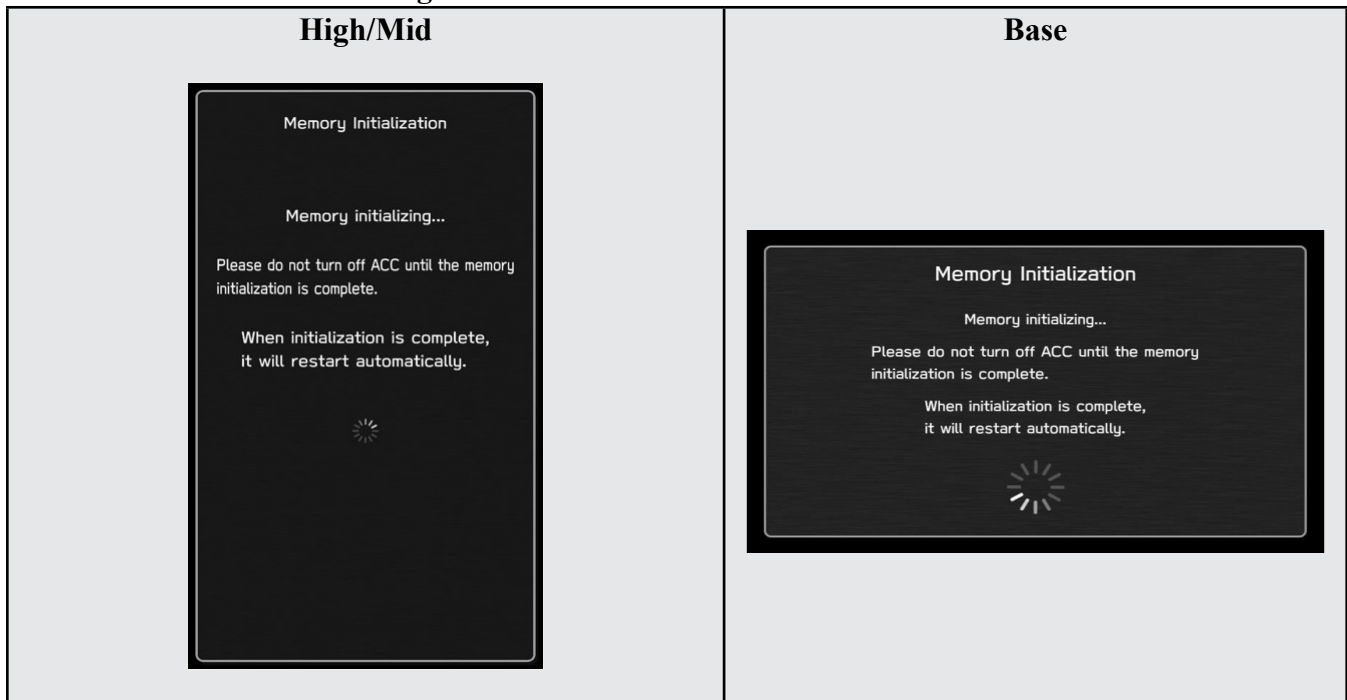
2-3. Select “OK”

After Memory Initialization, all settings are reset to factory default.



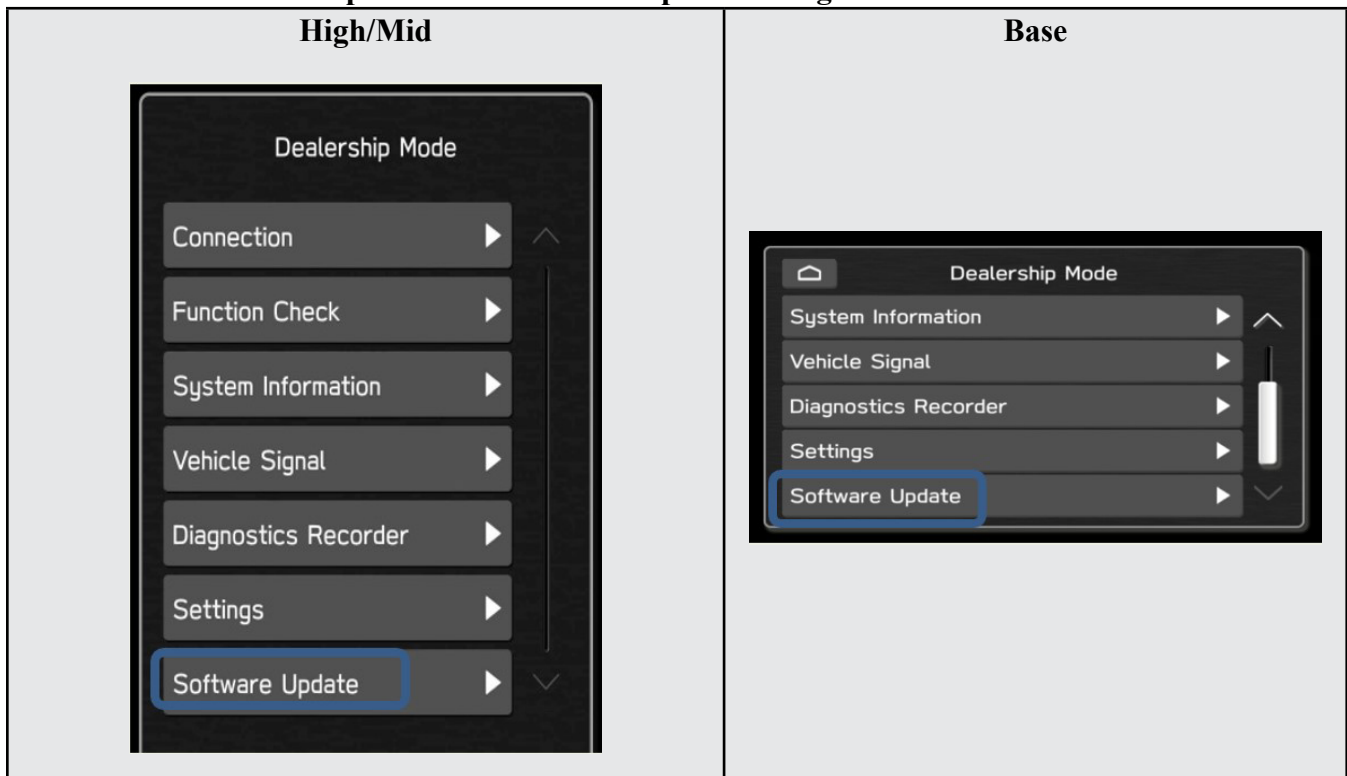
Continued...

2-4. You will see the following screen



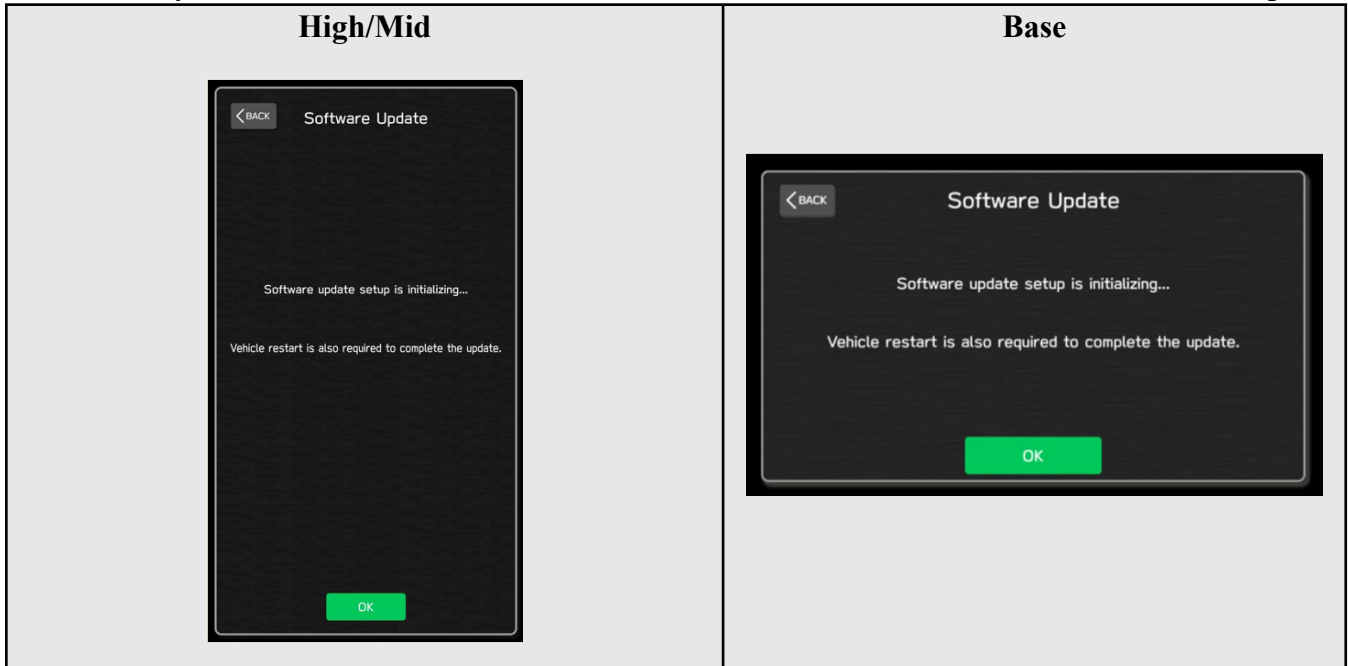
2-5. After a few seconds, system restarts itself.

2-6. Select “Software Update” in the Dealership Mode diagnostics screen.

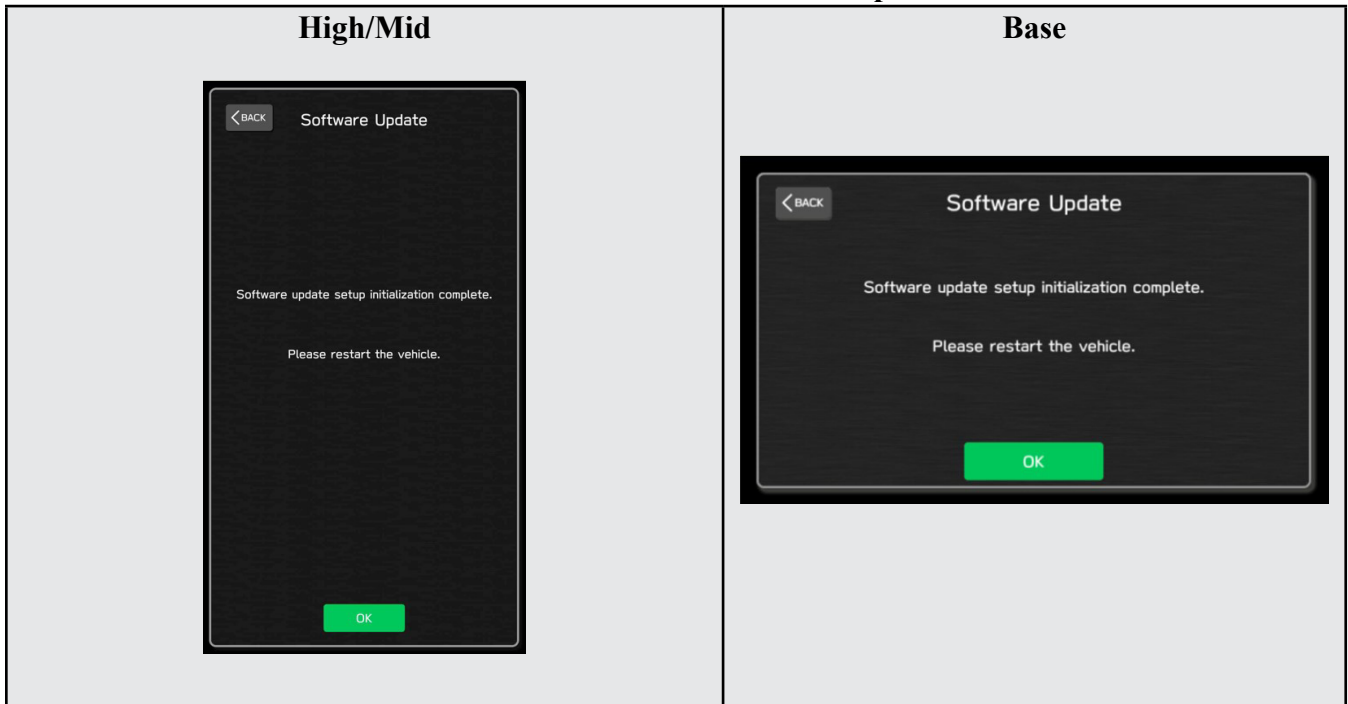


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2-7. When you see the screen below, wait for about 15 minutes until the initialization is complete



2-8. You will see the screen below when the initialization is complete.



2-9. Turn the ignition switch or engine OFF, open the driver side door and close the door then wait for 3 minutes.

2-10. Open the driver side door then turn the ignition swatch or engine ON.

2-11. 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 4c beginning on pg. 11.

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“APPENDIX D”

Denso Gen 4 Software Update Timeline (*TSB Number: 15-301-22*)

Update #	Model Year:	Release Date:	NEW Software Version ID #:	Conditions Addressed:
0	2022	2/1/2022	F21SHM101-780 F21SMM101-780 F21SBM101-780	SOP for 22MY BRZ
1	2022	8/26/2022	F21SHM121-980 F21SMM121-980 F21SBM0121-980	- See “Conditions Addressed by Update #1” as outlined in “Appendix E” below.

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“APPENDIX E”

Symptoms Addressed By Update #1:

Number	Symptoms to be Improved:
1	<p>System restarts itself during FOTA (Firmware Over The Air) update. FOTA operation is conducted in two processes: downloading (from the server to the Cockpit Control Unit via Wi-Fi) and installation (inside the Cockpit Control Unit). During the FOTA operation, after the new software has been downloaded to the Cockpit Control Unit (CCU) customer is to push “Install Now” on the Center Information Display (CID) to start installation of the software.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>FOTA Normal process</p> </div> <p>However, in rare case, the CCU restarts itself* during installation.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Linux reset occurs</p> <p>•Linux reset(CID black screen) may occur during FOTA installation •If Linux reset occurred, CID will be black screen max 30s, after that CID will restart automatically</p> </div> <p>Note* Even if this symptom occurs, after approximately 2 minutes, the system resumes, and the CID comes back to the below screen. Customer can then push the “Install Now” to proceed with the installation.</p> <div style="text-align: center; margin-top: 10px;"> </div>

Continued...

Number	Symptoms to be Improved:
2	<p>No image on CID (Center Information Display) or Black display condition and HVAC function becomes inoperative due to listed below actions:</p> <ul style="list-style-type: none"> • Failure to complete CP1 software update via USB port * • After the failure, Ignition Switch is turned off and on then an initializing process is started with “Software update setup is initialing.....” message on the display, which requires about 15minutes to complete. During this message is displayed, power supply of CCM is cut off like disconnecting battery terminals. • Performing CP1 software update via USB port using the same software version <p>Note* In case this USB update failure occurs, retry updating according to the instructions in “Appendix B ”</p>
3	<p>No image on CID (Center Information Display) or Black display condition followed by CP1 reboot resulting from CCU (Cockpit Control Unit) internal communication error or due to listed below actions:</p> <ul style="list-style-type: none"> • Loss of Bluetooth or Wi-Fi connection • Removing USB connection between the iPhone’s and CP1 during active CarPlay session • Performing USB map update using Bluetooth connection with a smart phone carrying STARLINK CompanionApp map update data • Re-inserting USB Flash drive within 2-3 seconds
4	<p>No music or sound via AndroidAuto after ending hands-free telephone call. The music played via AndroidAuto is turned off, after finishing the hands-free telephone call.</p> <p>(This symptom occurs only after using voice command via AndroidAuto to make hands-free telephone call.)</p>
5	Intermittent loss of Bluetooth connection
6	Information Bar on map screen is displayed, even it is selected “do not show it” after the engine is restarted.
7	In multilingual countries, city name is not displayed in selected language, when searching an address by POI.
8	Screen does not change when selecting <RADIO> or <MEDIA> in HOME screen.

Continued...

Number	Symptoms to be Improved:
<p>9</p>	<p>Pop-up message "Please go to your retailer to update the Gracenote Database" appears every time CP1 system is rebooted due to interruption of CP1 software update via USB port (ACC OFF or BATT power remove etc.) **</p> <div data-bbox="760 279 1052 730" data-label="Image"> </div> <p>Note** In case this USB update failure occurs, retry updating according to the instructions in "Appendix C "</p>
<p>10</p>	<p>Reverse Speed Limiter function is disabled right after the ignition switch is turned on.</p>
<p>11</p>	<p>SXM (Sirius XM) Radio does not function (no sound) and/or cannot be controlled on the SXM screen.</p>