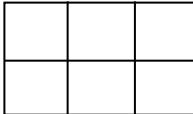


ATTENTION:
GENERAL MANAGER
PARTS MANAGER
CLAIMS PERSONNEL
SERVICE MANAGER

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



© 2018 Subaru of America, Inc. All rights reserved.



QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2017-20MY Impreza
2018-20MY Crosstrek
2018-19MY Legacy and Outback
2019-20MY WRX and WRX STI
2019-20MY Ascent
2018-20MY BRZ
2019-20MY Forester

NUMBER: 15-221-18R

DATE: 04/11/18

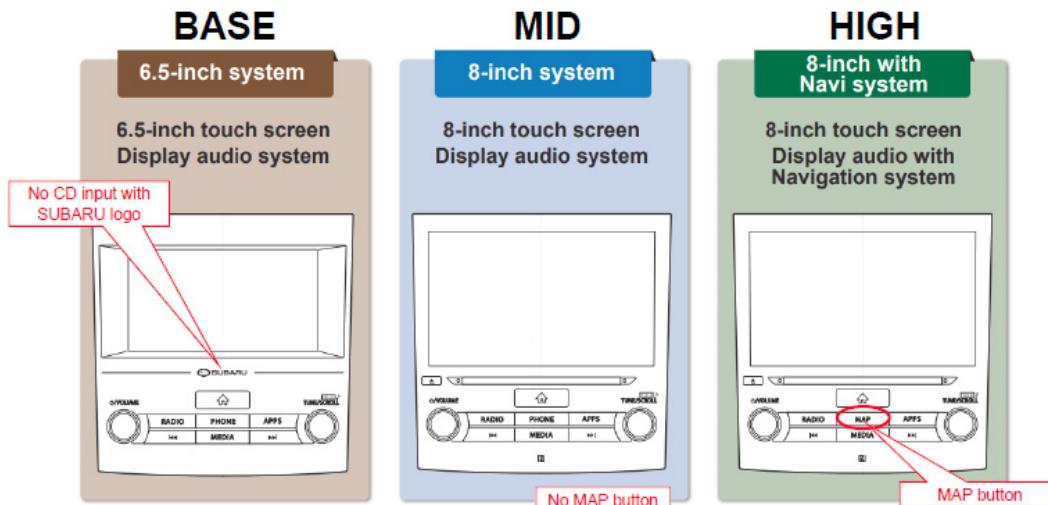
REVISED: 11/18/19

SUBJECT: Harman Audio / Infotainment: Harman Generation 3.0 and 3.1 Operating Tips

INTRODUCTION:

This bulletin provides helpful information about operating conditions observed in the field for Technicians to use when diagnosing customer concerns which may arise while operating Harman Gen 3.0 and 3.1 Navigation and Display Audio systems. We will continue to add to this bulletin as more information becomes available.

17-18MY Impreza / 18MY Crosstrek



Continued...

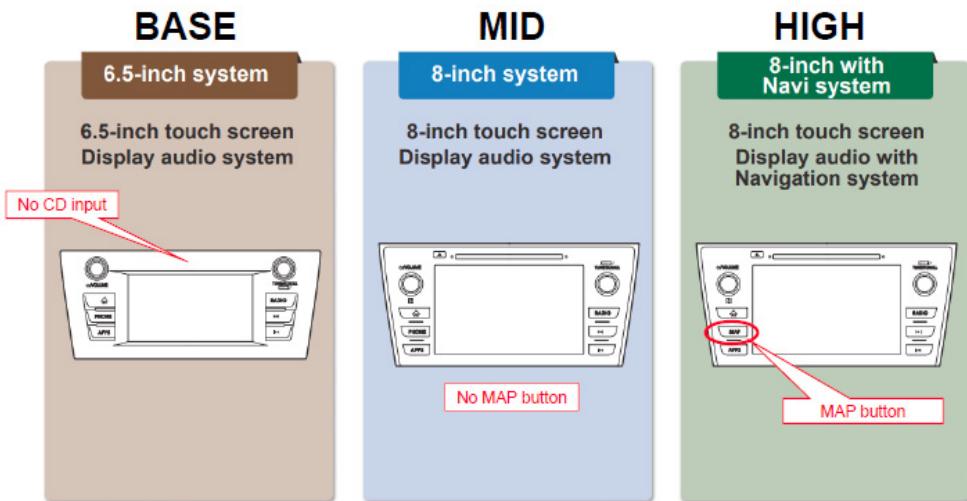
CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

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.

18MY Legacy / Outback



CONDITION# 1: Backup camera inoperative after head unit replacement or battery disconnect (2016 Dec TechTIPS).

CAUSE: Whenever the Audio / Navigation head unit requires removal on a 2017 Impreza, it is **important** the Service Manual procedure be followed. The Service Manual advises to disconnect the battery before servicing the audio unit. Failure to follow this instruction, can result in a customer concern of the backup camera becoming inoperative since the service. The reason, when connecting power to the unit, a self-check is performed. If the backup camera has not been connected yet, the unit assumes there is no back up camera and renders it inoperative.

RECOMMENDATION: A quick fix for this condition is to remove and reinstall the transit (PDI) fuse or remove and reinstall the negative battery terminal. The situation can be avoided completely by following the Service Manual and disconnecting the battery **before** starting the service.

IMPORTANT CAUTIONS:

- If swapping an audio system for diagnostic purposes, be sure the DCM remains with the original vehicle or network communications **will** be severed.
- The SXM ESN is assigned by VIN. Moving audio units permanently between vehicles **will** disrupt the customer's SXM services.

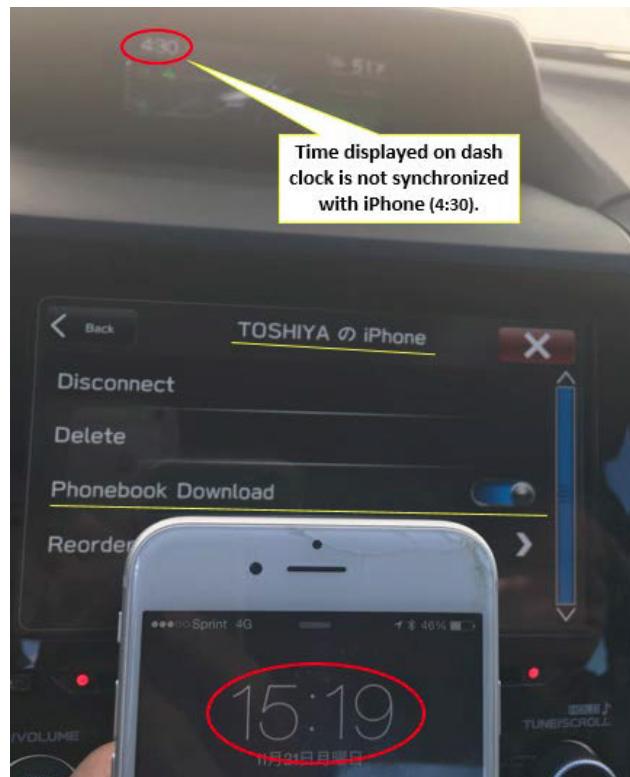
Below is an image of what the screen will look like if a line check is performed before the issue is corrected:



Continued...

CONDITION# 2: Display Audio (non-navigation units), clock not synchronized with paired iPhone. (December 2016 TechTIPS).

CAUSE: NOTE: This information is applicable to iPhone (iOS) users only. If a customer states the time displayed on their iPhone is not synchronized with the instrument panel clock display, the information below provides an easy solution. Always ensure the latest software version is installed.



RECOMMENDATIONS: First, select the setting mode for the clock by following these steps:

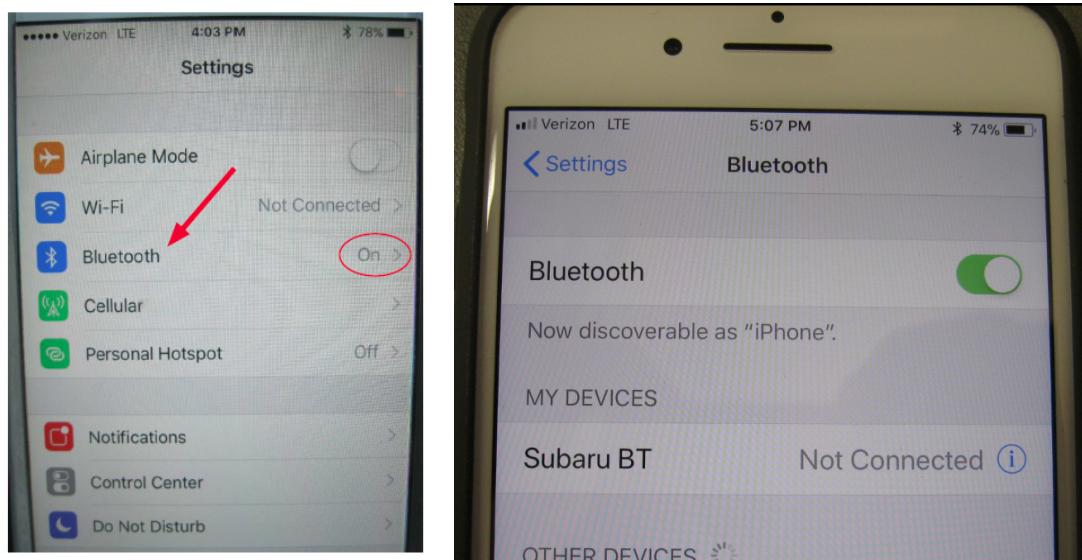
- Press the “Home” button on the audio unit display.
- Press “Settings”.
- Press “Vehicle”.
- Select “Clock Adjustment”.
- Select “Auto”.



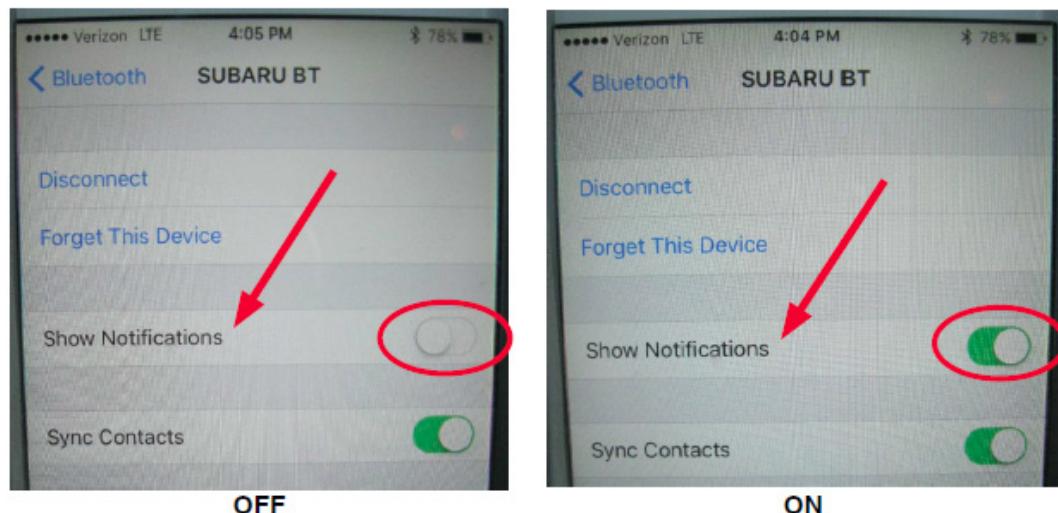
Continued...

Once “Clock Adjustment” is set to “Auto”, the iPhone “Show Notifications” setting must also be confirmed as set to ON following the steps below:

- From the iPhone Home screen, tap “Settings”.
- From the Settings menu, tap “Bluetooth” and make sure it is set to “On”.
- Select the device being used (in this case, SUBARU BT) then tap on the blue i icon to display the device options list.



- Once “Show Notifications” is switched on, the device and vehicle clocks will synchronize automatically.



Continued...

CONDITION# 3: Clock Setting Information (December 2016 TechTIPS)

CAUSE: With the release of the 2017 Impreza Harman Gen 3 SUBARU STARLINK™ 6.5" Multimedia System and SUBARU STARLINK™ 8.0" Multimedia Navigation systems, there have been inquiries about the clock adjustment. There are two different modes of adjustment available: Automatic and Manual.

Figure 1 shown here is an excerpt from the 2017 Impreza Owner's Manual describing both modes.

RECOMMENDATIONS: Automatic setting of the clock is accomplished differently between the navigation and non-navigation systems. As shown above, the navigation system will automatically set the time according to GPS location. Non-navigation systems utilize a paired smartphone connected via Bluetooth to accomplish the automatic setting. During the PDI process, it is recommended to manually set the clock on non-navigation models. This will ensure the correct time is displayed and allows the opportunity to show the customer the automatic feature should they choose to use it. Please review the Owner's Manual for the applicable manual clock setting procedure.

Figure 1 – 2017 Impreza Owner's Manual

■ Clock setting with automatically

To set the clock automatically, the "Auto" mode must be selected in the clock adjustment setting preparation procedure.

▼ Models with navigation system

The clock will be set automatically where a GPS signal is available.

▼ Models without navigation system

The clock will be set and adjusted automatically when a smartphone is connected via Bluetooth® for transferring phonebook data.

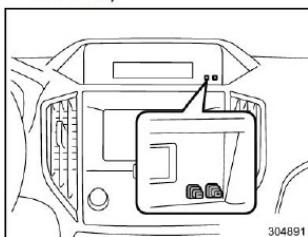
1. Register the smartphone to the audio system. For details, refer to "Bluetooth SETTINGS" in the supplemental Owner's Manual for the audio/navigation system.

2. Transfer phonebook data to the system. For details, refer to "Bluetooth SETTINGS" in the supplemental Owner's Manual for the audio/navigation system. The clock will be adjusted automatically.

■ Clock setting with manually

To set the clock in manual mode, "Manual" must be selected in the clock adjustment setting preparation procedure.

▼ Type A multi-function display (black and white)



▼ Adjusting the clock

To adjust the clock, press the "+" button or the "-" button beside the clock.

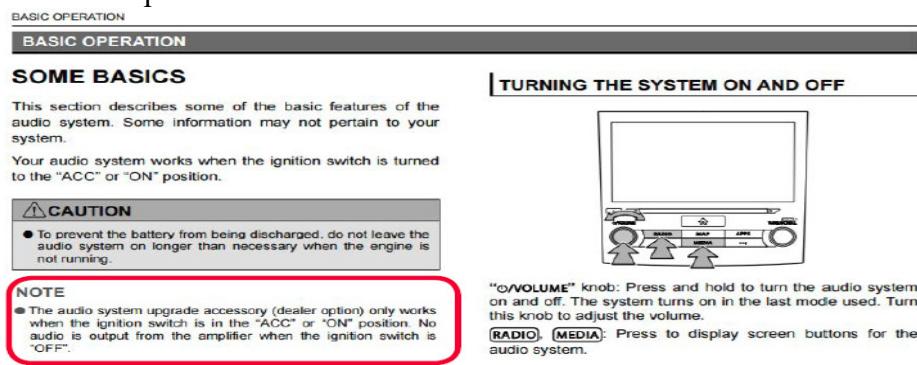
CONDITION# 4: Audio unit stays powered up after ignition switched to Off (February 2017 TechTIPS).

CAUSE: All the new 2017MY Impreza audio systems include a feature where the audio system stays powered for a period of time after the ignition is switched OFF. If the vehicle has been equipped with the accessory Rockford Fosgate audio amplifier, some confusion may arise when comparing audio unit operation of one Impreza to another. Although the audio unit will continue to operate after the ignition is switched OFF on all models, the power supply for the accessory amplifier is switched off along with the ignition resulting in the loss of audio output. This may cause confusion for customers when seeing the audio unit appear to be operating but not hearing any audio output.

NOTE: Later versions of the Rockford Fosgate amplifier used in 2018 MY vehicles no longer share this characteristic. Vehicles / audio systems equipped with these enhanced amplifiers function like those equipped with factory-installed amplifiers.

RECOMMENDATION:

Be advised, this is a normal operating characteristic and no attempt should be made to repair or replace any of the system components. **This operating characteristic is also briefly described on pg. 118 of the Multimedia System guide contained in the Owner Information Kit as shown here.**



Continued...

CONDITION# 5: Keeping the Display OFF during loading.

CAUSE: Customer asks to keep the display off (black screen) following ignition ON.

RECOMMENDATIONS: Press and Hold Power/Volume knob for 4 seconds prior shutting off engine.

NOTE: Audio will still play following ignition ON but display will remain blank. If customer is concerned about volume as well as display, see **CONDITION# 6** for more details.

CONDITION# 6: Keeping display and Audio OFF during loading.

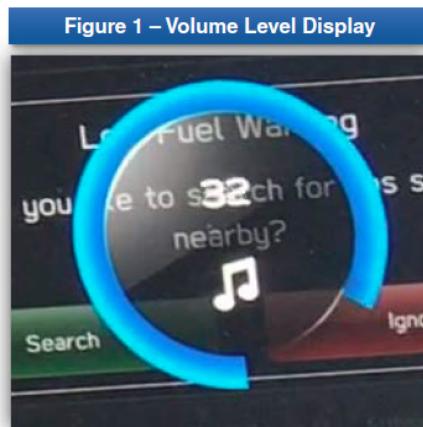
CAUSE: Customer asks to keep the display OFF (black screen) and audio muted following the ignition ON step.

RECOMMENDATIONS: Turn Power / Volume knob counter-clockwise bringing the volume setting to the lowest point prior shutting off the engine. Then, press and hold the Power / Volume knob for 4 seconds prior to shutting off the engine.

IMPORTANT NOTE: This feature is changed effective with Version 4 software. On Version 4 and later equipped head units, if the head unit is turned OFF prior to ignition OFF, both the audio output and display will remain off following ignition ON until the Power/ Volume knob is pressed.

CONDITION# 7: Audio Volume is turned to MAX when monitoring infotainment data monitor (March 2017 TechTIPS).

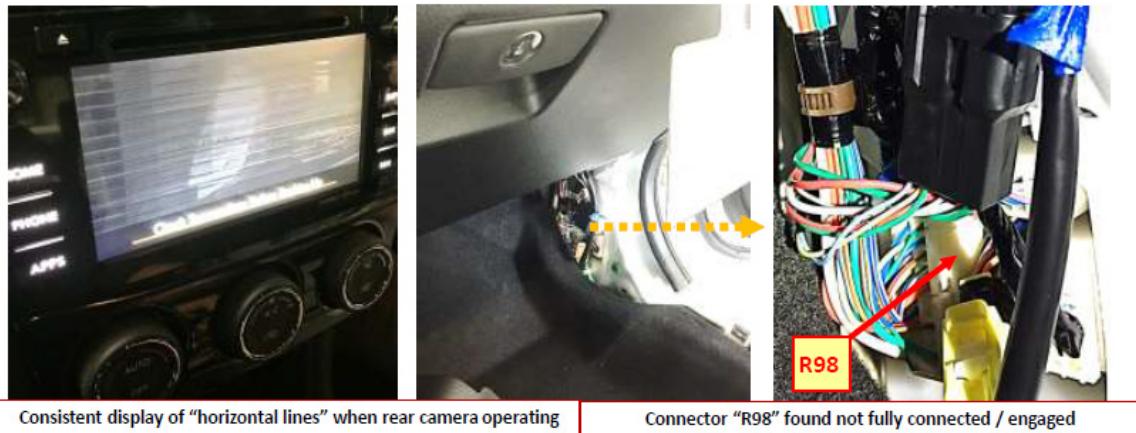
CAUSE: If you are monitoring the Infotainment System Data Monitor and the volume level display (see image below) appears showing the volume level increasing but the sound level remains the same, this is a normal operating characteristic of the Harman audio units.



RECOMMENDATION: When a Technician accesses the Infotainment System Data Monitor, the unit enters “Diagnostic Mode” and the volume level will be displayed in this manner. No repairs should be performed to address this concern as it is a normal operating characteristic.

Continued...

CONDITION# 8: Subject vehicle consistently displays multiple horizontal lines across the display screen each time the backup camera feature is operated. **NOTE:** This applies to **2017MY Impreza ONLY.**



CAUSE: Investigation found the cause of this condition to be connector R98 not fully connected / engaged.

RECOMMENDATIONS: Access and disconnect R98 and examine closely for any bent or displaced terminals. If OK, firmly reconnect and ensure a solid connection. Retest backup camera operation and confirm a consistent, high-quality image is displayed.

CONDITION# 9: Harman Gen 3 Audio/ Navigation head unit shows an “Advisory Message- No Signal” notification on the display.



CAUSE: In areas of poor or no SXM coverage, the head unit will display the message as shown above. It is not a failure condition assuming SXM service is not available.

RECOMMENDATION: No action should be taken to correct this condition.

NOTE: After Ver.3 (2.17.43.xx) software version update, the message ONLY pops up while displaying the SXM radio screen. On earlier software versions, it will pop up in FM/AM screen.

Continued...

CONDITION# 10: Hurricane or Severe Weather warning message is displayed.



CAUSE: The head unit receives information from SXM and displays the message whenever there is a signal from SXM. If there is no date information from SXM, the details (dates) will not show.

RECOMMENDATION: The display matches data supplied by SXM. **NOTE:** If the concern is the frequency the message is displayed, the frequency was reduced effective with Version 3 software update release.

CONDITION# 11: Android Auto fails to launch after the phone is connected via genuine USB cable.

CAUSE: Earlier versions of Android Auto have been noted as experiencing this condition. The app was updated during Nov-Dec 2017. When combined with the Version 2 and later software in the head unit, stability has been greatly improved. Open Android Auto on the phone and check the version under "Settings".

RECOMMENDATIONS: Set Apps to auto update to assure the phone gets the newest version. To check, go to the Play Store and search for Android Auto. Ensure the head unit has the latest version software installed.

CONDITION# 12: Weather, Fuel Information, Sports, Stocks information do not display in the Multi-Function Display (MFD).

CAUSE: Weather forecasts, forecast temperature or highest / lowest temperature, and chances of precipitation, etc. can be displayed in weather information. A SiriusXM (SXM) services subscription is required.

RECOMMENDATIONS: Verify an active subscription for SiriusXM (SXM) services has been extended, after 1-year free trial period. Content using the SiriusXM® Satellite Radio Service is reset when personal information is initialized by selecting **Factory Data Reset** (Factory Data Reset) on the "GENERAL SETTINGS SCREEN".



*: 8-inch with Navi system/8-inch system only

Continued...

ADDITIONAL SIRIUS/XM NOTES:

- SiriusXM U.S. satellite and data services are available only in the 48 contiguous states and the District of Columbia (DC). SiriusXM Satellite Services are also available in Canada; see www.siriusxm.ca.

4 month trial of SXM audio was launched beginning with MY12 models equipped with satellite radio.

- During the trial period, SXM does engage with the customer to let them know about their trial and when it is going to expire. If SXM does not hear from the customer or receive some type of payment, they assume the customer is not interested and **deactivate SXM radio after the 4-month trial period is over**. SXM offers free listening campaigns which run several times each year. Whenever there is a concern about SXM outside the trial period, always confirm the customer subscription is active and current before condemning the head unit. This still applies for those cases where signal refresh seems to restore function (even briefly).

3 years of SXM Traffic and Travel Link was launched with MY16 vehicles equipped with navigation.

3 years of SXM audio + Traffic + Travel Link is only applicable to MY17 Outback Touring models.

CONDITION# 13: AM station 600 fades in and out and two stations can be heard when listening to FM station 99.3.

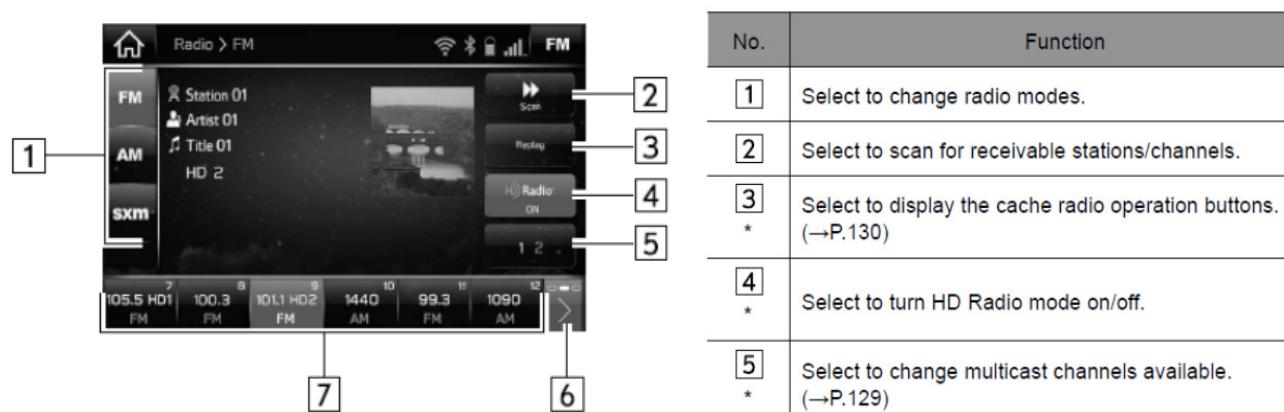
CAUSE: The vehicle is in a weak signal area and is losing reception.

RECOMMENDATION: These issues are scheduled to be addressed by Version 4 software update projected for release during Summer, 2018.

CONDITION# 14: Volume fades up and down (FM/AM HD radio).

CAUSE: Assuming the audio unit is in HD Radio mode, the vehicle is likely traveling outside of HD Radio coverage area causing the head unit to switch between HD and Analog mode.

RECOMMENDATION: Turn HD off as shown in the images below.



Continued...

CONDITION# 15: Low Fuel Warning advisory message appears on display.

CAUSE: The head unit only displays fuel level information sent to it from the combination meter.



RECOMMENDATIONS: Confirm combination meter and sender functions are operating properly. Confirm the trip meter is reset following refueling. Confirm ignition key is not being left in the ON / RUN positions during refueling.

CONDITION# 16: Bluetooth operation concerns when using the Messaging feature.

CAUSE: The customer concern is messaging doesn't work properly until the head unit has been restarted. Sometimes, the phonebook also doesn't work but, this symptom may be more intermittent. The concern was duplicated using an iPhone 7 with iOS 11.2.2 as well as an iPhone X with iOS 11.2.2 with the same result.

RECOMMENDATION: The next iOS update from Apple *reportedly* contains a patch to address this condition.

CONDITION# 17: Apple CarPlay feature has functionality concerns.

CAUSE: Update the Apple iOS version to after iOS 11. iOS 11. has been noted by sources familiar to have some concerns with CarPlay functionality.

RECOMMENDATION: Await next Apple iOS release update.

CONDITION# 18: CarPlay feature no longer functions after shutting off the engine, even though the head unit is still powered up.

CAUSE: If this is a HIGH (Navigation) audio unit, this is a normal operating characteristic.

When the ignition is turned off, the USB hub loses power and terminates the connection between the audio unit and the paired phone.

RECOMMENDATION: This is a normal operating characteristic. Do not replace head unit or USB hub for this complaint.

Continued...

CONDITION# 19: On vehicles equipped with reverse automatic braking (RAB), a red area appears in backup camera display.

CAUSE: If a customer states they see a red box or area in their backup camera display, the system is most likely operating as designed. Always perform a visual check of the sensors on the rear bumper first. If any of the sensors are covered over or obstructed by ice and / or snow, the RAB system may not function properly and the red area shown in the example photo below will most likely appear.

RECOMMENDATIONS: When this condition occurs, the RAB system is unable to properly differentiate between what really is an obstacle and what is not. In the image below, the sensor is iced over and the red area is displayed with no obstacle present. The Owner's Manual provides a list of other potential causes for this condition to occur.



• In the following cases, the system may not be able to properly detect an obstacle. Promptly contact a SUBARU dealer to have the system inspected.

- A sticker, paint, or a chemical is applied to the rear bumper near the sonar sensor
- The rear bumper is modified
- The rear bumper has been removed and reattached
- The ground clearance is changed due to the vehicle's loading condition or modification
- Ice, snow or mud is adhered to the rear bumper near the sonar sensor
- The rear bumper is exposed to strong impact, or the rear bumper is deformed



Continued...

CONDITION# 20: CarPlay and/or Android Auto does not launch consistently.

CAUSE: Possible poor connectivity to USB Media Hub. Harman and SBR investigations have attributed these issues to use of non-genuine cable connections between the paired phone and USB hub or, in a limited number of cases, marginal USB hub operation.

RECOMMENDATIONS: New firmware has been released to improve / enhance connectivity.

NOTE: This enhancement assumes use of factory certified connection cable. Aftermarket cables do not always offer sufficient data connectivity to achieve the desired device function. Always use a genuine cable. NEVER replace the USB hub unless the condition is verified while using a cable confirmed to be genuine.

Media Hub Part Numbers: 86257FL00A / 86257FL100 (for MID, HIGH audio units). The BASE unit part numbers are different: (86257FL10A / 86257FL110) and are not applicable.

CONDITION# 21: The Navigation system's voice prompt volume stays where it has been reset to only if the car is off for a short time. After several hours or overnight, it will reset to 10.

CAUSE: This is normal operating characteristic to ensure the driver can hear the navigation prompts during a later trip. For example, if the customer reduces the voice prompt volume to very low or OFF, then during the next trip, they (or another driver) may miss critical prompts or think navigation is not working correctly.

RECOMMENDATION: Please advise the customer they will need to adjust the volume to a comfortable level whenever using the NAVI guidance feature.

CONDITION# 22: What is Maximum number of contacts the Gen 3.0 head unit can support?

CAUSE: The system has a set storage allowance for downloading and storage of contact data.

RECOMMENDATION: The maximum is approximately 2,000 contacts. The customer can exceed that number when some contacts do not have phone number information or the size of the contact's "file size" itself is small. If more than 2,000 contacts are stored on the phone, only the first approximately 2,000 contacts will download to the head unit. Again, this may be slightly more or less than 2,000 depending on the details contained for each contact.

CONDITION# 23: When using the **Get an email** function, audio output **mutes** for a moment and then comes right back on.

CAUSE: Per information received from the service provider (in this case, Verizon), the behavior is categorized as a normal operating characteristic.

RECOMMENDATION: Turning off alerts for receiving email during driving could be considered as a possible work around for this concern.

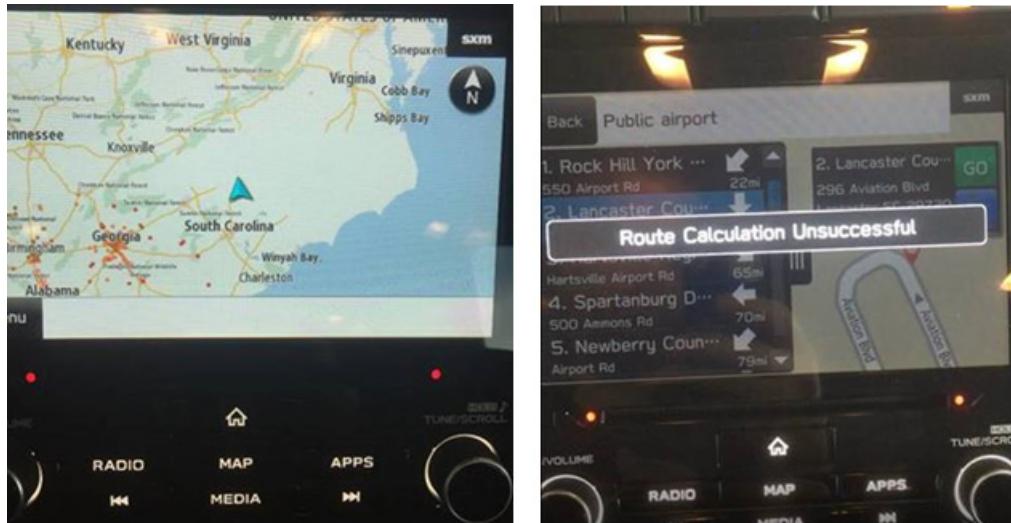
CONDITION# 24: Gen 3 Harman head units do not power OFF, even when the ignition is turned OFF and the driver door opened. Volume and Tune knobs do not operate, but the touch panel operates normally (Software version was Rel 2.17.22.30).

CAUSE: Input / Output Controller is not responding to shut down signal from BIU. Suspect an internal head unit failure.

RECOMMENDATIONS: This condition is scheduled to be addressed by Version 4 software update projected for release Summer, 2018. Until the software update is available, clear the condition by performing a capacitive discharge or exchange the head unit.

Continued...

CONDITION 25: Map Display “Whiteout”. Map display is either white (blank) or, an incomplete screen (no roads) is displayed. “Route Calculation Unsuccessful” message is displayed when trying to calculate a route.



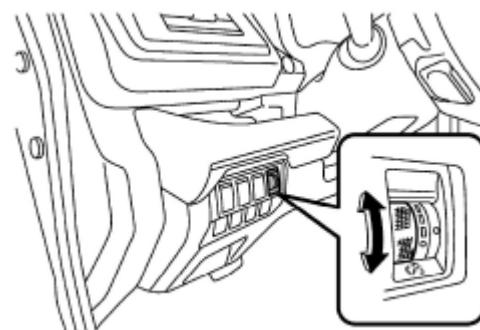
CAUSE: If a MOTA (Map Over The Air update) was performed or attempted previously, the state map data may have become corrupted. This can occur due to weak a WIFI signal during MOTA causing the state to disappear (appear white).

RECOMMENDATION: Update the map (again) successfully using a strong WIFI signal or via USB.

CONDITION 26: Map display not going into “Night” mode in low light (night time / dark) conditions

POSSIBLE CAUSES: Map display setting may be set to “Day” instead of “Night” or “Auto” as shown below. If the instrument panel illumination control knob is set to MAX brightness (all the way up), the map display will not change regardless if “Auto” or “Night” mode is selected in the Settings menu.

RECOMMENDATIONS: From the Settings menu, select Map Display and either “Auto” or “Night”. If there is no change, check and lower (if necessary) the illumination control knob as shown in the illustration to the right and “Auto” or “Night” mode operation will be restored.



Continued...

CONDITION 27: Wrong Head Unit (H/U) part numbers being ordered. Several reports have been received describing operational issues occurring after installation of the replacement H/U.

CAUSE: In some cases, further investigation revealed an incorrect (or different than the original) part number H/U was ordered and installed.

RECOMMENDATIONS: When ordering an exchange unit, there are Exchange Component Identification bulletins for every model year posted on STIS. These bulletins are an excellent resource to use in combination with the Electronic Parts Catalog (EPC). In the event a new unit is being installed (e.g. for a new, in-stock vehicle), always order the most up-to-date replacement part number H/U based on the specific VIN being repaired using the exchange portal and indicate the new unit is required for an in-stock unit.

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.