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

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QUALITY DRIVEN® SERVICE

SERVICE INFORMATION BULLETIN

APPLICABILITY: All 2019-22MY Vehicles with Gen 2 Telematics	**NUMBER:** 15-266-20R
SUBJECT: Telematics Function and Operation Testing Information	**DATE:** 07/16/20
	REVISED: 11/02/21

INTRODUCTION:

This Service Information Bulletin provides helpful procedures and best practices to utilize when customers present with concerns relating to the operation of their Gen 2 Telematics system equipped Subaru. The Gen 2 system was incorporated beginning in the 2019MY as shown in reference table below.

Carline	MY 2016	MY 2017	MY 2018	MY 2019	MY 2020	MY 2021	MY 2022
Ascent	NA	NA	NA	Gen2	Gen2	Gen 2	Gen 2
Crosstrek	Gen1	Gen1	Gen1	Gen2	Gen2	Gen 2	Gen 2
Crosstrek Hybrid	NA	NA	NA	Gen2	Gen2	Gen 2	Gen 2
Forester	Gen1	Gen1	Gen1	Gen2	Gen2	Gen 2	Gen 2
Impreza	Gen1	Gen1	Gen1	Gen2	Gen2	Gen 2	Gen 2
Legacy	Gen1	Gen1	Gen1	Gen1	Gen2	Gen 2	Gen 2
Outback	Gen1	Gen1	Gen1	Gen1	Gen2	Gen 2	Gen 2
WRX	NA	Gen1	Gen1	Gen1	Gen1	Gen 1	Gen 2
BRZ	NA	NA	NA	NA	NA	n/a	Gen 2

SERVICE PROCEDURE:

VERY IMPORTANT: Any Technician or other retailer personnel who, despite service documentation and training to the contrary, performs a DCM swap on a subscribed vehicle should NEVER release that vehicle back to the customer until after confirming the proper operation of the Telematics system. If the issue is first discovered only after the vehicle has been released to the customer, then the retailer MUST contact the customer immediately to inform the customer the ACN/AACN feature may not be functioning properly, and that the vehicle must be returned for inspection as soon as possible.

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Any time a repair to the Telematics system is performed, proper operation of remote services must be verified to confirm a sound repair. A post-repair press of the SOS or i-Button will NOT thoroughly test or validate proper operation of the Telematics system. It is CRITICAL to verify the proper operation of the service. Even if the DCM has been removed from the vehicle for head unit replacement / exchange, upon reinstallation of the DCM, Telematics system operation must always be verified. This requirement is necessary to confirm the Telematics system's functionality which is required for the Advanced Automatic Collision Notification (AACN) feature to operate properly should the need arise. Additionally, this step will help ensure a successful "Fixed Right First Time" repair and have a positive effect on customer satisfaction.

Best Practices:

1. Always make every effort to verify the concern with the customer at the time of vehicle write up. Witness the behaviors the customer feels are in question and document it with pictures or video if necessary to insure a complete understanding.

   a. Most repeat repairs are a result of failing to fully understand the customer's concern or, a failure to verify the condition has been successfully addressed post-repair.

   b. For any Telematics concern, at write up, always make sure the customer's cell phone number is confirmed and listed as the primary contact number. Some repair order generation programs use the phone number given at the time of the vehicle sale, which in some cases is a home or business phone and not the required cell number.

2. Always ensure the person answering the primary contact number has the MySubaru App loaded on their phone and is completely familiar the vehicle's concern.

   a. There are circumstances where someone other than the owner may answer the phone. Explain the need to verify the repair at write up in case arrangements are required to ensure contact with an authorized user of the vehicle's Telematics system.

3. For customers whose availability is limited or unpredictable, obtain permission to have someone at the retailer added as an authorized user to their MySubaru account at write up. The new Authorized User will now be able to support the repair efforts locally.

   a. Doctors, Lawyers, and other professions may not be able to accept personal calls. In these cases, the retailer could request having a trusted member of their staff added as an authorized user to the customer's MySubaru account so testing and diagnosis can be performed without interrupting the customer.

4. Perform a direct test of the customer concern to confirm the condition as reported. For example, if a problem with remote door lock / unlock operation was reported by the customer, always make sure the concern is verified when attempting the corresponding remote service request.

   a. DCM replacements often occur for failed remote services request concerns. Unfortunately, the only post-replacement repair verification performed in many cases is an i-Button push. A successful i-Button push does NOT guarantee the new DCM's ability to perform remote service requests. Pushing the i-Button and connecting with an Operator confirms the new DCM can access the voice network ONLY. A successfully completed test of the remote service being addressed by the DCM replacement MUST be completed to confirm the repair.

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5. The most popular Telematics feature is remote engine start (RES). It is always a good practice to confirm the feature operates properly, especially after a DCM replacement.

    a. RES is also the most frequent Telematics system customer concern. Not testing the operation of this service to confirm proper operation may compromise a successful repair. RES looks at many different system inputs to complete its function: door locks, door latches, hood latch, PRG, and the CVT inhibiter switch, to name a few.   DCM replacement also requires registration with the immobilizer. The only way to confirm successful immobilizer registration is to perform a remote service request of the RES and have it complete as expected. It is CRITICAL to always test and confirm proper RES operation.

6. The final verification of proper remote services function is confirmation of the i-Button operation. Press the i-button and simultaneously observe the Telematics LEDs and confirm the green LED is illuminated.

7. **IMPORTANT REMINDERS:** Voice service (an Operator answering after pressing the i-button) is NOT an indicator of the Telematics system's ability to perform remote service requests. The purpose of the i-Button push test is to reach an Operator and confirm VIN and vehicle location information. Pushing the i-Button and canceling the call once the ring back tone is heard does NOT indicate a fully functioning Telematics system.

Subscription Verification and Operation:

The first step to any repair is knowing what the expected behavior of a vehicle should be. Whenever a Technician enters a vehicle, one of the first things after ignition start should be to observe the Telematics LED operation, even if the vehicle does not have a reported Telematics concern. Understanding what the LEDs indicate is the key to a successful repair.

- **Both LEDs OFF, IGNITION ON** – The Telematics has been comm checked and is ready to subscribe but, may have a power / ground issue, back up battery (BUB) not installed or a swapped DCM.

- **Green LED ON, Ignition ON** – Identifies a subscribed and working as expected Telematics system.

- **Red LED ON, Ignition ON** – A current system fault is present requiring further investigation.

- **Both LEDs ON, Ignition ON** – A communication, or provisioning fault is present requiring further investigation.

- **Blinking Green LED, Ignition ON** - The vehicle has communication in progress.

NOTES:
- It is possible for the Green LED to stay illuminated for up to five minutes after switching the ignition off and moving the key away from the vehicle.

- The DCM can continue communication for up to fifteen minutes after ignition off and key away from the vehicle. This behavior can complicate parasitic draw testing, and technicians should refer to the May 2020 TechTIPs for more information on how to disqualify the DCM as a root cause of parasitic draw.

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Repairs requiring Telematics Operation Verification:

It is required to perform tests of the i-Button AND remote service operation any time one of the following occurs:

1. The DCM is replaced as the root cause of customer concern.

2. The DCM is removed and reinstalled due to another repair, e.g. a head unit replacement / exchange.

3. After Sharkfin Antenna replacement or removal / reinstallation

4. After Antenna Cable replacement or removal / reinstallation

5. Whenever a Technician performs a DCM software reflash as part of a service campaign, recall, or as directed by a Technical Service Bulletin (TSB)

6. Whenever a Technician resolves a concern with the Telematics system which prevented expected operation but did not involve a Telematics component replacement. Examples: a wiring repair or, an Error 202 or 204 which may require Techline support and subsequent tickets with the SOA IT department to resolve. **NOTE:** Telematics operation verification must still take place despite the lack of a part(s) replacement or component removal / reinstallation.

Methods of Telematics Operation Verification:

Whenever possible, always verify the customer's concern with the customer at vehicle write up before attempting any repairs.

If the customer is waiting, and their repairs are complete, engage the customer and request they perform several tests by requesting remote service operation. If the customer subscribes to **STARLINK Security Plus**, make sure to test the Remote Engine Start feature and witness its successful completion. If the customer subscription plan is **STARLINK Safety Plus**, there are no remote services to check and verification would be to test the i-Button operation which can be performed without contacting the customer for assistance.

If the customer is not going to stay at the retailer or was a night drop off, there are multiple ways to verify proper Telematics system operation. The absence of the customer does provide an exception for duplicating the customer's concern before beginning any diagnosis or repair.

Some customers can be difficult to reach depending on their work schedule and other obligations. It may not be a realistic expectation for them to be easily accessible by phone to perform or assist with testing / confirming remote services operation.

Another possibility for remote service operation testing is to gain local access to the vehicle by having the customer add a trusted individual at the retailer as a delegate on their MySubaru Account. The method to perform this operation detailed in the Technical Support Guide for Subaru Gen1 and Gen 2 Telematics Systems and can be complicated to complete for some. This process also involves the customer providing their PIN to the trusted individual they have agreed to have as their delegate. A preferred security measure is for customers to change their PIN to a temporary value like 1234 or similar while the retailer has control of their remote services. Once the repairs are complete, the customer removes the retailer delegate then changes their PIN back to the previous or desired pin to ensure security of their remote services. The MySubaru delegate method is best suited for Telematics concerns involving frequent test attempts or customers having zero availability to perform remote service requests.

Although these methods have been available since Gen 2 Telematics was launched, there is strong evidence to suggest neither are taking place often enough in the field to ensure quality Telematics repairs. An agreement has been reached with the STARLINK Call Center to aid with remote service testing. Details of how testing should take place are outlined below but, these 3 basic guidelines must ALWAYS be followed:

1. The remote service request test procedure will only work on a Gen2 equipped vehicle subscribed to **STARLINK Security Plus**.

2. Only use the i- button to perform the voice, VIN and location test.

3. Technicians can request VIN, Vehicle Location and Remote Door Unlock for testing purposes ONLY.

Process for Performing the Remote Service Operational Test:

NOTE: Before beginning, always confirm Gen2 Subscription to **STARLINK Security Plus** with the customer or a STARLINK Call Center Operator.

1. If necessary, connect the Subaru Midtronics DCA-8000 Dynamic Diagnostic Charging System or the Subaru Midtronics GR8-100 Diagnostic Battery Charger and utilize the Power Supply Mode feature to supply a stable **13.5 volts**.

2. Confirm all electrical accessories, headlamps, and HVAC are in the off position.

3. Vehicle in Park with parking brake set (EPB on).

4. Ignition is switched to ON with engine OFF.

5. All doors (and rear gate) must be closed and locked.

6. Push the i-Button. When the Operator connects:

    a. The Technician identifies themselves as working at Subaru Retailer XXyyZZ, and currently testing the Telematics system.

    b. Request the Operator confirm the last 8 characters of the VIN and location of the vehicle.

    c. Request a Remote Door Unlock command be sent to the vehicle.

7. If the VIN, Vehicle Location and Remote Door Unlock request are successful, the Telematics system is fully operational.

NOTE: Remote Engine Start operation requires additional vehicle system input for the feature to perform as expected. (See section **5a** above for more information.) If the customer's concern is focused on a RES failure, testing and successful operation this feature MUST take place with the customer before releasing the vehicle.

8. If VIN, Location, and Remote Door Unlock testing are unsuccessful, continue diagnosing the system using all available resources such as: STIS, TSBs, TechTIPS, FSE contact, and Techline support.

This testing procedure confirms the minimum functionality for operation of the Telematics system before releasing the vehicle to the customer. It does not replace customer concern specific testing to verify the expected behavior. For RES, operation must be confirmed by completing a Remote Engine Start request.

IMPORTANT NOTE: For Vehicles subscribed to **STARLINK Safety Plus**, there are no remote services to test with this level of service. This subscription level does include capability to test i-Button operation enabling Technicians to confirm the STARLINK call center receives VIN and vehicle location information.

Process for performing i-Button Operational Test:

NOTE: Before beginning, always confirm the vehicle is at least subscribed to **STARLINK Safety Plus** (or higher) with either the customer or a STARLINK Call Center Operator.

1. If necessary, connect the Subaru Midtronics DCA-8000 Dynamic Diagnostic Charging System or the Subaru Midtronics GR8-100 Diagnostic Battery Charger and utilize the Power Supply Mode feature to supply a stable 13.5 volts.

2. Confirm all electrical accessories, headlamps, and HVAC are in the off position.

3. Vehicle in Park with parking brake set (EPB on).

4. Ignition is switched to ON with engine OFF.

5. All doors (and rear gate) are closed and locked.

6. Push the i-Button.

7. When the Operator connects
   a. The Technician identifies themselves as working at Subaru Retailer XXyyZZ, and currently testing the Telematics system.
   b. Request the Operator identify the last 8 of the VIN and location of the vehicle.

8. If the VIN and Location requests are successful, the Telematics is fully operational. If VIN and Location requests are unsuccessful, continue diagnosing the Telematics system using all available resources such as STIS, TSBs, TechTIPS, FSE contact, and Techline support.

Both these testing procedures are provided to ensure a Fixed Right First Time repair and a fully operating Telematics system capable of an AACN should operation of this very important safety feature be necessary.

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.