

Articles Contained in this Issue

*Click on a title below to jump to the article.
Click the date located in the footer to return to page 1.*

CODE	ARTICLE.....	PAGE
(00)	STIS New Releases	9
(01)	QMR of the Month	1-2
(01)	QMR of the Month Award Presentations	2
(01)	Lost Keys? Contact the Subaru Techline.....	3
(02)	Improved Diagnosis of Engine Oil Leakage, Leak Trace Powder Revisited	4
(05)	Front Lower Control Arm Bushing Repair Procedure	6
(15)	Blind Spot Detection Disabled, No DTCs found	7
(15)	CP1 Panel and Steering Switch, Knob Switch Checks	8

SUBARU TECHLINE HOLIDAYS & HOURS OF OPERATION

Memorial Day: (Closed)
Monday, May 31, 2021

Mon. - Thurs.	8:30AM - 7:30PM EST
Friday	10:30AM - 5:00PM EST
Saturday	9:00AM - 3:00PM EST

01 QMR of the Month

We are pleased to announce this month's QMR of the Month Winner:

Leo Gilmore from
Ruge's Subaru in Rhinebeck, NY

This month's winner selected from January 2021's submissions involved the diagnosis and root cause identification of a Check Engine light with intermittent misfire DTCs on a 2020MY STI. Leo began his diagnosis by contacting Techline to confirm the CID and CVN numbers for the ECM were SBR original. He then accessed the Roughness Monitors for all 4 cylinders. While recording, he marked the data stream whenever misfire counts were identified. Even when seeing the misfire counts occur on the SSM4, they were totally unnoticeable. Leo then moved on to connecting his scope and proceeded to monitor the waveform data for the crankshaft position sensor. Closer inspection revealed inconsistencies in the data when compared to a known-good vehicle's pattern. Leo then removed the crankshaft position sensor for inspection and found engine oil on the internal portion which "reads" the reluctor teeth. After removing the front covers and the timing belt, the oil leak was identified to be coming from the front crank seal. He found this highly unusual, especially with only 2300 miles on the vehicle so, Leo proceeded to install a dial indicator to measure for any excessive radial freeplay of the crankshaft as a possible cause for the low-mileage seal failure. His suspicion was confirmed as the measurement showed .010 of radial freeplay when moving the end of the crankshaft up and down. This resulted in not only the seal failure / oil leak but the misfires too as the excessive freeplay caused inconsistencies in the distance between the reluctor teeth and the face of the crankshaft position sensor. Leo provided a short video showing his crankshaft measurement procedure, an SSM data file showing the roughness monitors and a highly detailed Powerpoint® presentation outlining all his diagnostic steps and test results.

In appreciation for going the extra mile and sharing his experience with us, Leo will be receiving the following from his Field Service Engineer:

\$500.00 Snap-On gift card

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

The Subaru TechTIPS newsletter is intended for use by professional Technicians ONLY. Articles 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 your vehicle has or will have that condition. Impreza, Legacy, Justy, Loyale, Outback, Forester, Subaru SVX, WRX, WRX STI, Baja, Tribeca, BRZ, XV Crosstrek, Ascent, Crosstrek Hybrid and "Quality Driven" are Registered Trademarks.

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.



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01 QMR of the Month (CONTINUED)

The other Regional winners selected from QMRs submitted during November 2020 were:

- **Tad Griggs** from **Michael's Subaru of Bellevue** in Bellevue, WA
- **Johnathan Scott** from **Subaru of Grand Blanc** in Grand Blanc, MI
- **Sean Rabbitt** from **Steve Lewis Subaru North** in Hadley, MA
- **Garrett Fuchs** from **Baierl Subaru** in Pittsburgh, PA

Any Subaru Technician can participate in the QMR of the Month program. See the February 2013 and January 2016 issues of Tech TIPS for full details. You just might see your name and photo in a future issue of Tech TIPS!

01 QMR of the Month Award Presentations

As part of our “enhanced” QMR of the Month recognition program, we will include a photo (whenever available) of the recipient’s award presentation in TIPS. The winner selected from QMR of the Month submissions received during January 2021 was (again) Leo Gilmore, a Technician from Ruge’s Subaru in Rhinebeck, NY.



Leo is shown above after being presented with his latest \$500.00 Snap-On Gift Card. To Leo’s right are Dealer Principals Lewis Ruge and Kristin Hutchins. To his left are Service Manager Jack Cleary and Subaru Distributors Corporation Field Service Engineer, Jim Colamarino.

*Congratulations and **THANK YOU** to our January 2021 QMR of the Month Award recipient!*

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01 Lost Keys? Contact the Subaru Techline

If you receive a vehicle from the customer where all their originally registered keys have been lost, contact the Subaru Techline for the necessary steps to program new keys. Depending on the immobilizer type, you will be unable to just program one key without an original key. All immobilizer types (except for A type) require an original key to make any changes to the immobilizer system. Without an original key, a new one cannot be added. Unsure of which immobilizer type you have? Refer to the reference chart below. Once the vehicles immobilizer type has been confirmed, perform the following:

- **Verify the vehicle is onsite.**
- **Open a Repair Order with all necessary information.**
VIN, RO number, RO date, Mileage (if it can be obtained), etc.
- **Verify key type (push button, turn-key)**
- **Contact the Subaru Techline.**

When calling the Subaru Techline, please ensure all necessary information is available at the time of the call.

SOA will no longer clear immobilizer modules for POLK branded title vehicles (except for lemon law buy-back). All other POLK branding will require immobilizer component replacement. Refer to the Title Alert when checking the Vehicle Inquiry on Subarunet. Please refer to the Service Manual/Registration Manual for Immobilizer for repair of these vehicles.

Anytime a retailer has a vehicle with lost keys, a **NEW** Techline case must be opened for **EACH** vehicle. The retailer will not be allowed to reuse the document sent for other vehicles.

When Techline has components to clear, it is vital a completed form is sent. Without this information, the entire process will be delayed. Specific components have different procedures for clearing and without this information, the components may not be cleared at all or, additional down time may occur to determine their origin.

See latest Immobilizer chart below:

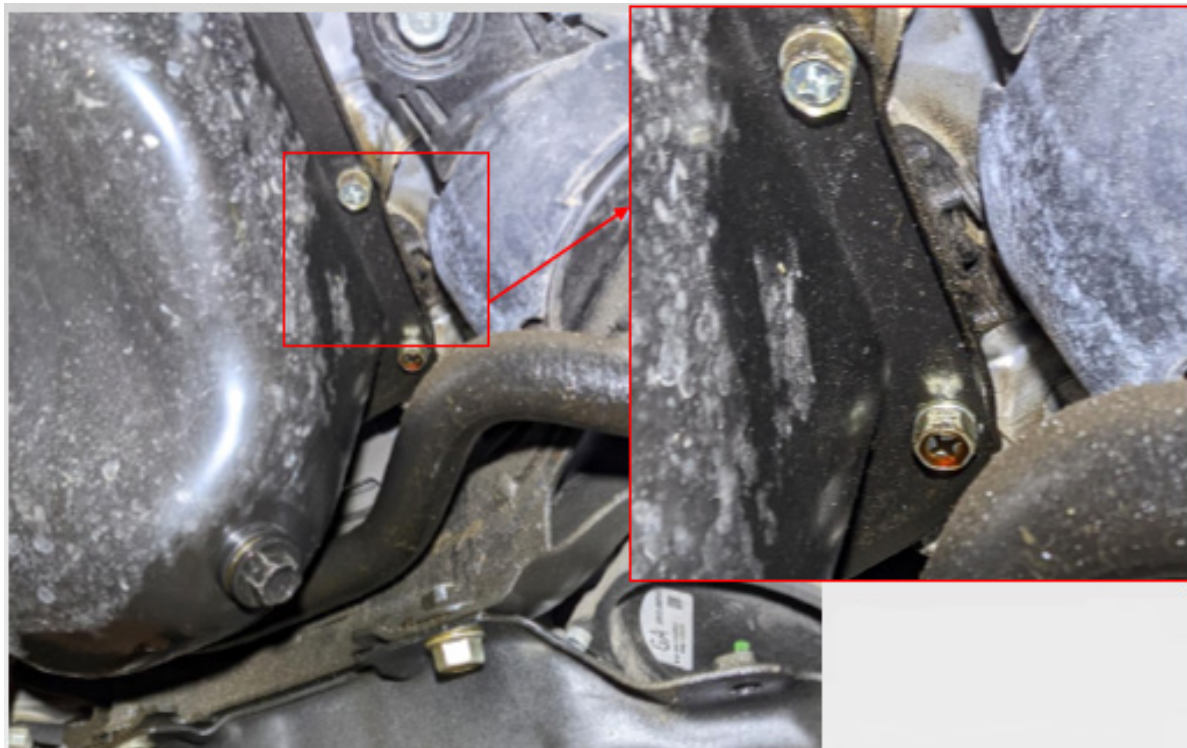
US model		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY	2017MY	2018MY	2019MY	2020MY	2021MY	
Legacy OBK	Key Access type	A type										B type			G				
	keyless Access with push-button start system									D type				H					
Tribeca	Key Access type	A type																	
IMPREZA	Key Access type					A type			B type										
	keyless Access with push-button start system											D type							
Crosstrek	Key Access type											B type							
	keyless Access with push-button start system											D type							
Crosstrek Hybrid	keyless Access with push-button start system											D type				F type			
WRX/STI	Key Access type					A type				B type									
	keyless Access with push-button start system											D type							
Forester	Key Access type					A type				B type									
	keyless Access with push-button start system											D type							
BRZ	Key Access type											X type							
	keyless Access with push-button start system											Y type							
ASCENT	Key Access type															B type			
	keyless Access with push-button start system															D type			

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When diagnosing a customer concern for an oil leak, it is always good practice to check for applicable TSBs for known concerns. If none are found, the next step would be to look at the vehicles repair history. Does the customer perform their own oil changes? Was oil spilled? Was the engine resealed recently? These details will aid in a quick and accurate diagnosis. Be thorough in the visual inspection process and inspect closely at the highest point of the leak. Oil will settle and pool at the lowest point.

Here is an example: a Technician finds oil seepage and drips forming at the back of the oil pan and thought it was coming from the oil level switch gasket. So, the Technician removed the switch, cleaned the surrounding area, and replaced it.

The customer returned a short time later with an oil leak in the exact same place. This time the Technician cleaned the oil/residue and used leak trace powder to determine the source and identified the leak was from the oil pan seal, NOT the level switch. After resealing the oil pan the vehicle was fixed and no more leaks were found.



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Here is another example. At first glance before cleaning, it appears the front timing cover is leaking. After cleaning and with the help of leak trace powder, it is properly identified that the head gaskets are leaking. This could have easily resulted in a costly shop comeback and a decline in customer satisfaction if misdiagnosed.



If Technicians are able to identify any leaks, SOA is requesting a QMR be submitted with photos of the leaking point, and where leak trace powder has been applied for clear origin confirmation as shown above. Be sure to take several pictures both up close and far away so location and orientation are clearly understood.

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02

Improved Diagnosis of Engine Oil Leakage, Leak Trace Powder Revisited (CONTINUED)

Reminder: Leak tracing powder is considered a shop supply and subject to Subaru – Policies & Procedures 8.4.36 Shop Supplies. Dye is **NOT** an approved method of leak detection, unless explicitly directed. There are many kinds of powder spray available. Magnaflux SKD-S2 Developer is shown here. If these specific products are not readily available, in a pinch commonly available foot powder spray or any powder spray can be substituted for similar results. Refer to Tech Tips 4/11, 11/18 for additional information on Fluid Leak Detection.

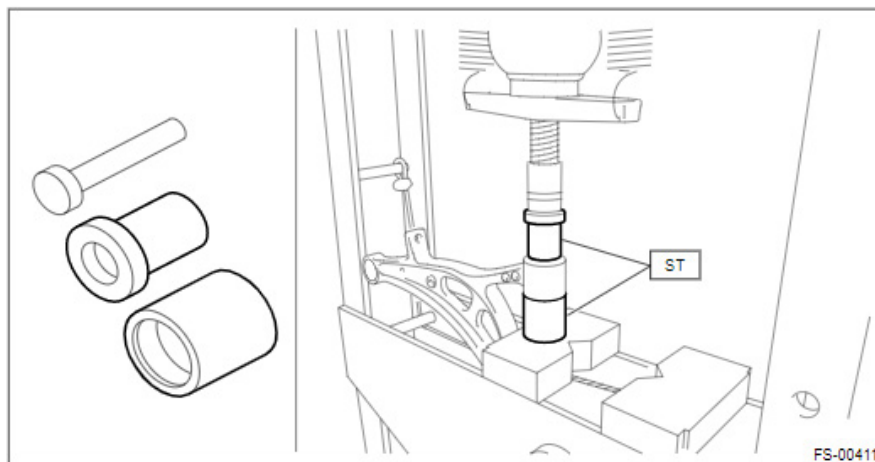
05

Front Lower Control Arm Bushing Repair Procedure

The Subaru Claims Department has identified a trend involving improper repair procedure. There are instances of retailers identifying bushings within the front lower control arm as the source of customer concern related to NVH or drivability, then replacing the entire control arm assembly. The proper repair involves replacing the failed bushing(s) by following the service manual procedures. There are few reasons that a claim should be made to Subaru to replace the entire arm instead of bushing replacement. Subaru Claims Policy does not allow for damages resulting from an impact, accident, environmental factors, and other reasons listed in our Policies and Procedures Manual found on Subarunet.



Failed bushing



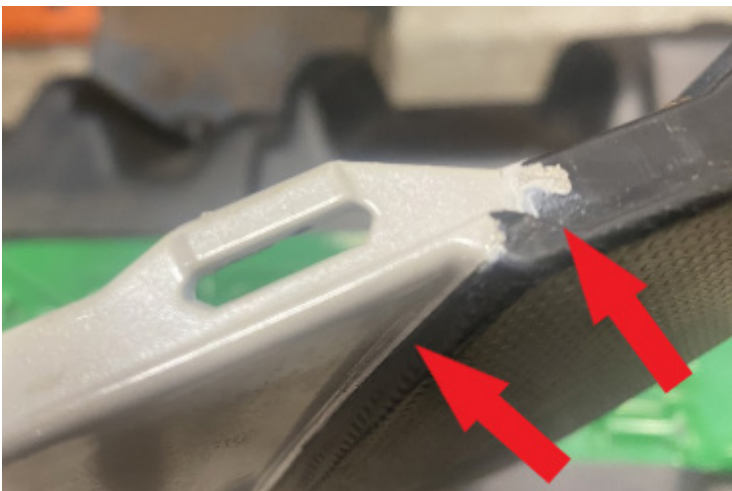
Bushing removal and installation procedure

Note: Review STIS for the proper removal and installation tool applicable to the model being repaired.
Suspension -> Front Suspension -> Disassembly/Reassembly, #2

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15 Blind Spot Detection Disabled, No DTCs found

When diagnosing a blind spot detection concern that does not display a DTC, the Technician should consult the data monitor as the first step. SRVD System Fail & Halt flag PIDS are indicators of why the system has been disabled. Refer to Tech Tip 1/2018: Blind Spot Detection Off for additional information. If a fail flag or halt flag is present the Technician should inspect the vehicle for body damage in the rear corners. Evidence of an impact or signs of body shop work require a more in-depth inspection of the vehicle. If body shop work cannot be determined, the vehicle can be driven without the bumper cover to verify if the cover may be the cause. If the issue does not happen when the bumper is removed, there is a possibility that the bumper cover is at fault. If the halt or failure is still present without the bumper installed the tech should suspect the control module, harness, bracket, or body work behind the bracket. The SRVD modules can also be swapped from left to right and recalibrated. After another test drive the Technician should take note of whether the halt or failure follows the module or stays in the same location. If the fault follows the module, the module should be replaced.



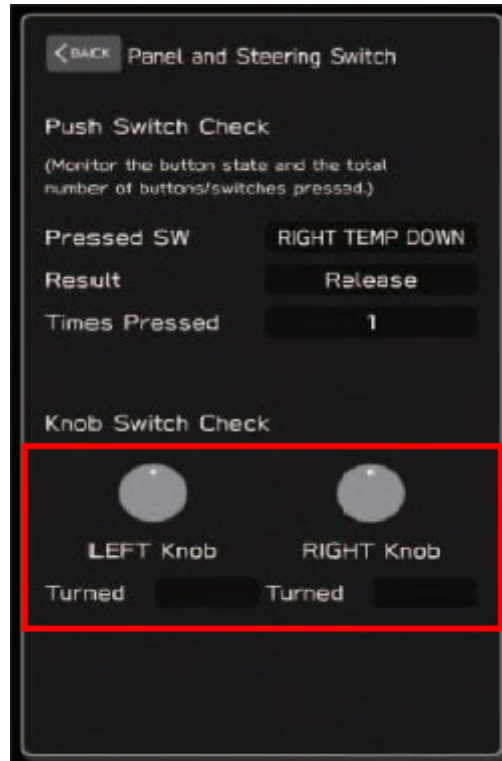
Evidence of body work includes poor paint coverage in corners, overspray, and tape lines.



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Reminder: for infotainment related concerns, please always remember to review as applicable: **Technical Support Guide, TSB 15-177-14R** “Gen 2 and Gen 2.1 Operating Tips”, **TSB 15-221-18R** “Harman Audio/Infotainment: Harman Generation 3.0 and 3.1 Operating Tips”, **TSB 15-259-20R** “Denso Gen 4 Cockpit One (CP1) Infotainment System Operating TIPS Technical Support Guide”.

Technicians have reported when performing Panel and Steering Switch function check, using “VOLUME” and “TUNE” knobs/switches located on the CID, the count appearing in “Turned” seems to be out of sync with the knob rotation.



Be advised, this is normal operation. This behavior applies to both CID options 11.6” & 7”. The function’s purpose is to measure how many clicks are dialed in over a certain amount of time (1 sec), NOT accumulative dial counts. The number readout is directly linked to the speed of knob rotation. This function is set with the intention to confirm knob’s operability without malfunction. This test allows the Technician to know the direction of clicks (clockwise or counterclockwise) and its rotation speed (volume).

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
12-318-21	Technical Service Bulletin	Rear Bumper Reflex Reflector- ...	8-Apr-21
F551SAN400	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
J1310AN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
B321SFL000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
J3110AN020	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
F551SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
H461SFL110	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	8-Apr-21
E551SXC000	Accessory Installation Guide	Ascent Front Bumper Under Guar...	8-Apr-21
E551SXC000	Accessory Installation Guide	Ascent Front Bumper Under Guar...	8-Apr-21
F551SFL100	Accessory Installation Guide	PORT INSTALLATION: 2017-2022MY...	8-Apr-21
07-193-21	Technical Service Bulletin	OBDII Diagnostic Connector and...	7-Apr-21
12-300-20R	Technical Service Bulletin	Power Rear Gate (PRG) Switch T...	7-Apr-21
WRI-20R	Subaru Product/Campaign Bulletin	Reprogramming of Denso CP1 Inf...	5-Apr-21
12-316-21	Technical Service Bulletin	Rear Door Weatherstrip- Design...	5-Apr-21
10-98-20R	Technical Service Bulletin	New Air Conditioning (A/C) Com...	5-Apr-21
WRC-21	Subaru Product/Campaign Bulletin	Continental Tire Safety Recall	5-Apr-21
J101SAN300	Accessory Installation Guide	2022MY Outback Mud Flap	5-Apr-21
J101SAN400	Accessory Installation Guide	2022MY Outback Wilderness Mud ...	5-Apr-21
15-280-21R	Technical Service Bulletin	Gen1 Telematics Reprogramming ...	1-Apr-21
J101SAN150	Accessory Installation Guide	2022MY Outback Wilderness Spla...	1-Apr-21
15-279-21R	Technical Service Bulletin	Gen1 Telematics DCM Replacemen...	31-Mar-21
H671SAN200	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
J201SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
H461SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
H630SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
05-63-18R	Technical Service Bulletin	Steering Rattle Sound / Steeri...	31-Mar-21
J501SAN222	Accessory Installation Guide	2022 Outback Seat Back Protect...	31-Mar-21
J131SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
B321SFL020	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
H621SAN000	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
J101SAN800xx	Accessory Installation Guide	PORT INSTALLATION: 2020-2022MY...	31-Mar-21
J131SCC000	Accessory Installation Guide	2022MY BRZ Door Scuff Protecto...	31-Mar-21
SOA801P061xx	Accessory Installation Guide	Outback Wilderness Door Edge G...	31-Mar-21
J501SAN260	Accessory Installation Guide	OUTBACK CARGO SIDEWALL PROTECT...	31-Mar-21
15-282-21	Technical Service Bulletin	STARLINK Remote Engine Start (...)	29-Mar-21
12-317-21	Technical Service Bulletin	Console Lid Inner Tray Mat- De...	29-Mar-21
65550XC00AXX	Accessory Installation Guide	PORT INSTALLATION:2020MY Outba...	25-Mar-21

All revised publications are highlighted in yellow.

Continued on the next page

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
15-281-21	Technical Service Bulletin	Customer Takeover after STARLI...	25-Mar-21
H501SSG203	Accessory Installation Guide	PORT INSTALLATION: 2020MY Lega...	25-Mar-21
H001SAN100	Accessory Installation Guide	2020 Legacy / Outback Remote E...	25-Mar-21
H001SAN000	Accessory Installation Guide	2020 Legacy / Outback Remote E...	25-Mar-21
15-259-20R	Technical Service Bulletin	Denso Gen 4 Cockpit One (CP1) ...	24-Mar-21
H501SVA100	Accessory Installation Guide	2017-21MY WRX/STI Auto Dimming...	19-Mar-21
E751SCC000	Accessory Installation Guide	2022MY BRZ Vortex Generator	19-Mar-21
06-82-21	Technical Service Bulletin	Squeaking -Type Sound from Rea...	16-Mar-21
07-151-19R	Technical Service Bulletin	DTC B112C or B112E -Driver Mon...	15-Mar-21
WQZ-61R	Subaru Product/Campaign Bulletin	Telematics System Data Communi...	15-Mar-21
07-192-21	Technical Service Bulletin	DTCs B112C and / or B112E in D...	15-Mar-21

All revised publications are highlighted in yellow.

Continued on the next page

This is your chance to offer suggestions for use in future issues of TechTIPS! Make sure that if you e-mail us, you place in the **subject line** of your e-mail **“For TechTIPS Newsletter”**. Thank you!

Model: _____

Year: _____

VIN: _____

Description of situation encountered: _____

Your suggestion for repair procedure, product improvements, etc.: _____

Please attach separate sheets, if necessary. You may also want to include Service Manual diagrams or references, or your own drawings to assist in describing your suggestion. All information submitted becomes the property of Subaru of America, Inc. Permission is granted to Subaru of America, Inc. to print your name and suggestions in TechTIPS and other Subaru of America, Inc. publications. Mail items to: PO Box 9103; Camden, NJ 08101-9877.

Your Name: _____

Signature: _____

Dealer's Name: _____

City: _____

Date: _____

Dealer Code: _____