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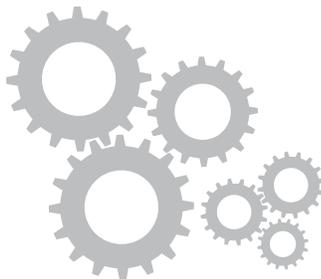
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SUBARU TECHLINE HOLIDAYS & HOURS OF OPERATION

Holiday Break: (Closed)
Tuesday, December 24, 2019
Wednesday, December 25, 2019

New Year's Day: (Closed)
Wednesday, January 1, 2020

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 Winner of QMR of the Month:

Thomas Jones from
Hadwin-White Subaru in Conway, SC.

Thomas submitted his winning QMR describing his diagnosis and repair of a 2018 Outback 2.5i which presented with a concern of the vehicle having difficulty starting. Upon arrival, his first step was to confirm the hard start condition then connect the SSM to check for any stored or active DTCs. Thomas provided a list of the DTCs but concentrated his initial diagnosis on the EGR system as most were related to that system. He provided details of his testing and the results for each check performed. Continued testing led him to find a voltage fluctuation when wiggling the E18 connector and the related wiring harness. Thomas accessed the connector and upon inspection found pin #8 had backed out as a result of a broken lock tab. The affected pin was the EGR valve power supply. After replacing the engine harness, and road testing to confirm the repair, normal operation was restored with no returning DTCs. Thomas' report contained detailed step-by-step descriptions of his diagnostic procedure which was supplemented with a series of quality photos.

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

A \$500.00 Snap-On gift card.

CONTINUED ON THE NEXT PAGE

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.

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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 2019 were:

- **Travis George** from **Subaru of Spokane** in Spokane, WA
- **Alex Valentine** from **Quirk Works Subaru** in Braintree, MA
- **John Cote** from **Bill Kolb Jr. Subaru** in Orangeburg, NY
- **Erik Rodriguez** from **Grand Subaru** in Bensenville, IL.

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 September 2019 was Thomas Jones, a Technician at Hadwin-White Subaru North in Conway, SC.



Thomas is shown above after being presented with his \$500.00 Snap-On Gift Card by SOA Field Service Engineer Dan Page. Pictured (right to left) are: Dan Page, Hadwin-White Service Manager, Brandon Bell, September’s winning Technician Thomas Jones, his wife Jennifer and SOA District Parts and Service Manager Matt Seiler. Congratulations and **THANK YOU** to our September 2019 QMR of the Month Award recipient!

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TECH TIPS GREATEST TIPS

This series features TechTIPS articles frequently referred to by Techline. This month's feature is for Authorization Request Pictures from April 2014

01 AUTHORIZATION REQUEST PICTURES

As mentioned in the February TIPS, the importance of taking quality pictures is essential when submitting an Authorization Request (AR) for consideration. Subarunet allows for each picture to be up to 5MB which is possible only when using a quality camera. Certain cell phones have the capability of providing quality pictures however, they must be saved in the proper format, **Actual Size**.

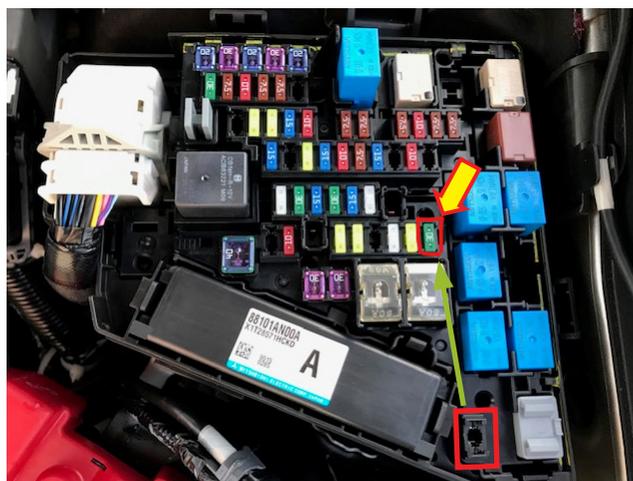
Prior to the customer leaving your dealership, take a minute to review the pictures you are about to submit to ensure their quality.

A camera is the best tool to use when taking pictures to attach to an AR. However, if you are sending pictures taken by a cell phone, it is recommended to choose the **Actual Size** when prompted. This will provide the best quality photo possible. The quality of the Small (KB), Medium (KB) or Large (KB) size pictures in most cases have poor resolution. This makes it necessary for us to request additional pictures.

Always review your pictures prior to attaching them to your AR request.

07 2020MY LEGACY & OUTBACK, DTCS B2259, B2244, B282C & B2C22

As part of retailer pre-delivery inspection (PDI) the green 30A (backup) fuse shown below is moved from "transit" position "A" to "delivery" position "B". During manufacturing and at the completion of port processing prior to shipment, the backup fuse is installed into the "A" position to eliminate battery draw during transit / storage.



NOTE: The new 2020MY Legacy and Outback will set DTCs B2259, B2244, B282C and B2C22 if for some reason, the fuse is removed from the "B" position while the ignition is "ON". This is a normal operating characteristic for these models.

- **B2259:** Center Information Display Communication Open -> Cockpit Control Module (CCU)
- **B2244:** Amplifier Communication -> Cockpit Control Module (CCU)
- **B282C:** Audio Visual Navigation Abnormal -> Eyesight
- **B2C22:** Eyesight System -> Reverse Auto Brake (RAB)

For this reason, when performing a Check ALL DTC on a new 2020MY Legacy or Outback, the list of DTCs above will likely be stored in memory until the backup fuse is in position “**B**” and the memory cleared. For example: if a Technician installs an additional accessory which requires removal of the backup fuse from “**B**”, the codes above will automatically set. The memory must always be cleared after the backup fuse is reinstalled into “**B**”.

When checking for DTCs during diagnosis of any abnormality regarding the infotainment system, EyeSight or RAB, keep this information in mind to avoid diagnosing the listed DTCs unnecessarily.

First, check to see if **B2259**, **B2244**, **B282C** and **B2C22** are Current or History codes. See the SSM screenshot below for reference.

IF CURRENT: Check to see if the backup fuse is blown or not and confirm it is fully installed in the proper position. If the fuse is OK, diagnose the DTCs as per the applicable Service Manual.

Keyless A...	No DTC						
EyeSight	Current	B282C	Audio Visual Navigation Abnormal	00684	17400	Com...	
Combinat...	No DTC						
Power Re...	Unexecuted						
Headligh...	No DTC						
Immobili...	Unexecuted						
Blind Spo...	No DTC						
Blind Spo...	No DTC						
Front Cor...	Unexecuted						
Front Cor...	Unexecuted						
Cockpit C...	Current	B2259	Center Information Display Communication Open	00683	30800	Com...	
Cockpit C...	Current	B2244	Amplifier Communication	00683	63700	Com...	
Power Se...	No DTC						
EyeSight	No DTC						
Telematic	No DTC						
Power W...	No DTC						
Power W...	No DTC						
Power W...	No DTC						
Power W...	No DTC						
Power W...	No DTC						
Reverse...	Current	B2C22	Eyesight System	00683	36500	Com...	
Keyless E...	Unexecuted						

IF HISTORY: Check the **Trip** count and **Freeze Frame Data** of the DTCs to determine when the DTCs were stored. If the Trip count when the DTCs were stored is *higher* than the current trip count *or*, if the FFD shows the date when the DTCs were stored is *before* the sold date, these DTCs are not related to a customer concern. The cause of the DTCs would most likely be the backup fuse was removed for some reason and the memory was not cleared after the fuse was reinstalled.

System ▲	Status ▲	Code ▲	Description & trouble part	Time stamp		Gro...	IG c...	FFD ▲
				Trip ...	Time C...			
				00100	188200	Cur...		
Keyless A...	No DTC							
Keyless A...	No DTC							
EyeSight	History	B282C	Audio Visual Navigation Abnormal	00058	18200	Com...		
Combina...	No DTC							
Power Re...	No communication							
Headligh...	No DTC							
Immobili...	No communication							
Blind Spc...	No DTC							
Blind Spc...	No DTC							
Front Cor...	No communication							
Front Cor...	No communication							
Cockpit C...	History	B2259	Center Information Display Communication Open	00057	48800	Com...		
Cockpit C...	History	B2244	Amplifier Communication	00057	68300	Com...		
Power Se...	No DTC							
EyeSight	No DTC							
Telematic	History	B2A15	VIN Data Response					
Power W...	No DTC							
Power W...	No DTC							
Power W...	No DTC							
Power W...	No DTC							
Power W...	No DTC							
Reverse...	History	B2C22	Eyesight System	00058	19000	Com...		
Keyless E...	No communication							
Central G...	No DTC							

B2259 The past : Center Information Display Communication Open

Item	Unit	4 bloc...	3 bloc...	2 bloc...	1 bloc...	Detect
Trip Count	times	57	57	57	57	57
Count		Comm...	Comm...	Comm...	Comm...	Comm...
Time Count	ms	46800	47300	47800	48400	48800
ACC Power connection state		OFF	OFF	OFF	OFF	OFF
IGN Power connection state		OFF	OFF	OFF	OFF	OFF
Reverse connection state		OFF	OFF	OFF	OFF	OFF
SPEED signal connection state		ON	ON	ON	ON	ON
PKB connection state		OFF	OFF	OFF	OFF	OFF
Illumi connection state		OFF	OFF	OFF	OFF	OFF
XM ant connection state		ON	ON	ON	ON	ON
GPS ant connection state		ON	ON	ON	ON	ON
MIC connection state		ON	ON	ON	ON	ON
Steering switch connection state		OFF	OFF	OFF	OFF	OFF
Rear camera connection state		ON	ON	ON	ON	ON
USB1 connection state		ON	ON	ON	ON	OFF
CAN connection state		ON	ON	ON	ON	ON
BATT Voltage	V	12.05	12.05	12.05	12.05	12.05
Speed		0	0	0	0	0
BATT BackUp Voltage	V	12.05	12.14	12.14	12.14	3.79
GPS Received Number		18	18	18	18	18
Global Positioning System Level		0	2	2	2	2
Time and Date Settings :Year	Year	2019	2019	2019	2019	2019
Time and Date Settings :Month	Month	9	9	9	9	9
Time and Date Settings :Date	day	13	13	13	13	13
Time and Date Settings :Hour	Hour	22	22	22	22	22
Time and Date Settings :Minute	min	31	31	31	31	31
Time and Date Settings :Second	sec.	30	31	31	32	32
CID connection state		ON	ON	ON	ON	OFF
METER connection state		ON	ON	ON	ON	ON
USB3 connection state		OFF	OFF	OFF	OFF	OFF

11 P04AE DIAGNOSTIC ISSUES FOR 2019-2020MY ASCENT

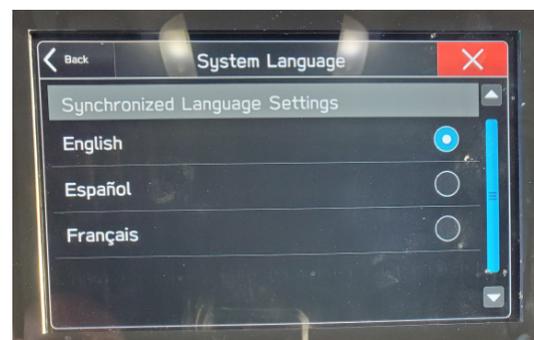
When diagnosing P04AE in 2019-2020MY Ascent, there are two separate issues which can make an accurate diagnosis difficult. The first issue is caused by an ECM logic concern and only the 2019MY Ascent is affected. The issue was corrected for the 2020MY. Normally P04AE is set when a fault is detected between the canister purge control solenoid valve and the intake manifold. However, DTC P04AE may be set by a loose fuel cap on the Ascent (2019MY only). This occurs due to an issue within the ECM. The 2020MY ECM has been updated and will set P0455 for a loose fuel cap.

The second issue is an error with the SSM4 software. Currently P04AE will not be detected during the ELCM self-test. However, P04AE can be detected using the normal diagnostic method. NASI and SBR are actively working to correct the issue with the SSM4 software. Until this is corrected, the DTC and Mode\$06 data may be retrieved after the ELCM self-test has been completed. At the end of the ELCM self-test, no DTC is detected. Without turning the key off, perform an all-DTC scan with the SSM4 software.

15 UPDATED INFOTAINMENT "CONDITIONS" INFORMATION

Changing SXM Channel Using Voice Recognition

There have been reports received regarding a faulty voice recognition system (VR) operation when changing the SXM channel by calling a channel name. It usually happens following a head unit factory reset. Harman has reviewed reports and found the root cause. This issue occurs occasionally when a SXM channel name file gets deleted from the cache during a factory reset. The countermeasure is already being worked on but at this point, the schedule is not available. In the meantime, Harman has recommended the following steps as the temporary work around. The issue can be resolved by changing the language from English to Spanish or French and back to English, followed by a full ignition (I/G) cycle (Full I/G cycle = Turn OFF I/G, open/close driver door, wait for 2-3 minutes, and turn I/G ON).



CONTINUED ON THE NEXT PAGE

Album Artwork Display for FM Radio:

Please note, the head unit displays the album art only when HD radio is on and the info is provided by the broadcaster.

HD Radio option: OFF



HD Radio option: ON



Multicast channel 1

Multicast channel 2

When the head unit has been rebooted, there will be a delay until the artwork is displayed. It is also true after the HD Radio option is first turned on.

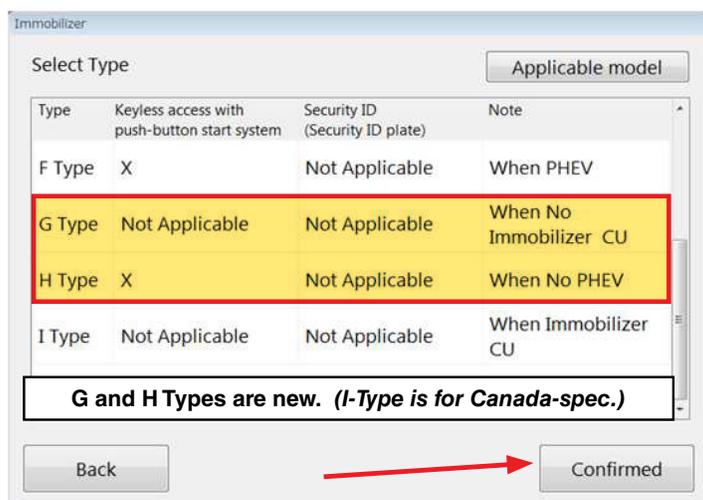
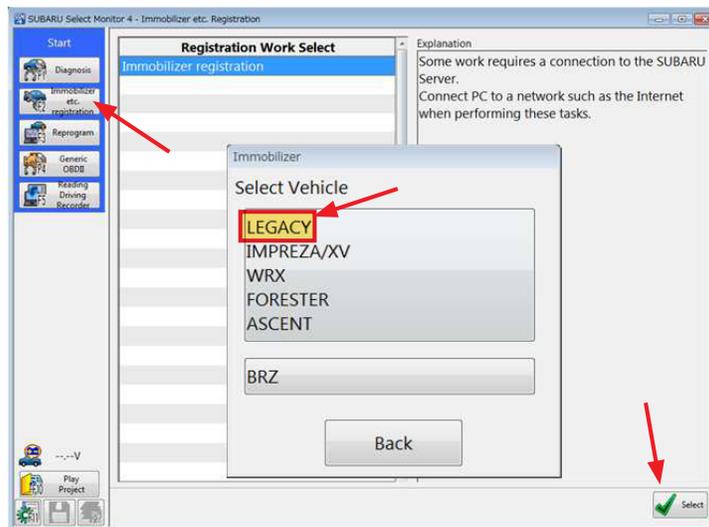
Gen 1 and Gen 2 Fujitsu Ten (Denso Ten) SD Card Navigation Service Update

Please note, Subaru Map Update Download Tool (Toolbox) needs to be re-installed to support the latest 64bit MacOS Catalina. Subaru Toolbox is a utility designed to connect the Navigation device with a computer (PC or Mac) and enables the user to see all available updates, download the necessary files from the internet and upload updates and new content to the Navigation device. The latest Toolbox for Windows as well as MacOS is available to download at this link: <http://www.subarumapupdates.com/index-en-gb.html>

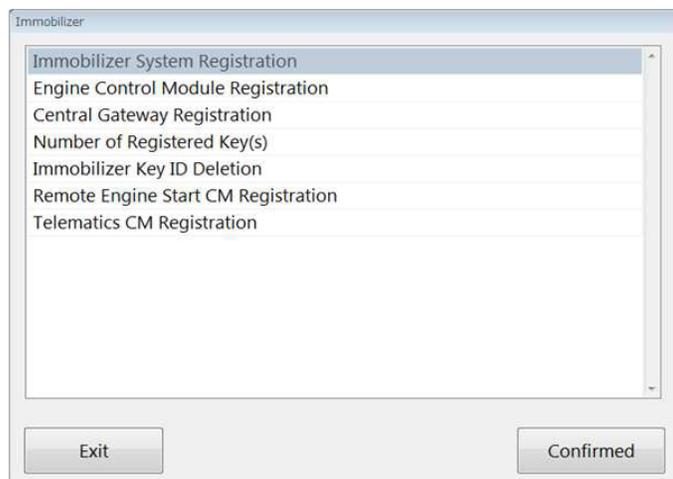
This TIPS article outlines a new required procedure to follow when performing immobilizer-related repairs on the all-new 2020 Legacy and Outback. To further enhance vehicle security, this new procedure requires connection to a secure SBR server for authentication and to access immobilizer information. An 8-digit "Authentication Key" supplied by SBR will be a required input when working with SSM4. Unlike the previous system where Teaching Codes have been unchanged, the new Authentication Key will change every 6 months. TSB **15-246-19R** will be updated with the latest Authentication Key as it becomes available. The new vehicles utilize an Immobilizer Type "G" or "H" system depending on model:

- **G:** Vehicles with a turn key ignition switch
- **H:** Keyless Access with Push-Button Start.

After connecting the SSM4 to the vehicle and starting the application, from the Main Menu, select Immobilizer etc. registration, select the Vehicle then Immobilizer Type and Confirmed.

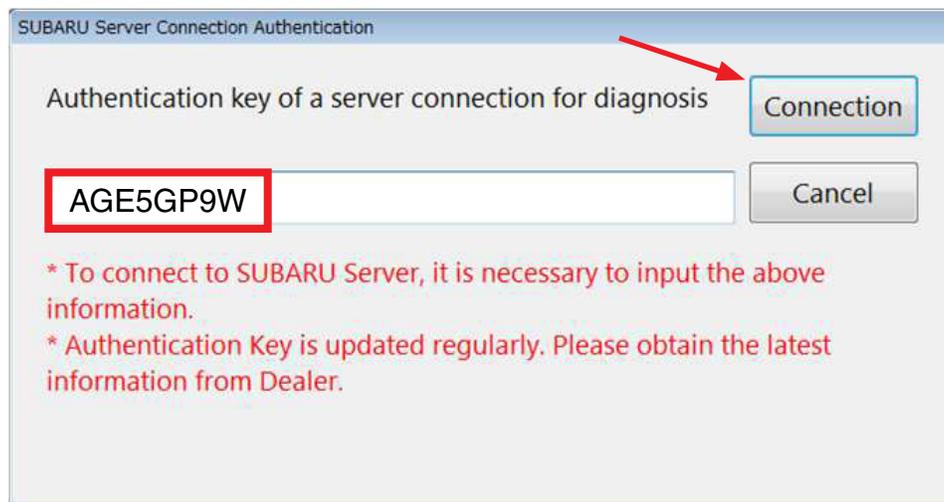


When the vehicle utilizes either a **G** or **H** -Type system, an Authentication Key is required to perform any of the immobilizer-related functions listed in the menu shown below.



Currently, for all other models, the immobilizer registration process is unchanged.

For 2020MY Legacy and Outback with a **G** or **H** -Type system, the Server Connection screen shown below will be displayed. Input the current Authentication Key and select "Connection." Currently the Authentication key is **AGE5GP9W**.



Authentication key of a server connection for diagnosis

AGE5GP9W

Connection

Cancel

* To connect to SUBARU Server, it is necessary to input the above information.

* Authentication Key is updated regularly. Please obtain the latest information from Dealer.

Detailed instructions for performing all immobilizer-related functions can now be found on STIS under the Other/Miscellaneous Publication Type: "20MY Registration Manual for Immobilizer" or by searching Document Code: S1090BE.

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
15-249-19R	Technical Service Bulletin	2020 Audio/Navigation & Power ...	02-Dec-19
MSA5P3611C	Technician Reference Booklet	Electrical Theory and Diagnosi...	21-Nov-19
MSA5P3415T	Technician Reference Booklet	CVT Transmission Diagnosis (No...	21-Nov-19
WUR-03R	Subaru Product/Campaign Bulletin	Brake Hose Swelling Service Pr...	20-Nov-19
WUM-98R	Subaru Product/Campaign Bulletin	Occupant Detection Wiring Harn...	20-Nov-19
MSA5B2008A	Owner Manual	2020MY Crosstrek Hybrid Quick ...	19-Nov-19
MSA5B2007A	Owner Manual	2020MY Crosstrek Quick Guide	19-Nov-19
MSA5M2025A	Owner Manual	2020MY Crosstrek Hybrid Subaru...	19-Nov-19
MSA5M2019A	Owner Manual	2020MY Crosstrek Subaru STARLI...	19-Nov-19
MSA5M2027A	Owner Manual	2020MY Crosstrek Hybrid Eyesig...	19-Nov-19
MSA5M2018A	Owner Manual	2020MY Crosstrek Eyesight Owne...	19-Nov-19
MSA5M2008A	Owner Manual	2020MY Crosstrek Hybrid Owner'...	19-Nov-19
MSA5M2007A	Owner Manual	2020MY Crosstrek Owner's Manua...	19-Nov-19

All revised publications are highlighted in yellow.

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
V1390BE	Service Manual	2020MY Crosstrek Hybrid Emerge...	19-Nov-19
01-167-08R	Technical Service Bulletin	Recommended Materials (All Veh...	18-Nov-19
15-231-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	18-Nov-19
15-228-18R	Technical Service Bulletin	Harman Audio / Infotainment: D...	18-Nov-19
15-227-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	18-Nov-19
15-251-19R	Technical Service Bulletin	DTC B2A16	18-Nov-19
15-221-18R	Technical Service Bulletin	Harman Audio / Infotainment: H...	18-Nov-19
15-233-18R	Technical Service Bulletin	Display / Touch Screen "Soft K...	15-Nov-19
15-220-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	15-Nov-19
15-230-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	15-Nov-19
15-229-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	15-Nov-19
15-247-19R	Technical Service Bulletin	Harman Navigation "Route Calcu...	15-Nov-19
15-226-18R	Technical Service Bulletin	Harman Audio / Infotainment: T...	15-Nov-19
15-243-19R	Technical Service Bulletin	Multi-Function Display (MFD) C...	15-Nov-19
F411SFL030	Accessory Installation Guide	2020MY Impreza Sedan Seat Cove...	13-Nov-19
F411SFL020	Accessory Installation Guide	2020MY Impreza Sedan Seat Cove...	13-Nov-19
U1370BE	Service Manual	2020MY Impreza/Crosstrek New C...	12-Nov-19
MSA5B2001A	Owner Manual	2020MY Impreza Quick Guide	12-Nov-19
MSA5M2012A	Owner Manual	2020MY Impreza Eyesight Owner'...	12-Nov-19
MSA5M2009A	Owner Manual	2020MY Impreza Subaru STARLINK®...	12-Nov-19
MSA5M2001A	Owner Manual	2020MY Impreza Owner's Manual	12-Nov-19
WUP-01R	Subaru Product/Campaign Bulletin	PCV Valve- Design Change	11-Nov-19
15-257-19	Technical Service Bulletin	STARLINK Service Leads, DTC B2...	11-Nov-19
15-249-19R	Technical Service Bulletin	2020 Audio/Navigation & Power ...	11-Nov-19
TIPS1119-SE-CP1	TechTIPS NewsLetter	2020 OUTBACK/LEGACY COCKPIT GE...	11-Nov-19
15-256-19	Technical Service Bulletin	FOTA (Firmware Over-The-Air) R...	8-Nov-19
15-255-19	Technical Service Bulletin	Map Data Update Procedure for ...	8-Nov-19
15-254-19	Technical Service Bulletin	Map Data Update Procedure for ...	8-Nov-19
11-193-19	Technical Service Bulletin	DTC P0300- Reprogramming File ...	8-Nov-19
15-236-18R	Technical Service Bulletin	Reprogramming File Availabilit...	8-Nov-19
H630SAN100	Accessory Installation Guide	LEGACY / OUTBACK Tweeter Kit	8-Nov-19
H671SSJ003	Accessory Installation Guide	Forester USB Charging Ports	8-Nov-19
H671SSJ003	Accessory Installation Guide	Forester USB Charging Ports (F...	8-Nov-19
H671SXC003	Accessory Installation Guide	Ascent USB Charging Ports (FRE...	8-Nov-19
H671SXC003	Accessory Installation Guide	Ascent USB Charging Ports	8-Nov-19
SNLG_01	Other/Miscellaneous	Engine, Transmission & Turboch...	8-Nov-19
WUA-86R	Subaru Product/Campaign Bulletin	Harman Kardon Head Unit Reprog...	8-Nov-19

All revised publications are highlighted in yellow.

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
WTZ-85R	Subaru Product/Campaign Bulletin	Harman Kardon Head Unit FMVSS ...	8-Nov-19
WUE-90R	Subaru Product/Campaign Bulletin	Brake Lamp Switch Replacement	8-Nov-19
WTW-82	Subaru Product/Campaign Bulletin	Combination Meter Reprogrammin...	8-Nov-19
07-146-19R	Technical Service Bulletin	Engine Wiring Harness- Design ...	6-Nov-19
H451SFL300	Accessory Installation Guide	2020 Impreza LED Fog Lamp Upgr...	5-Nov-19
H451SFL300	Accessory Installation Guide	2020 Impreza LED Fog Lamp Upgr...	5-Nov-19
H451SFL200	Accessory Installation Guide	2020 Impreza Fog Light Kit (FR...	5-Nov-19
H451SFL200	Accessory Installation Guide	2020 Impreza Fog Light Kit	5-Nov-19
WUS-04R	Subaru Product/Campaign Bulletin	PCV Valve- Design Change	31-Oct-19
WUQ-02R	Subaru Product/Campaign Bulletin	Ignition Coil Short Circuit	31-Oct-19
15-245-19R	Technical Service Bulletin	FOTA (Firmware Over-The-Air) R...	31-Oct-19

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: _____