TECH TIPS

March 2022

Subaru Service and Technical Support Line Newsletter

Articles Contained in this Issue

SUBARU TECHLINE HOLIDAYS & HOURS OF OPERATION

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

---

01 TechShare QMR of the Month

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

John Cote from
Bill Kolb Jr. Subaru in Orangeburg, NY

John created a high quality QMR using TechShare reporting on an open found in the bulkhead harness causing concerns with cruise control operation. His report included detailed diagnostic steps, supporting wire diagrams with findings, high-quality photos, videos, and SSM Data.

Please refer to the following link to review the TechShare QMR in detail.

https://subarutechshare.com/qmrs/TS-189638

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

$500.00 Snap-On gift card

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.

SUBARU
QUALITY DRIVEN® SERVICE

ASE | Education Foundation

The other Regional winners selected from QMRs submitted during January 2022 were:

- **James Pedicone** from **Chilson Subaru** in Eau Claire, WI
- **Jeremy Buturla** from **Garavel Subaru** in Norwalk, CT
- **Jeremy De Groodt** from **Capitol Subaru** in San Jose, CA
- **Joseph Frye** from **AutoNation Subaru Hunt Valley** in Cockeysville, MD

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

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 2022 was John Cote, Shop Foreman and Master Technician at Bill Kolb Jr. Subaru, Orangeburg NY.

John is shown above (right/center) after being presented with his $500.00 Snap-On Gift Card and NOCO GB40. To his right are Bill Kolb Jr. Subaru's Parts Manager Joe Kensicki and Subaru of America, Inc. Field Service Engineer Jim Colamarino. To his left is Bill Kolb Jr. Subaru's Fixed Operations Director Joe Minns.

*Congratulations and **THANK YOU** to our January 2022 QMR of the Month Award recipient!*

TECH TIPS GREATEST TIPS

This series features TechTIPS articles frequently referred to by Techline. This month's feature is from March 2021.

01 | Lost Keys? Contact the Subaru Techline. Updated Immobilizer Chart

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 you have confirmed the vehicles immobilizer type 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.

US model		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY	2017MY	2018MY	2019MY	2020MY	2021MY	2022MY	2023MY
Legacy OBK	Key Access type	A type	A type	A type	A type	A type	A type	A type	A type	A type	A type	B type	B type	B type	B type	B type	G Type	G Type	G Type	
Legacy OBK	keyless Access with push-button start system									D type	D type	D type	D type	D type	D type	D type	H Type	H Type	H Type	
Tribeca	Key Access type		A type	A type	A type	A type	A type	A type	A type											
IMPREZA	Key Access type				A type	A type	A type	A type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type
IMPREZA	keyless Access with push-button start system											D type	D type	D type	D type	D type	D type	D type	D type	D type
Crosstrek	Key Access type									B type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type
Crosstrek	keyless Access with push-button start system											D type	D type	D type	D type	D type	D type	D type	D type	D type
Crosstrek Hybrid	keyless Access with push-button start system										D type	D type		F type	F type	F type	F type	F type	F type	F type
WRX/STI	Key Access type				A type	A type	A type	A type	A type	A type	A type	B type	B type	B type	B type	B type	G Type	G Type	G Type	
WRX/STI	keyless Access with push-button start system											D type	D type	D type	D type	D type	H Type	H Type	H Type	
Forester	Key Access type					A type	A type	A type	A type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type	B type
Forester	keyless Access with push-button start system										D type	D type	D type	D type	D type	D type	D type	D type	H Type	H Type
BRZ	Key Access type								X type	X type	X type	X type	X type	X type	X type	X type	X type	X type		
BRZ	keyless Access with push-button start system								Y type	Y type	Y type	Y type	Y type	Y type	Y type	Y type	Y type	Y type	H Type	H Type
ASCENT	Key Access type														B type	B type	B type	B type	B type	G
ASCENT	keyless Access with push-button start system														D type	D type	D type	D type	D type	H

Every year more and more vehicles require check board harnesses to complete proper diagnostics. Recently, Techline and Field Quality Assurance have become aware that Technicians are not using these diagnostic tools correctly.
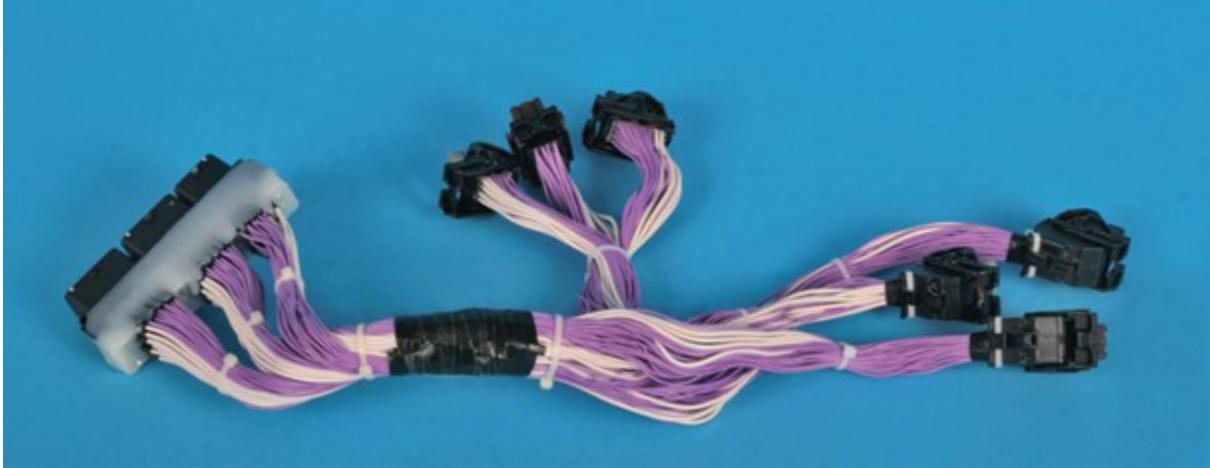
Modern vehicle wiring has gotten smaller. It is more important than ever to use the dedicated Check Board Harness for testing. There is potential to damage the vehicle's wiring harness if the proper testing procedure is not followed. Failure to do so can lead to new concerns caused by damage to the harness or module. It is good practice to mark/identify the testing portion of the Check Board Harness so one end is used for testing while the other end is reserved for plugging into the vehicle. This will prevent possible damage to the vehicle while perform testing and diagnostics.
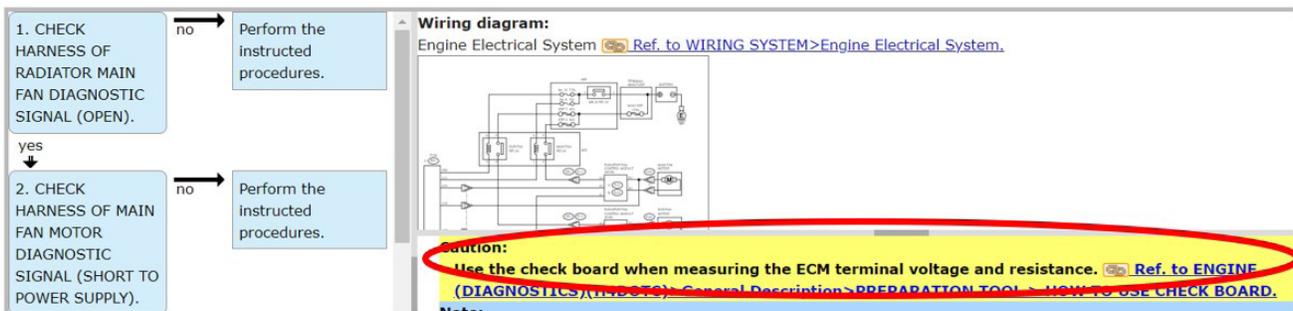
The Service Manual will display a caution note if a Check Board Harness is necessary. The CAUTION/NOTE tab can also be used to identify the need for check board harness.

The new 2022 WRX has two base model options for CP1. The Cockpit Information Display (CID) can be easily misidentified when attempting to make repairs. The main method to determine which CID is installed is to inspect the Heated Mirror Switch on the bottom left-hand corner of the unit. Note in the pictures below if a heated mirror option is equipped it will be shown on the button.
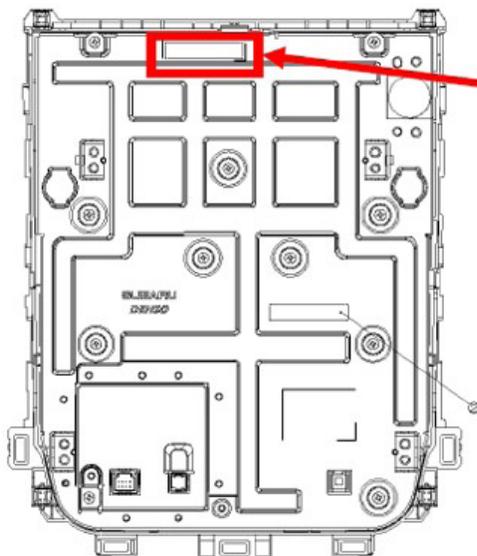

With Heated mirror switch

86213VC410

Without Heated mirror switch

86213VC430

The part numbers are also different, and the CID should not be interchanged with the opposite unit. The part number has now been included on the back of the unit if there is an unusual circumstance.

Back

Example Label

86213AN65A
MX462200-8512
191009
2491

Techline has identified four examples of failed CID (Cockpit Information Displays). These are the typical concerns of a failed CID.

- **Figure 1:** shows a thin pixel line across the screen at all times. This can develop anywhere on the screen.

- **Figure 2:** shows full color failure. The screen will always look disfigured and unusable.

- **Figure 3:** is a different variation of color failure, it will look patchy or as if the back light has failed in certain spots.

- **Figure 4:** is a total loss of image. <u>This condition should not be confused with temporary blackout</u>. This condition will not power up the screen in any way regardless of key position or input. Note that Airbag indicators still function. Volume and Temperature controls may still work if the blower is on at the time. Power and ground should be verified, and then the best course of action is swapping the CID with a known good unit of the same trim level (mid or high).

It is important to note that the following conditions are **<u>NOT</u>** Cockpit Information Display related.

- Freezing, system lag, or rebooting

- CarPlay® or Android Auto® App concerns

- Software upload or initialization error

- Volume concerns or no sound

- Auxiliary Component concerns: Aux port/USB, DMS, Back-up Camera, CD player, Microphone, Eyesight warnings.

- Programing Voice Recognition, Navigation, Loss of Presets, STARLINK®, Gracenotes®, AM/FM, SXM, or Clock concerns

These concerns should be diagnosed accordingly to the available reference material in STIS or the following Technical Service Bulletins.

- CP1 Operating Tips and Tricks 15-259-20R

- CP1 Software Reprogramming 15-261-20R

- CP1 Microphone testing Procedure 15-275-20

Techline has seen an increase in concerns reported regarding poor Bluetooth quality during phone calls across both CP1 and Harman models. These concerns stem from settings being mistakenly changed in the radio. Misidentification of these settings can lead to unnecessary Headunit replacement, DCM replacement or Microphone replacement when the root cause of the concern is simply a setting. The customer may describe the condition as any of the following:

- "Intermittently, the person I am calling cannot hear me at all".
- "There is a lot of wind noise during Bluetooth calls".
- "There is a lot of audible feedback during Bluetooth calls".

On Harman models, if the setting **Microphone Volume** is turned up or down, these conditions can occur. The setting has very little to do with the loudness of the call. In actuality it adjusts how sensitive the microphone is. A **Microphone Volume** with a +30, will have a lot of "wind noise" or static. The microphone is too sensitive and is picking up every noise inside the cabin. If the setting is -30, the caller will not be heard at all when talking. Small adjustments can be made in one or two increments, but Techline has not seen a phone that requires more than 4 adjustments.

-HARMAN-

On Denso CP1 models, if the setting **Call Volume** is set to more than +/-2, the same condition can occur. Techline usually finds that the **Call Volume** has been turned up to +6 which creates the same conditions listed above. Some phones may require a +/- adjustment. However, Techline has not seen any models that need more than +1 to make the Bluetooth clear. Here is a picture of Base model CP1 and Mid/High CP1 for reference.


-CP1 MID/HIGH-

-CP1 BASE-

Generation 4 eyesight cameras have a new procedure for removal and installation. It is important to take care when removing and installing components as improper removal and installation practices can damage camera or windshield. The Eyesight cover, heater elements, and camera on the generation 4 system has been designed to snap onto a camera bracket that is bonded to the windshield. <u>If the bracket is damaged the entire windshield must be replaced</u>. The components have been engineered to be removed by hand. Do not use impact tools when servicing the eyesight camera components.

After removing the overheard console, the Eyesight cover is removed by applying pressure on the back of the cover to slide it forward. The technician should only try to release one side at a time. While applying moderate steady pressure to the back of the cover the technician should be applying pressure to the front of the cover to limit the travel when the tabs release. If the cover is not secured while being released, locating pins on the camera bracket may be damaged. Once the cover has been released from the clip on one side, the technician should perform the same procedure on the other side. The picture below shows the direction that the cover is removed. The lower section of the image shows the position of the heater locating pin. The lower right image shows where the improper removal of a cover resulted in the pin being broken off. Damage to the bracket or pin(s) can only be repaired through windshield replacement.
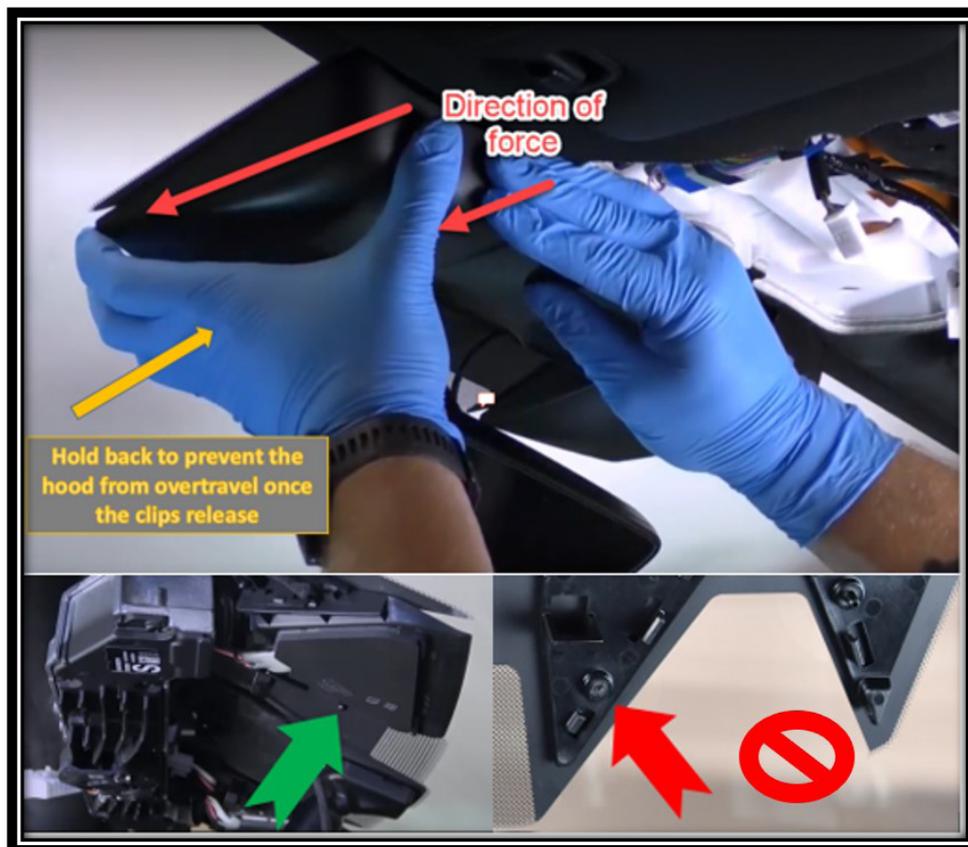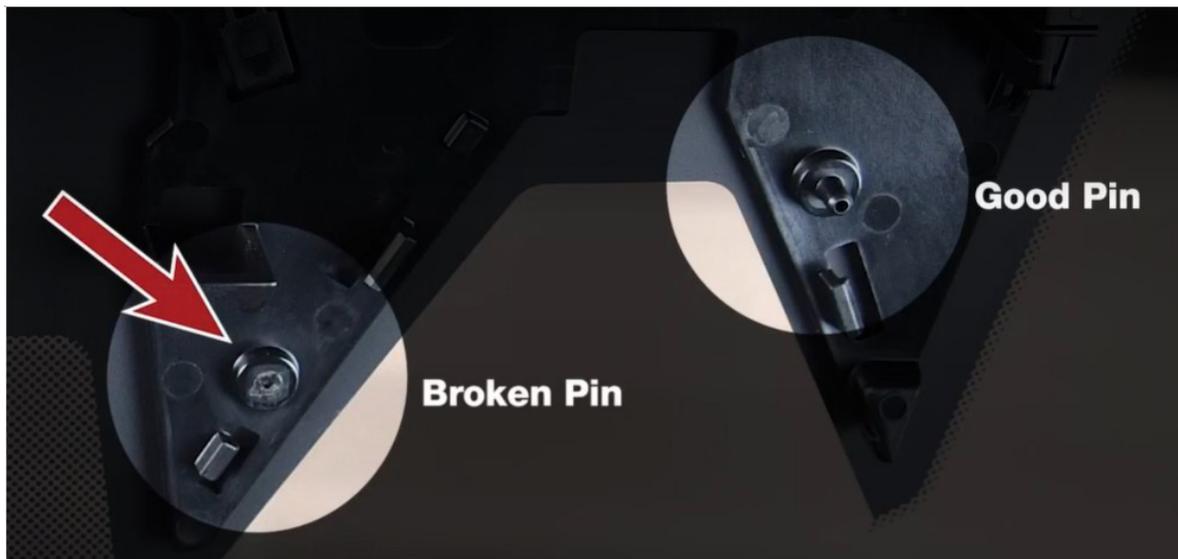
The camera has 3 mounting pins that engage the windshield bracket. A forward-facing locating pin is located centrally on the front of the camera and there two pins in the rear of the camera. The camera is removed by applying steady pressure in a rearward motion until the tabs are released. Only attempt to release one tab at a time or damage to the bracket may occur. When reinstalling the camera, the use the center pin to locate the camera. Then seat the camera on the bracket using one of the rear pins. Apply steady pressure to each pin. There will be an audible click when each clip is seated. Attempting to secure every pin at the same time can result in damage to the windshield bracket. Any damage to the bracket will require the windshield to be replaced.

Image below shows camera installation
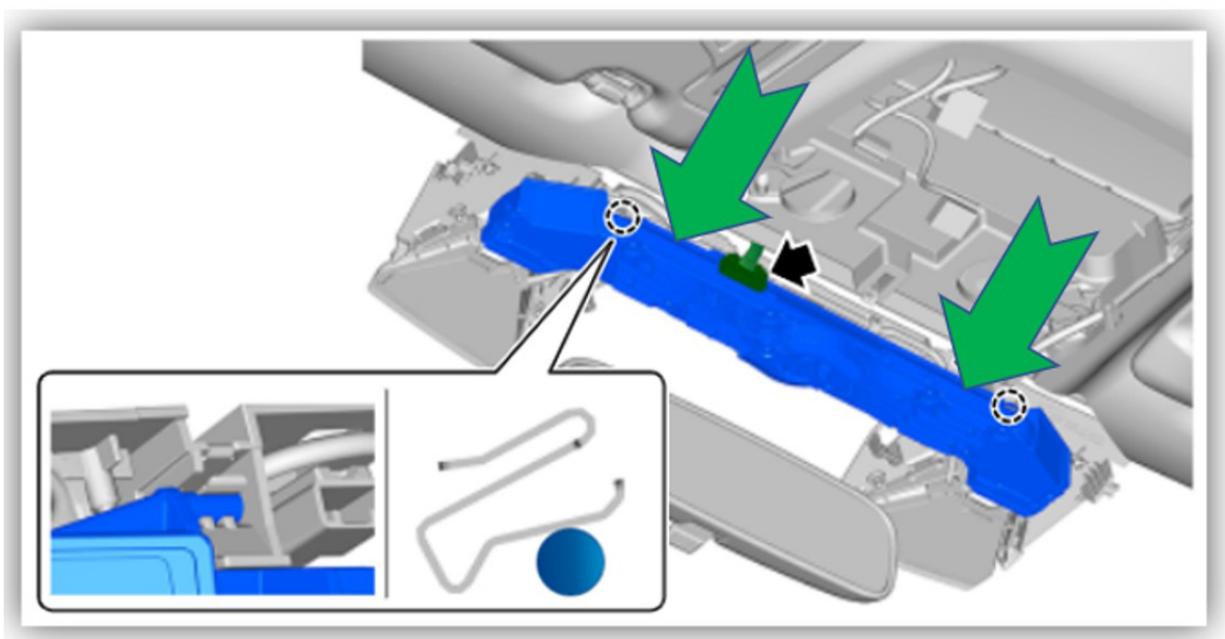
ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
E751SCC000	Accessory Installation Guide	PORT INSTALLATION: 2022MY BRZ ...	May 2, 2022
L101SSJ005	Accessory Installation Guide	2022MY Forester Trailer Hitch ...	May 2, 2022
E751SVC000	Accessory Installation Guide	PORT INSTALLATION: 2022MY WRX ...	May 2, 2022
H001SVC100	Accessory Installation Guide	PORT INSTALLATION: 2022MY WRX ...	May 2, 2022
15-261-20R	Technical Service Bulletin	Reprogramming File Availabilit...	May 2, 2022
H501SVC000	Accessory Installation Guide	PORT INSTALLATION: 2022MY WRX ...	May 2, 2022
Service Diagnostics	2023MY Solterra Service Manual...	Apr 29, 2022	
MSA5B2310A	Owner Manual	2023 Solterra Quick Start Guid...	Apr 29, 2022
MSA5B2309A	Owner Manual	2023MY Solterra Getting Starte...	Apr 29, 2022
MSA5M2331A	Owner Manual	2023MY SolterraCONNECT Subaru ...	Apr 29, 2022
MSA5M2330A	Owner Manual	2023MY Solterra Owner's Manual	Apr 29, 2022
PS93842190XX	Accessory Installation Guide	2023MY Solterra - Body Side Mo...	Apr 27, 2022
PK38942P10SP	Accessory Installation Guide	2023MY Solterra - Splash Guard...	Apr 27, 2022
PS936-42230-XX	Accessory Installation Guide	2023MY Solterra - Door Edge Gu...	Apr 27, 2022
PT91242231	Accessory Installation Guide	2023MY Solterra - Cargo Net	Apr 27, 2022
07-205-22R	Technical Service Bulletin	Subaru Rear Vehicle Detection ...	Apr 27, 2022
15-211-17R	Technical Service Bulletin	Reprogramming File Availabilit...	Apr 26, 2022
09-87-22	Technical Service Bulletin	P0890 TCM Power Relay Sense Ci...	Apr 26, 2022
16-136-22R	Technical Service Bulletin	Vibration & Possible Judder Co...	Apr 26, 2022
12-237-22	Technical Service Bulletin	Loose Fitting Side Windshield ...	Apr 26, 2022
09-86-22	Technical Service Bulletin	P0890 TCM Power Relay Sense Ci...	Apr 22, 2022
H501SVC100	Accessory Installation Guide	2022XMY WRX (with manual trans...	Apr 22, 2022
12-232-21R	Technical Service Bulletin	Trailer Hitch Fascia Panel Tem...	Apr 20, 2022
L101SSJ005	Accessory Installation Guide	2022MY Forester Trailer Hitch	Apr 14, 2022
J201SVC000	Accessory Installation Guide	2022MY WRX Exterior Autodimmin...	Apr 14, 2022
D441SVC000	Accessory Installation Guide	2022MY WRX STI Performance Muf...	Apr 14, 2022
C1010VA001	Accessory Installation Guide	PORT INSTALLATION: 2022MY WRX ...	Apr 14, 2022
F551SFL100	Accessory Installation Guide	PORT INSTALLATION: 2017-2022MY...	Apr 14, 2022
12-235-22	Technical Service Bulletin	Rear License Plate Mounting	Apr 12, 2022
15-283-21R	Technical Service Bulletin	2022 Audio/Navigation & Power ...	Apr 11, 2022
18-223-22	Service Manual Correction	Service Manual Corrections	Apr 6, 2022
18-222-22	Service Manual Correction	Service Manual Corrections	Apr 6, 2022
18-221-22	Service Manual Correction	Service Manual Corrections	Apr 6, 2022
18-220-22	Service Manual Correction	Service Manual Corrections	Apr 6, 2022
02-190-22	Technical Service Bulletin	Proper Diagnosis of Oil Level ...	Mar 29, 2022

All revised publications are highlighted in yellow.

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: _____

SUBARU TECHLINE
Hours of Operation

Monday – Thursday 8:30 am to 7:30 pm
Friday 10:30 am to 5 pm and Saturday 9 am to 3 pm