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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 key fob not communicating with vehicle. His report included diagnostic steps, 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-192945>

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

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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.

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01 QMR of the Month (CONTINUED)

The other regional winners selected from TechShare QMRs submitted during March 2022 were:

- **David Nichols** from **Morrie's Minnetonka Subaru** in Minnetonka, MN
- **John Venegas** from **Sierra Subaru of Monrovia** in Monrovia, CA
- **Trevor Wales** from **Burlington Subaru** in Burlington, VT
- **Luke Wasson** from **VCMA's Colonial Subaru** in South Chesterfield, VA

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



John is shown above (center) after being presented with his \$500.00 Snap-On Gift Card and NOCO Boost GB40. To his right is Bill Kolb Jr. Subaru's Fixed Operations Director Joe Minns. To his left is Subaru Distributors Corporation Field Service Engineer, Jim Colamarino.

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

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Techline recommends that if any component on the CAN network attached to the Central Gateway Control Module (CGW) is replaced, that the CGW be re-registered so it can properly identify and function with other modules.

An example Techline has identified is if the DCM is replaced for a fault code, the remote services associated with the Gen 2 Telematics system may operate erratically or be inoperative. The DCM provides the command to the network through the CGW, and in turn, the CGW distributes the command. If the CGW is not registered to the new device, the command may not be completed.

This situation could happen with any device on the network, including but not limited to the Cockpit Control Unit (CCU), Cockpit Information Display (CID), Body Integrated Unit (BIU), Engine Control Module (ECM, Air Conditioning Control Module, or Keyless Access Control Module (KACM). These devices receive and provide commands to and from the CGW.

It is best practice to perform this action before the repairs are finalized and the vehicle system in question is retested for proper operation. The re-register command can be found in the CGW Work Support using the SSM. Proper battery charge should be checked before issuing this command.

If a component is swapped for another vehicle for testing, a Recovery option is also in work support which will have you re-register the system again.

RE-REGISTER LAN CONNECTION UNIT

1. On [Start] screen, select [Diagnosis].
2. On [Select Vehicle] screen, input the target vehicle information and select [OK].
3. On [Main Menu] screen, select [Each System].
4. On [Select System] screen, select [Central Gateway], and then select [Next].
5. On [Select Function] screen, select [Work Support].
6. Select [Re-register LAN connection unit] on the [Work Support] screen.

Note:

For detailed operation procedures, refer to "Help" of application.

Please be aware that charging cables should not be routed in front of any touch device such as the Denso F10, Harman Headunits, and CP1 Cockpit Display. Routing the cables across the touch screen can cause erratic operation of the screen. This is referred to as 'ghost touch'. This is caused by an electrical pulse through the wire being interpreted as an input by the screen. This unwanted input can cause intermittent screen concerns and even unit crashing. This concern can be traced back to the first Denso F10 Units.

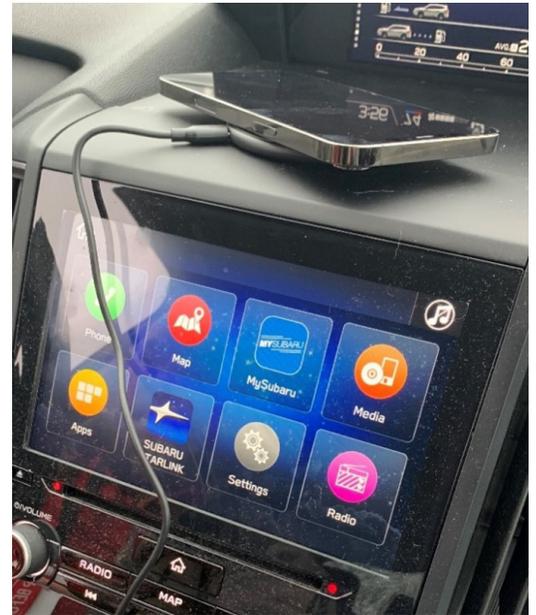


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15 Charging Cables and Touch Screen Concerns (CONTINUED)

If faced with an intermittent screen operation concern, it is important during the customer interview process to ask where the customer's phone/device is kept or mounted. Pay close attention to the windshield/dashboard area for suction cup mounting marks, magnetic mounts or weighted phone mounts. An example of an external device is typically, but not limited to; a third-party GPS, a cell phone mount, or wireless charger. These components are useful hints as to how the vehicle is being used.

Pictured to the right, is an example from Techline of a customer with a wireless charger mounted to the pocket above the Headunit. The Customer concern was intermittent no response from the touch screen and screen distortion. Not only is the charging cord across the screen but the electromagnetic effect of the wireless charger. In some vehicles this may affect speaker performance.



Pictured to the left, is an example of a phone mount and charging set up that could affect the screen responsiveness and behavior. Projection apps can be affected by this concern as well.



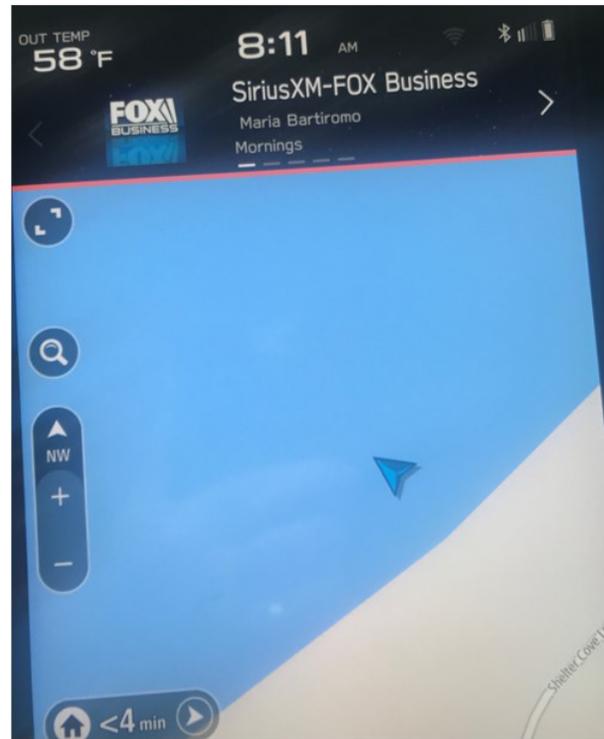
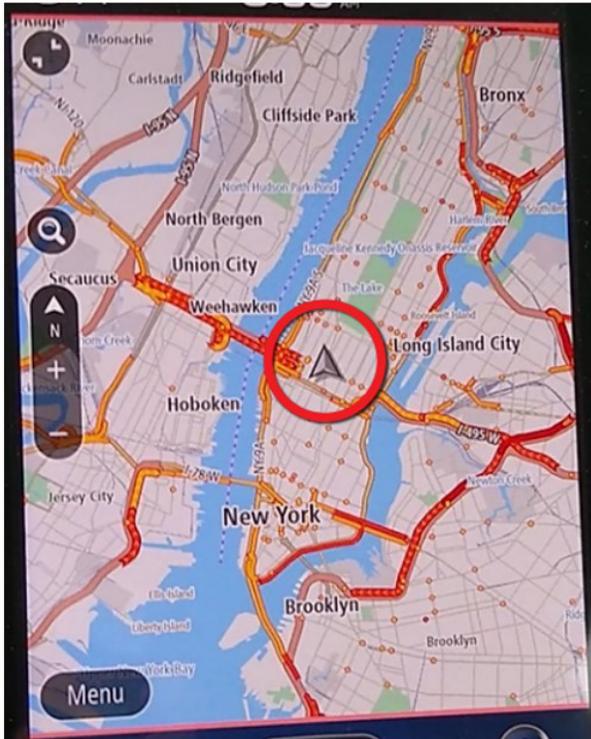
Finally, with the addition of CP1 to the Subaru lineup, there is a much larger screen where multiple inputs can be made. Shown to the right is an example of how a charging cord could affect the screen. This is especially noticeable in radio mode or a screen with several selections such as SXM or Navigation. This could cause a no response situation or screen distortion until the key is cycled and the cord is removed.

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15 CP1 Navigation shows the wrong location

Retailers may receive vehicles with a customer complaint of the navigation showing the wrong location. This condition may show the vehicle a few miles off from the current location, the wrong town, the wrong state, or out in open water. The following instructions will clear the condition and explain how to reset the vehicle properly. Failure to follow these steps will not resynchronize the unit and may lead to unnecessary part replacement.

Below are two examples of common wrong locations seen.



Note: This condition and following process are only relevant if the clock is set to Auto mode and the correct time zone for the area is selected. If the clock is set to manual or the time is incorrect, please review basic GPS antenna integrity inspections.

Note: The default GPS location for CP1 is Manhattan, New York. The arrow icon could be gray, which indicates the vehicles' location is not found by the Navigation satellites (shown above).

Navigation Resyncing procedure.

1. Verify the condition.
2. Install the newest logic as per TSB 15-261-20R; refer to the TSB for the latest version.
3. Document the customers' settings, radio stations, favorites, and saved locations.
4. Perform a 10-minute capacitive discharge.

It is recommended that no short cuts be taken at this time. Failure to meet the allotted capacitive discharge time may not erase the memory and the Technician will find the same condition present when setting the vehicle back up.

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15 CP1 Navigation shows the wrong location (CONTINUED)

5. Set up the customers' settings, radio stations, favorites, and saved locations.
6. Road test the vehicle in as straight of a line as possible for 10 minutes or ten miles, whichever resets the GPS arrow icon from gray to blue. Be mindful of the road test route selected.

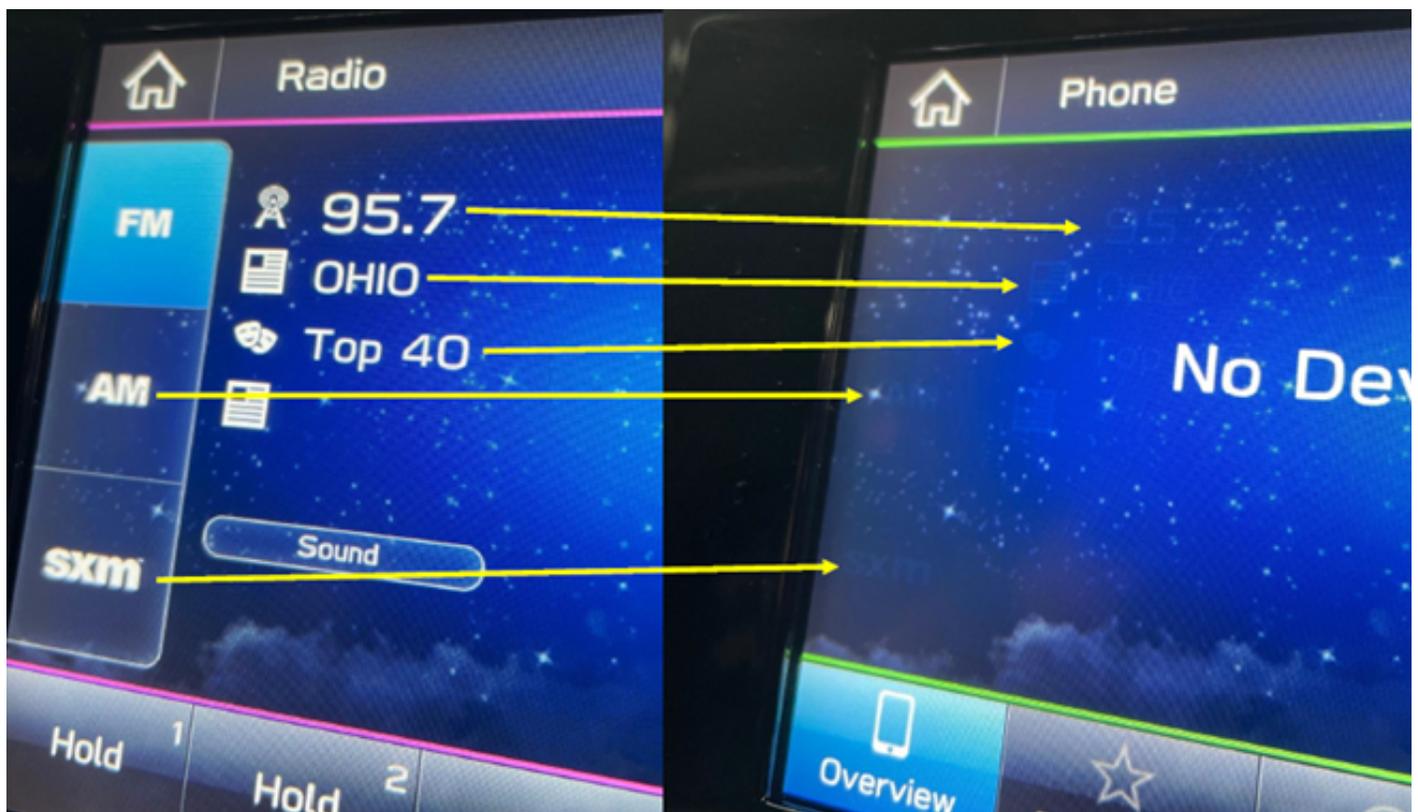
Note: When the arrow icon changes, the vehicle's location will change immediately to where the vehicle presently is.

Note: If the map display does not show the street names, refer to TSB 15-259-20R; Condition 1b.

15 Harman 3.1 Base & Base+ Only, Ghost Image or Double Image

If a customer is concerned with a Ghost Image or Double Image on a Base+ or Base Harman unit, this condition requires no repair at this time. The vender has determined that this condition is non detrimental to the operation of the Headunit and will clear with time as the unit is used. The exchange process is NOT recommended for this concern.

Refer to the images below for an example of the condition.



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15 Harman Unit, bubble screen condition

Recently, there have been an increase in reports of Harman Headunits exhibiting screen bubbling to TechShare and Techline. The root cause of this concern is liquid entering the airgap between the screen and inner Headunit components through the CD player port. Liquid enters down into the air gap of the screen and will cause permanent damage. This may originate from spray bottle splash or liquid cloth wipes coming in contact with the area. The only repair for this concern is the Headunit exchange program.

In the Starlink owner's manual, reference page 7 for cleaning recommendations. No liquid should be put on the display. This means spray disinfectants, liquid cleaners (wipes included), or food products. If the screen is dirty, it should be cleaned with a soft, dry cloth. If a chemical cleaner is needed, see the recommendations listed in the manual.

If you suspect the unit has been damaged by liquid, some Technicians report being able to use their flashlight on an angle to see the liquid behind the clear plastic when the Headunit is off. If liquid can be seen, a Headunit exchange will be needed.



- If juice or similar liquid is spilled on the display, wipe off immediately. Failure to do so may result in product malfunction.
- The screen is easily marked by fingerprints and tends to attract dust, and should therefore be cleaned occasionally. When cleaning, turn off the power, and wipe lightly with a soft, dry cloth. To remove dirt, soak a soft cloth in neutral detergent and squeeze well before wiping. Do not use a wet floor-cloth, organic solvents (benzene, ethanol, thinner, etc.), acids, or alkalis. Using such agents will result in screen deterioration. Furthermore, do not hit the screen or rub it with hard objects.

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Techline has seen an increase in concerns that are in direct relation to aftermarket components. These concerns can range from Telematics RES operation to Infotainment concerns and even as wide as drivability concerns.

It is extremely important to ask the following questions when assessing the vehicle and during the customer interview.

- Is anything installed in the vehicle that was not originally equipped at the time of PDI?
- Did the customer take any belongings with them when they dropped the vehicle off?
- How does the customer operate the vehicle daily?
- Does the concern happen when an aftermarket device is in use?
- Are any devices plugged into the USB/AUX port?

What are Aftermarket Devices?

Techline typically asks: Are there any aftermarket components installed on the vehicle? (Excluding SOA installed accessories). This is a broad question but when asked, take note on **ANYTHING** that did not come with the vehicle at the time of PDI. Does the customer have a dash camera and additional cables? Does the customer have a power inverter in the car for a mobile computer? If so, how are they being supplied power? Are there any other devices being used in the USB port? Thoroughly inspecting the vehicle during the multiple point inspection will help answer these questions. If you have any questions about whether or not a device is aftermarket, contact the Techline.

Have you ever been asked if anything was plugged into the car?

Techline may ask if you interviewed the customer or found any devices plugged into the vehicle. This question includes the USB data port, USB charger port, front accessory port, or Hardwired into the vehicle. This could be an Insurance Tracker, Cellular accessory battery charger, Phone cords, Dash Cameras, or aftermarket lighting. Any of these devices could draw or provide power that may affect vehicle operation.

Example 1: The customer states they have a concern of the Infotainment system having erratic screen operation. When the Technician performed his inspection and diagnosis of the vehicle, they found no aftermarket devices and unable to duplicate the concern. After an interview was performed, it was found that the customer was mounting their phone above the Head unit and charging it. At the time of drop off however, the customer took their phone setup (phone, mount & cord) with them. If the Technician had known, they could have attempted to mimic the customers setup in an effort to duplicate and advised the customer against this.

Example 2: A classic example some Technicians may have heard when talking with Techline, is the case of a 15MY WRX with a fuel rail pressure DTC. When the Technician contacted Techline, they had already completed the DTC Trouble Tree, which led to replacement of the fuel pressure sensor. After replacement, the code returned and was current. Further inspection with the SSM4 found that the actual rail pressure reading was approximately 40% lower than the target rail pressure. The tech completed the Trouble Tree a second time, again it was pointing to a failed pressure sensor. The tech thoroughly inspected connections for the circuit. All were found to be fully seated with no signs of

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tampering. The Technician inspected the battery health, battery terminals, and ECM grounds. Again, all came back with the correct specified results. Not finding any issues, the Technician was asked if there were any aftermarket parts or electrical devices in the vehicle. The Technician mentioned that the vehicle was equipped with aftermarket LED license plate bulbs. The Technician proceeded to remove the LEDs and found the code had moved to history. This was new as previously the code was only current. The Technician went back to check the actual and target fuel pressure PIDs and found that they were now in agreement with one another. With OEM bulbs installed, the code remained in history and did not re-set.

Example 3: A recent report was shared with Techline in reference to a customer concern of the Telematics Remote Engine Start request not being completed. It was later found the customer was using the USB port to charge a battery. When the customer left this in the vehicle there was an abnormal voltage reading at start up. The charge from the batter connected to the USB power supply back feed into the power supply circuit. The Telematics RES saw this abnormal voltage and would not operate as designed.

Techline has provided multiple references over the years of aftermarket components that could affect vehicle systems and performance. Listed below are a few key Tech TIP articles for reference.

February 2022 - GEOTAB
November 2021 - Aftermarket Accessories
April 2020 - OBD port devices
March 2019 - LED disclaimer
March 2019 - Electrical Diagnostics
June 2017 - LED reference

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
V6710BE - card	Service Manual	2023 Solterra Emergency Respon...	30-Jun-22
V6710BE	Service Manual	2023 Solterra Emergency Respon...	30-Jun-22
15-246-19R	Technical Service Bulletin	New Immobilizer Registration P...	30-Jun-22
13-105-22	Technical Service Bulletin	2023 MY Paint Coding Informati...	29-Jun-22
09-88-22	Technical Service Bulletin	P0890 TCM Power Relay Sense Ci...	29-Jun-22
DCA-8000	Other/Miscellaneous	DCA-8000 Diagnostic Battery Ch...	29-Jun-22
DSS-5000	Other/Miscellaneous	DSS-5000 User Guide	29-Jun-22
07-206-22R	Technical Service Bulletin	Auto Headlamp Leveling System ...	28-Jun-22
WRA-20R	Subaru Product/Campaign Bulletin	Rear Seat Belt Webbing Locking	28-Jun-22
07-208-22	Technical Service Bulletin	Metallic Rattle Sound While Op...	27-Jun-22
J121SAN500	Accessory Installation Guide	PORT INSTALLATION: 2023MY Outb...	27-Jun-22
J121SAN100	Accessory Installation Guide	PORT INSTALLATION: 2023MY Outb...	27-Jun-22
PT91242231	Accessory Installation Guide	PORT INSTALLATION: 2023MY Solt...	27-Jun-22
PS93642230	Accessory Installation Guide	PORT INSTALLATION: 2023MY Solt...	27-Jun-22
PT97442231	Accessory Installation Guide	PORT INSTALLATION: 2023MY Solt...	27-Jun-22
15-236-18R	Technical Service Bulletin	Reprogramming File Availabilit...	27-Jun-22
18-224-22	Technical Service Bulletin	Diagnostics Procedure Addition...	27-Jun-22
E5610VC110	Accessory Installation Guide	2022MY WRX Rear Under Diffuser	27-Jun-22
18-225-22	Technical Service Bulletin	Diagnostics Procedure Addition...	27-Jun-22
15-211-17R	Technical Service Bulletin	Reprogramming File Availabilit...	27-Jun-22
L101SXC005	Accessory Installation Guide	PORT INSTALLATION: 2022MY Asce...	27-Jun-22
MSA5M2311A	Owner Manual	2023MY Legacy/Outback Subaru S...	22-Jun-22
MSA5M2303A	Owner Manual	2023MY Legacy Owner's Manual	22-Jun-22
MSA5M2304A	Owner Manual	2023MY Outback Owner's Manual	22-Jun-22
MSA5M2314A	Owner Manual	2023MY Legacy/Outback Eyesight...	22-Jun-22
01-184-22	Technical Service Bulletin	Pre-Delivery Inspection (PDI) ...	14-Jun-22
SPN0004850	Accessory Installation Guide	2019MY Legacy/ Outback - REMOT...	14-Jun-22
J1310VC624	Accessory Installation Guide	2022MY WRX Shift Boot WRX RED...	14-Jun-22
09-89-22R	Technical Service Bulletin	P0890 TCM Power Relay Sense Ci...	14-Jun-22
16-136-22R	Technical Service Bulletin	Vibration & Possible Judder Co...	14-Jun-22
12-239-22	Technical Service Bulletin	Non-Power Rear Gate Stay / Des...	14-Jun-22
09-90-22R	Technical Service Bulletin	P0890 TCM Power Relay Sense Ci...	14-Jun-22
07-206-22	Technical Service Bulletin	Auto Headlamp Leveling System ...	12-Jun-22
TIPS0422	TechTIPS NewsLetter	2022 April TechTIPS Newsletter	10-Jun-22
TSG 900MHz PS	Troubleshooting Guide	Remote Engine Start Systems Tr...	8-Jun-22

All revised publications are highlighted in yellow.

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
MSA5M2301W	Warranty Booklet	2023 Warranty and Maintenance ...	8-Jun-22
E7710VC501	Accessory Installation Guide	2022MY WRX Exhaust Finisher	8-Jun-22
E5610VC010	Accessory Installation Guide	2022MY WRX Rear Side Under Spo...	2-Jun-22
L101SSJ005	Accessory Installation Guide	PORT INSTALLATION: 2019-2022MY...	25-May-22
07-162-19R	Technical Service Bulletin	Automatic Door Lock / Unlock F...	23-May-22
12-288-20R	Technical Service Bulletin	Power Front Seat Cushion Frame...	23-May-22
J101SVC100	Accessory Installation Guide	2022MY WRX - Mud Flaps	19-May-22
16-112-18R	Technical Service Bulletin	Ignition Key Sticking / Design...	19-May-22
MSA5M2312A	Owner Manual	2023MY Impreza Eyesight Owner'...	18-May-22
MSA5B2301A	Owner Manual	2023MY Impreza Getting Started...	18-May-22
MSA5M2309A	Owner Manual	2023MY Impreza Subaru STARLINK...	18-May-22
MSA5M2301A	Owner Manual	2023MY Impreza Owner's Manual	18-May-22
12-203-16R	Technical Service Bulletin	Squeaking Sound from Front Sea...	18-May-22
J131SVC001	Accessory Installation Guide	2017-22MY Impreza (all trims) ...	18-May-22
MSA5M2318A	Owner Manual	2022MY Crosstrek Eyesight Owne...	17-May-22
MSA5B2307A	Owner Manual	2023MY Crosstrek Getting Start...	17-May-22
15-236-18R	Technical Service Bulletin	Reprogramming File Availabilit...	17-May-22
MSA5M2327A	Owner Manual	2023MY Crosstrek Hybrid Eyesig...	17-May-22
MSA5B2308A	Owner Manual	2023MY Crosstrek Hybrid Gettin...	17-May-22
MSA5M2325A	Owner Manual	2023MY Crosstrek Hybrid Subaru...	17-May-22
MSA5M2308A	Owner Manual	2023MY Crosstrek Hybrid Owner'...	17-May-22
WRG-21R	Subaru Product/Campaign Bulletin	Fuel Pump Impeller Failure	17-May-22
15-296-22	Technical Service Bulletin	Denso CP1 MID & HIGH (11.6" Di...	13-May-22
15-273-20R	Technical Service Bulletin	Denso CP1 BASE (Dual 7" Displa...	13-May-22
15-295-22	Technical Service Bulletin	Denso CP1 BASE (Dual 7" Displa...	12-May-22
18-219-22	Technical Service Bulletin	Service Manual Correction / D...	12-May-22
01-167-08R	Technical Service Bulletin	Recommended Materials (All Veh...	11-May-22
MSA5M2319A	Owner Manual	2023MY Crosstrek Subaru STARLI...	10-May-22
MSA5M2307A	Owner Manual	2023MY Crosstrek Owner's Manua...	10-May-22
	Service Diagnostics	2023MY Impreza / Crosstrek Se...	10-May-22
MSA5M2301M	Warranty Booklet	2023 Solterra Warranty and Mai...	9-May-22
18-218-22	Technical Service Bulletin	Service Manual Correction / DT...	9-May-22
4-28-22	Technical Service Bulletin	Squeaking Sound Occurs When Tu...	3-May-22

All revised publications are highlighted in yellow.

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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: _____