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## 01 QMR OF THE MONTH

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

**Kjell McDaniel** from  
**McCurley Integrity Subaru in Pasco, WA**

Kjell submitted a very detailed QMR on his diagnosis and repair of a 2016 Outback with 3300 miles. The customer reported that intermittently they could not get the selector out of park and that multiple warning lights illuminated. Based upon the complaint, Kjell started his diagnosis by confirming if the condition could be duplicated. It could not. Inspecting each control unit for codes, Kjell found every module had a "U" code in history for lost network communications. Believing he had a Controller Area Network (CAN) communications concern, Kjell proceeded to inspect the resistance of the CAN and found it to be 60 ohms as specified. He then proceeded to check the wiring focusing on code U0155 Lost Communication with Instrument Panel Cluster (IPC) Control Module found in the BIU. He found that when the wires going to connector i171 were manipulated the circuit would fail. He determined that the wires associated with the failure were K2 and K22 (connector i171 terminals 2 and 22). Further diagnosis made it clear the fault was at terminal 22 for the CAN LO circuit and a result of poor pin tension at the connector. Kjell replaced the pin using one from the Subaru Terminal Wiring Kit J-47606 and resolved the condition. Kjell supplied clear photos with callouts and comments that showed the before and after repair conditions. These details made it very clear how he arrived at the final result and provided useful feedback for manufacturing.

In appreciation for going the extra mile and sharing his experience with us, Kjell will be the first to receive our newest award item his from FSE:

**A Snap On ATECH2FR100B Electronic Torque Wrench plus credits to be used for additional award items of his choice.**

Any Subaru Service Technician can participate in QMR of the Month. See the February 2013 and January 2016 Tech Tips for full details. You may see your name here in a future Tech Tips.

## 2016 CALENDAR OF SUBARU HOLIDAYS

### Labor Day

Monday, September 5, 2016

### Thanksgiving

Thursday, November 24, 2016



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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, L.L. Bean, Baja, Tribeca, BRZ, XV Crosstrek 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.



QUALITY DRIVEN® SERVICE





As part of our “enhanced” QMR of the Month recognition program, we will be including a photo (whenever available) of the recipient’s award presentation in TIPS. The winner selected from QMR of the Month submissions received during June, was Kjell McDaniel, a Technician at McCurley Integrity Subaru in Pasco, WA. Kjell is shown above receiving his award and is joined by: (l to r), Jane Andrews, Assistant Service Manager, Troy Lively, Parts and Service Director, Steve Tinsley, Service Manager, Henry Field, CEO and Gary Borland, Field Service Engineer, SOA.

Congratulations and **THANK YOU** to June’s QMR of the Month Award recipient!

*Subaru-U is committed not only to the development of future Technicians, but also educating existing Service personnel on how Automotive Education works and how to give back to local programs. The Subaru-U Program is a true partnership and it cannot work unless all parties strive to make it work.*



*Over the next few months, a series of short articles will be released to help inform you, our retailers, about the education side of Subaru-U and what you can do to make the program a success and get the most out of it.*

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## I Can't Mentor Students. Part 2

In the first part of this article, we visited some of the common reasons given by retailers as to why they cannot mentor young student/Technicians. As with everything else, there are two sides to this issue. Some retailers have not only seen the need to work with education but have been proactive in exposing the next generation of Technicians to the rewards and challenges of the industry.

Instead of the reasons why a retailer cannot accommodate apprentices in their facility, let's look at some of the reasons a retailer is willing to do so.

***"I want to mentor because I have an immediate need for one or more Technicians"***- As many retailers are realizing, highly qualified Technicians are not easy to come by. They don't just walk into the store looking for a job and some of the ones out there looking for employment might not be of adequate quality. As we have said in previous articles, growing your own is the best way to get the Technician you need in your store. Bringing students on board to apprentice with your team will allow you to build that apprentice in the areas you need most in your store to service your customers in the most efficient manner possible. But as with everything else, building that Technician can take time and not all of them are a good fit for your store. Quite simply, the longer you wait to vet potential team members and get them into your store, the longer it will take to get them developed into the Technician you need them to be. Development of a quality Technician can take 24 to 36 months depending on when you start them in your shop and the college program they are or will be attending. Even with interviews and references, not all apprentices are going to be a good fit. Working with two or more apprentices at a time gives you flexibility in the event that not all of them make the cut.

***"I would like to work with the automotive program in my area"***- Some SM's and retailer executives do not know where the local programs which have the potential of "feeding" apprentice/Technicians into their stores are even located. A healthy relationship between education and industry is necessary to provide two-way communication. Education needs feedback on the quality of instruction in their respective programs and industry needs feedback on how they are developing and retaining Technicians once they have gone to the workforce. Depending on the location of the store, there may be several programs in the area to choose from. If there are post-secondary programs in a particular area, retailers have the tendency to gravitate towards them. However, without support for the secondary programs, the number of "feeder schools" directing students towards those college programs begins to dwindle. This doesn't mean a store should ignore a college for a high school program, but there is nothing to say a retailer cannot support more than one program. Working with these programs shows them you care about the quality of the next generation of Technician that is coming from them. And, if you have concerns about what their course content is, that gives you a voice to provide feedback to them. If you don't know where the programs are, all you have to do is ask someone. Technicians are usually (but not always) from the area. They should be able to help. NATEF and AYES are always willing to help open lines of communication between schools and retailers. Stores having strong ties to education ensure there is always someone from the store at the advisory meetings because that provides a chance for them to be involved.

Other skilled trades are very proactive in this area. They are competing for the same group of young people having a good grasp of mechanical comprehension. Unless the automotive repair sector is willing to settle for whatever is leftover, then as an industry, we need to show young people the rewarding side of this occupation.

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***“I would like some of my Technicians trained to be a mentor”***- Some retailers know that throwing an apprentice directly onto the line or burning them out on the lube rack is tantamount to pushing them right out of the business and into another skilled trade. Sending them to work with a Technician who is not prepared or capable of being an effective mentor is just as bad. Not all Technicians are going to be mentor material, and that’s alright. But, the ones that do have the ability to be patient and show the apprentice how to accurately diagnose and repair problems while raising up the apprentice are the ones a store needs in order to be successful. If a store has more than one Technician who have this ability, all the better. Every Technician has strengths and weaknesses. Rotating apprentices between Technicians allows a team to play to those strengths and weaknesses. AYES has information on how to become an effective mentor. Anyone interested in contributing to the development of the next generation of Technician can find out how to do so.

As an employee for a retailer, you can look at the Technician crisis and do nothing or be proactive. As it has been stated in previous article, we will not be 100% successful with all of the upcoming Technicians. But, if we choose to do nothing or let others put forth the effort instead, the entire industry loses. It requires an effort on the part of everyone to bring fresh new talent into our industry.

**01** ACCESSING TECHLINE PRE-CALL WORKSHEETS

When accessing any of the Techline Pre-Call Worksheets from Subarunet, it is necessary to use Internet Explorer to properly view these worksheets. If you launch them using Google Chrome, the worksheets will not display properly and you may also get a message asking you to update your Adobe to the newest version. The photo below shows an example of this error message.

Please wait...

If this message is not eventually replaced by the proper contents of the document, your PDF viewer may not be able to display this type of document.

You can upgrade to the latest version of Adobe Reader for Windows®, Mac, or Linux® by visiting [http://www.adobe.com/go/reader\\_download](http://www.adobe.com/go/reader_download).

For more assistance with Adobe Reader visit <http://www.adobe.com/go/acrreader>.

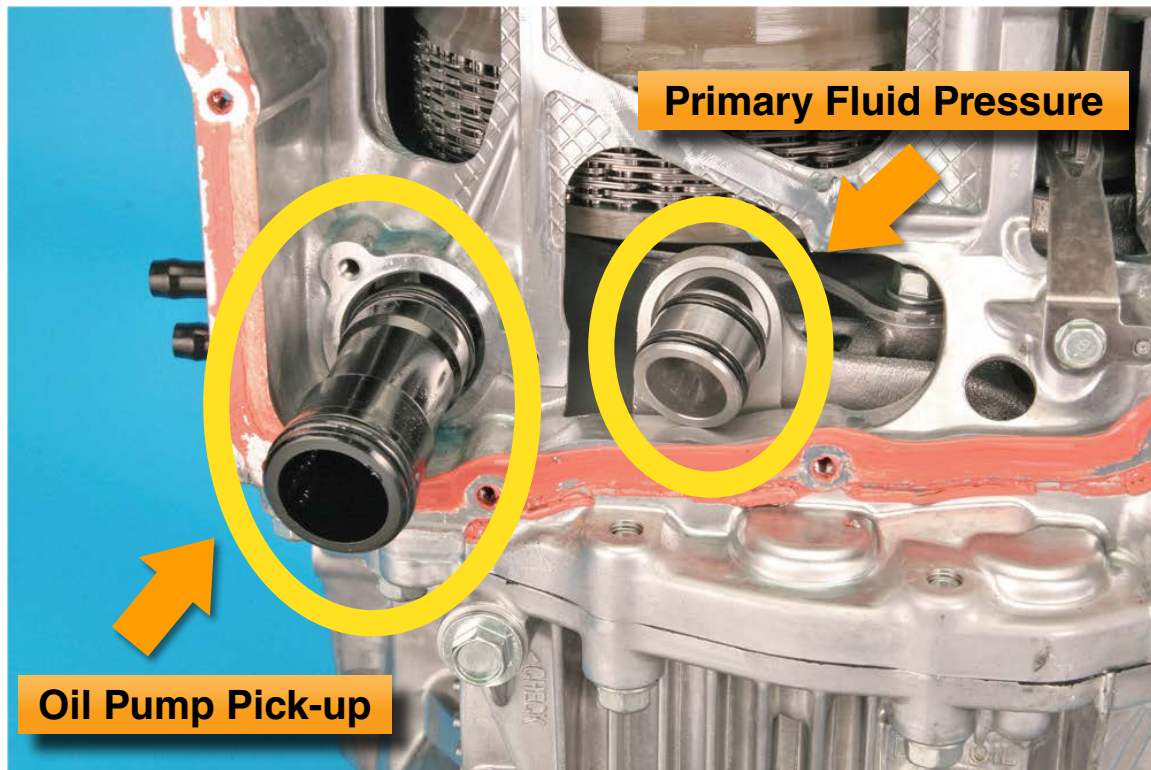
Windows is either a registered trademark or a trademark of Microsoft Corporation in the United States and/or other countries. Mac is a trademark of Apple Inc., registered in the United States and other countries. Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

**03** NO MOVEMENT AFTER VALVE BODY REPLACEMENT ON 10-12 LEGACY/OUTBACK CVT

Techline has received calls regarding no vehicle movement after valve body replacement on the first generation CVT (TR690). After investigation, it was determined the valve body was installed without transferring the primary pressure pipe. Loss of hydraulic fluid pressure will result along with several DTCs, most commonly P0841 and P2746. When removing and installing a new valve body, the primary fluid pressure pipe will need to be transferred to the new valve body. Typically, the pressure pipe will be found in the original valve body. New O-rings are required to be installed when the pressure pipe is removed during valve body service. Figure 1 shows the oil pump pick up and the primary fluid pressure pipes. Servicing the oil pump pick-up tube is not necessary, other than verifying it is fully seated into the CVT case. Refer to the applicable Service Manual for the valve body removal and installation instructions.

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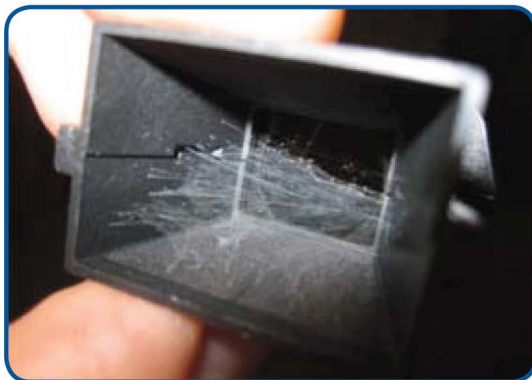


**Figure 1: Generation 1 TR690 Hydraulic Pipes**

The Techline has received multiple reports of stereo cameras being returned with issues of spider webs and debris on the hood assembly. Remember, these parts are serviceable for generation two eyesight systems, this would be 13-14 MY Legacy/Outback and 14-16 MY Forester.

#### 06 EYESIGHT™ SYSTEM TEMPORARY STOP INFORMATION

If you receive a customer concern of their EyeSight system becoming inoperative, the following information and photos may help with a solution. Apparently, small spiders are able to get inside the lens hoods and as shown, build webs which can obstruct the view of the EyeSight system's stereo camera.



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## 06 EYESIGHT REPLACEMENT PARTS

Once you have removed the lens hood assembly from the camera following the procedures in the applicable Service Manual, determine if the webs have contacted the lens itself as shown in the photo on the right. If they have, the lens hood must be replaced. If the webs can be removed **without touching the camera lens**, **CAREFULLY** remove them and reassemble the camera. **IMPORTANT:** Always confirm proper system operation before returning the vehicle to the customer. Refer to the Service Manual or the EyeSight and Keyless Access with Push Button Start (Module 923) Technician Reference Booklet on STIS for further diagnostic information. Damage caused by outside influence is not a matter for warranty.

## 14 PRECAUTIONS WHEN USING THE DST-I BOX

When using the DST-I box, it is very important to first disconnect the Data Link Connector from the vehicle when you are finished. Otherwise, if you disconnect the connector from the DST-I box while the Data Link Connector is still plugged into the vehicle's diagnostic connector, it can set false CAN Communication codes in certain control modules. If this is not noticed by the Technician, it may lead to unnecessary repairs being performed at a later date due to the stored Diagnostic Trouble Codes. If you should accidentally do this, be sure to check each module and delete any stored DTCs. This will not create any vehicle issues, it will just store the CAN Codes.

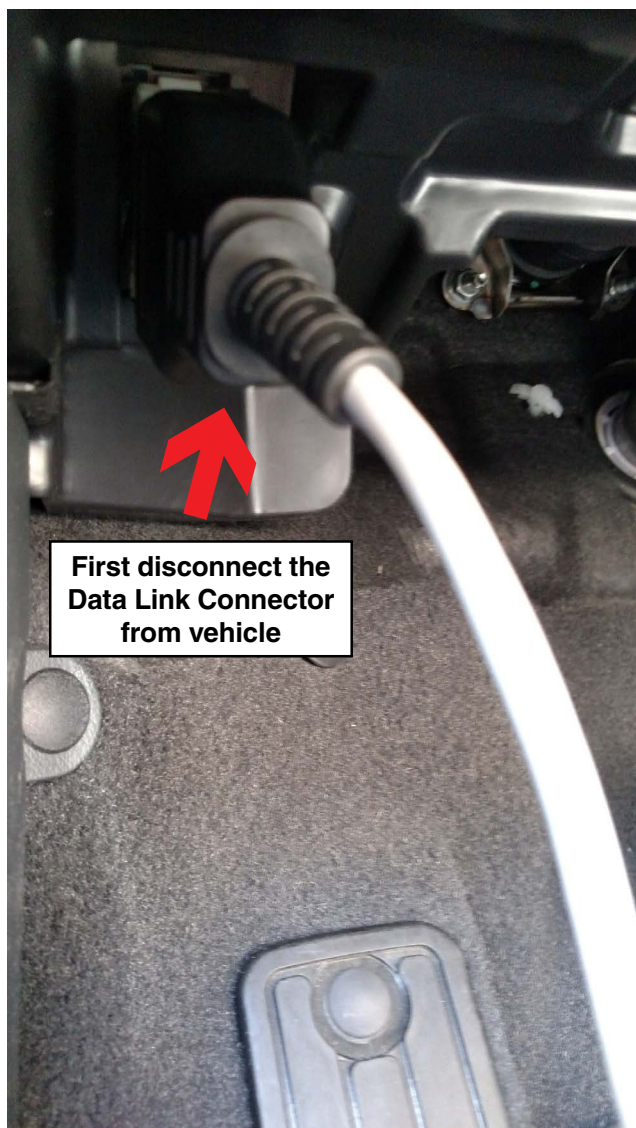
Another area of potential concern is the storage of the cable itself. As with previous Subaru Select Monitors, do not put stress on the harness near the connector ends by wrapping it around the DST-I box. Over time, this can lead to poor terminal contact and eventually broken wires.



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## 14 PRECAUTIONS WHEN USING THE DST-I BOX



## 00 STIS NEW RELEASES

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
14-22-16R	Technical Service Bulletin	Special Service Tool Cross Reference List	25-Aug-16
TKC-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	25-Aug-16

All revised publications are highlighted in yellow.

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
TKB-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	25-Aug-16
TKA-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	25-Aug-16
WQR-53R	Subaru Product / Campaign Bulletin	Takata Front Passenger Air Bag Inflator Replacement	24-Aug-16
18-188-16	Technical Service Bulletin	Service Manual Corrections	24-Aug-16
13-99-16	Technical Service Bulletin	2017MY Paint Coding Information	24-Aug-16
WTH-68	Subaru Product / Campaign Bulletin	Engine No-Start Condition in Cold Climates	23-Aug-16
07-89-15R	Technical Service Bulletin	Interior Fuse Box (F/B) "IG" and "ACC" Relay Replacement for Engine Will Not Crank / Start Condition	23-Aug-16
WTG-67	Subaru Product / Campaign Bulletin	Engine No-Start Condition in Cold Climates	23-Aug-16
01-168-09R	Technical Service Bulletin	Replacement Key and Immobilizer Information for Authorized Subaru Dealers	22-Aug-16
G2530BE	Service Manual Full	2017MY Legacy and Outback Service Manual	19-Aug-16
WQY-60	Subaru Product / Campaign Bulletin	Tribeca Hood May Open While Driving	16-Aug-16
07-112-16	Technical Service Bulletin	New Alternator Assembly to Address DTC P0300	12-Aug-16
02-163-16	Technical Service Bulletin	Inspection and Repair Procedures for AVCS-Related DTCs	12-Aug-16
07-110-16	Technical Service Bulletin	Low-Beam Halogen Headlamp Bulb Replacements	12-Aug-16
16-94-15R	Technical Service Bulletin	Diagnosis and Repair of DTCs P172A and P0B0B	12-Aug-16
J201SSG600	Accessory Installation Guide	2017 Forester Exterior Door Mirror with Approach Light and BSD	11-Aug-16

All revised publications are highlighted in yellow.

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
J201SSG300	Accessory Installation Guide	2017 Forester Exterior Door Mirror with Approach Light	11-Aug-16
J101SAL340	Accessory Installation Guide	2017 Legacy Sports model	11-Aug-16
J101SAL330	Accessory Installation Guide	2015-2017 Legacy (except Sport model)	11-Aug-16
J101SAL200	Accessory Installation Guide	2015-2017 Legacy (except Sport model)	11-Aug-16
J101SAL300	Accessory Installation Guide	2017 Legacy Sports model	11-Aug-16
WTE-66	Subaru Product / Campaign Bulletin	WTE-66 Front Brake Caliper, Wheel Hub and Stabilizer Clamp Attaching Bolt Torque	10-Aug-16
H4510CA150	Accessory Installation Guide	BRZ FOG LAMP KIT	9-Aug-16
J101SVA000...	Accessory Installation Guide	Rear Aero Splash Guard Kit (WRX and WRX STI)	9-Aug-16
WQP-51R	Subaru Product / Campaign Bulletin	Regional Front Passenger Air Bag Inflator Replacement	9-Aug-16
WQM-49R	Subaru Product / Campaign Bulletin	Regional Front Passenger Air Bag Inflator Replacement	9-Aug-16
WQL-48R	Subaru Product / Campaign Bulletin	Front Passenger Air Bag Inflator Replacement	9-Aug-16
WQR-53R	Subaru Product / Campaign Bulletin	Takata Front Passenger Air Bag Inflator Replacement	9-Aug-16
TKC-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	9-Aug-16
TKB-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	9-Aug-16
TKA-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	9-Aug-16
S1046BE	Other / Miscellaneous	2017MY Registration Manual For Immobilizer	5-Aug-16

All revised publications are highlighted in yellow.

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
	HTML Diagnostics	2017MY BRZ Service Manual	5-Aug-16
MSA5T1726A	Service Manual Full	2017 BRZ Body Repair Manual	5-Aug-16
G4440BE	Service Manual Full	2017MY BRZ Service Manual	5-Aug-16
MSA5B1706A	Owner Manual	2017 BRZ Quick Reference Guide	5-Aug-16
MSA5M1716A	Owner Manual	2017 BRZ Audio System Owner's Manual	5-Aug-16
MSA5M1706A	Owner Manual	2017 BRZ Owner's Manual	5-Aug-16
MSA5B1714A	Owner Manual	2017 EyeSight Quick Reference Guide	3-Aug-16
MSA5B1704A	Owner Manual	2017 Outback Quick Reference Guide	3-Aug-16
MSA5B1703A	Owner Manual	2017 Legacy Quick Reference Guide	3-Aug-16
MSA5B1702A	Owner Manual	2017 Forester Quick Reference Guide	3-Aug-16
MSA5M1711A	Owner Manual	2017 Legacy and Outback SUBARU STARLINK 7.0" Multimedia Plus and SUBARU STARLINK 7.0" Multimedia Navigation OM	2-Aug-16
MSA5M1703A	Owner Manual	2017MY Legacy and Outback Owner's Manual	2-Aug-16
WTE-66	Subaru Product / Campaign Bulletin	WTE-66 Repair Procedures	29-Jul-16
SUTTIPSLOC	Other / Miscellaneous	TechTIPS Article Locator Index (Updated 07-2016)	29-Jul-16
TIPS0716	TechTIPS NewsLetter	2016 July TechTIPS Newsletter	29-Jul-16

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.: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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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 6000, Cherry Hill, NJ 08034-6000.

Your Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Dealer's Name: \_\_\_\_\_

City: \_\_\_\_\_

Date: \_\_\_\_\_

Dealer Code: \_\_\_\_\_