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2016 CALENDAR OF SUBARU HOLIDAYS

Thanksgiving

Thursday, November 24, 2016

Holiday Break

Friday, December 23, 2016

Monday, December 26, 2016

New Years

Monday, January 2, 2017

01 QMR OF THE MONTH

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

Jerry Mitchell from **Findlay Subaru in St George, UT**

Jerry submitted a very detailed QMR on his diagnosis and repair of a 2017 Outback with 766 miles. The customer reported the air conditioning was not cooling. Based upon the complaint, Jerry started his diagnosis by confirming the concern. He connected the SSM4 and viewed the data for the air conditioning system. Here, he noted the pressures were reading zero. At this point, Jerry connected the new Robinair HFO-1234yf Recycle, Recovery, and Recharge machine. After noting no charge was remaining in the system, he attempted to pull a vacuum on it as an initial leak check. With the machine in vacuum hold mode, Jerry noted the vacuum could not be maintained. A visual inspection of the system eventually led him to the expansion valve where he found the bolt securing it was not completely seated. Thinking ahead, Jerry took a quick photo of the condition as he found it which was a perfect addition to his QMR. Seeing the condition as found is always the most helpful for quality assurance purposes. Finding the bolt to be binding during removal indicated to Jerry the root cause related to incorrectly cut or damaged threads which Jerry then addressed to correct the condition and cure the leak. Jerry's report included many clear photos showing 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, Jerry will be receiving the following from his Field Service Engineer (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 TechTIPS for full details. You may see your name here in a future TechTIPS.

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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 August was Jerry Mitchell, a Technician at Findlay Subaru in St. George, UT. Jerry is shown above receiving his award and is joined by: (l to r), Eric Atkinson, Service Manager, Jerry, David Gourley, General Manager, Jim Jones, Service Advisor and Rob Wilkes Field, Service Engineer, Subaru of America.

Congratulations and **THANK YOU** to August’s QMR of the Month Award recipient, Jerry Mitchell!!!!

In order for Subaru Techline to best serve our retailers, it is necessary that the Technician meet the following criteria **before** dialing in for assistance. Following this guideline can help reduce call wait times, decrease comebacks, and increase customer satisfaction.

- The vehicle should be available to the Technician for testing while on the phone with the Techline representative, if appropriate.
- All associated **pre-call** work sheets should be completed. These are located on Subarunet under Service Operations & Technical.
- If there are DTCs, the Technician should have a documented diagnostic path with exact answers. Stating “good” or “within specification” is not acceptable when a numerical value is requested.
- Always save Freeze Frame Data (FFD) electronically before clearing any DTCs. Printing is not recommended as it can omit important information. SSM4 use is recommended.

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01 CALLING THE TECHLINE REVISITED

- Always try to capture a data stream (SSM4 File) every time you are attempting to duplicate a condition. This is especially important when diagnosing intermittent issues.
- Always search STIS for common or known issues via TechTips, Service Bulletins, and Campaign Bulletins.
- When a case number is given to a Technician, it serves as a means to document vehicle issues and repairs. It does NOT give authorization to replace anything. If your diagnosis leads you to needing to replace a component and your testing results have been reviewed with the Techline Representative, it is still suggested you discuss this with your Service Manager. When in doubt about the need for an authorization, consult the Policy and Procedures manual to be sure you are following recommended procedures.
- Oil consumption issues fall within the guidelines of Technical Service Bulletin 02-157-14R do not need to be called in to the Techline unless you require assistance as stated at the bottom of the Consolidated Oil Consumption Form found on Subarunet.
- The only Authorizations the Techline can provide are for Warrantable Glass and Paint issues. They are to be submitted through the Authorization Request (AR) process also found on Subarunet.
- When you encounter a Customer complaint of a normal condition that you can verify on a comparable model, there is no need to call in for a case number to document this. If you have completed a repair successfully, there is no need to call and get a case number. It is suggested you complete and submit a QMR in these cases.

The Technical Support Line (Techline) is here to provide assistance to our retailers ONLY.

The Techline phone number should never be given to the Customer!! We can assist Authorized Subaru Retailer personnel ONLY. Customers must be directed to Customer Retailer Services (CRS) by contacting them online or by phone at:

<http://www.subaru.com/customer-support.html> or by calling **1-800-782-2783**.

01 SUBARU-U

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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Am I Mentor Material?

As we look at the immediate and future shortage of automotive Technicians, not only at Subaru retailers but in the industry as a whole, it should be obvious by now that the hiring and recruiting practices which have been widely accepted and used by the industry in the past are no longer effective. Doing the math, 50% of nothing is nothing. Technicians are leaving the workforce at a much faster rate than they are being replaced. If this continues, the projections the Bureau of Labor Statistics (BLS) have put out will probably wind up being on the conservative side. Headhunting and recruiting existing Technicians is no longer a viable option.

If one looks at the skilled trades sector in the United States, most of them require some sort of apprenticeship program to properly train them for the position before they are considered a journeyman in that skill. However, automotive Technicians are not required to go through this process in order to repair customer vehicles. Ours is a self-regulating industry that relies on each Technician to prove their competency in maintenance. How can a new Technician reach that level of competency safely and without excessive loss of property, damage to equipment or injury to one's self or others?

Providing mentorship for an aspiring Technician is a huge responsibility, one which has been carried out admirably by experienced Technicians for decades. What does it take to truly be an effective Mentor? Many Service Managers would think their Technician who has the greatest amount of training, been around the longest or does the job fastest would be an obvious choice. Even though that might be the case in some situations, it is not always the best move for an organization. Mentorship goes way beyond that. It is the ability to be able to patiently work with someone who has the basic knowledge but lacks the ability to put that knowledge into practice effectively. For an experienced Technician to be able to pass their skills on to the next generation can be an incredibly rewarding experience, but it also comes with a great amount of responsibility and is not a task to be taken lightly. Throwing an inexperienced intern straight onto a job without supervision is tantamount to throwing the Christians to the lions. Without a mentor, the organization is setting the intern up for failure. Mistakes will be made. It is the job of the mentor to supervise the work of the intern and to ensure that not only the quality of work they put out is acceptable, but also that their general work practices, housekeeping and communication skills with customers and their fellow Technicians develop properly. Not everyone is mentor material. It takes not only technical skills, but also people skills to be effective. If you, as a Technician, are interested in being a mentor or you, as a Service Manager, are trying to decide which of your Technicians (there can be more than one Mentor) would be the most effective at the job then consider the following:

1. Do you, as a Technician, present yourself in a professional manner to your customers and your fellow workers?
2. Do you, as a Technician, maintain a clean and safe work environment?
3. Do you, as a Technician, use the Service Manuals and other resources available to you to accurately diagnose the problem?
4. Do you, as a Technician, value "fixed right first time" over trying to beat the flat rate?
5. Do you, as a Technician, have the patience to work with someone who might not be on the same technical par as you?

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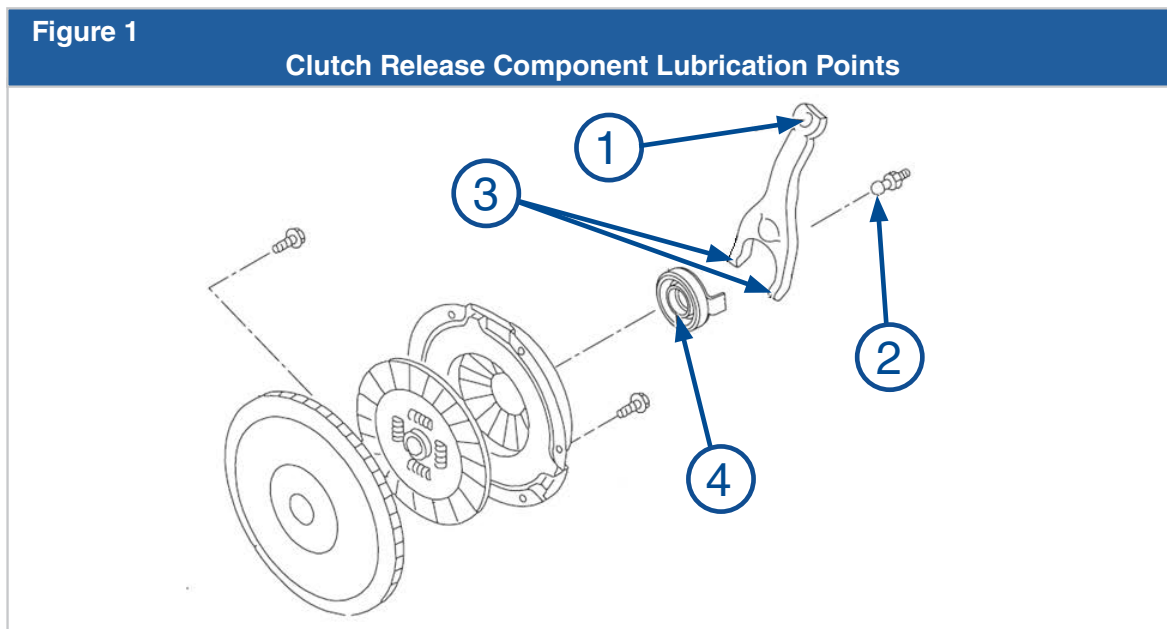
6. Do you, as a Technician, have the ability to explain procedure and methodology and convey it in a manner another person can easily understand?
7. Do you, as a Technician, have the ability to keep accurate records and log information in a timely manner?

If you can answer yes to all of those, then you are an excellent candidate for becoming a Mentor. Even someone who could not answer yes to all of them can be one. However, even if a Technician can answer yes to all of them, it makes sense to be properly trained to be the most effective Mentor one can be. There are training programs available to make sure that your organization gets the most out of interning young Technicians. AYES periodically provides mentor training classes as a service to industry to ensure that Mentors know what is expected of them. If you are interested, contact your local AYES representative to find out when the next class is scheduled in your area.

It cannot be impressed enough how important a job it is to be a Mentor. If you have what it takes, the reward is immeasurable and you are helping ensure the future of the next Technician following you.

03 CLUTCH RELEASE COMPONENT LUBRICATION

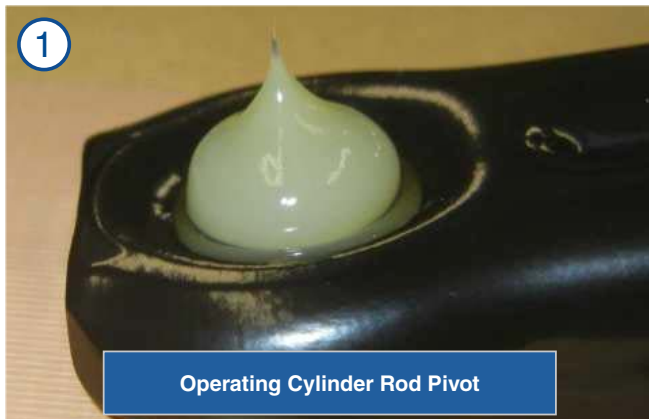
When removing a manual transmission for clutch servicing, it is required that the clutch release components are cleaned, inspected, and lubricated in accordance with the applicable Service Manual. Cleaning the transmission case surrounding the clutch assembly is necessary to prevent debris from contaminating the lubricant and interfering with release bearing operation. Thoroughly inspect the transmission case where the release bearing travels for damage or wear marks which could interfere with release bearing operation. Failure to follow these procedures can result in squeaks, rattles, increased clutch pedal effort, and ultimately an unnecessary comeback. **Figure 1** shows the points of lubrication that are critical in preventing noises and ensuring proper operation of the clutch release components.



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03 CLUTCH RELEASE COMPONENT LUBRICATION

Below are images labeled 1, 2, 3, and 4 that correspond with Figure 1. Each image shows the required lubrication point in detail. You can use these images as a reference when applying the approved lubricant. To locate the correct lubricant (grease), review the applicable Service Manual and if necessary use Service Bulletin 01-167-08R for approved equivalents.



07 IGNITION KEY CANNOT BE REMOVED FROM IGNITION SWITCH

NOTE: Inspection of this item only applies to models without a push button ignition switch.

If you confirm a customer complaint of the ignition key not able to be removed from the ignition switch, check the following PID (**Figure 1**) in the **Body Integrated Unit** current data display:

Figure 1

Key lock solenoid output	Key lock solenoid output ON/OFF status. Body integrated unit output value. Solenoid is activated to set this item to ON when the key is inserted with the shift lever in other than P range.	Lock/Unlock	Model without keyless access with push button start system
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07

IGNITION KEY CANNOT BE REMOVED FROM IGNITION SWITCH

If the **key lock solenoid output** reads as **Lock**, the next step in diagnosis should be to inspect the following PID (**Figure 2**):

Figure 2

P SW	P range switch ON/OFF status. Body integrated unit input value. Set to ON in the P range.	ON/OFF
------	---	--------

P SW is the park range switch, located in the AT shifter assembly. If the shifter is in the park position and this PID remains **OFF**, suspect an issue with the park range switch or circuit. Inspect for drink spills, previous interior repairs, modifications, and shifter position. Troubleshooting procedures can be found in the applicable Service Manual under the AT Shift Lock Control System > KEY INTERLOCK CANNOT BE LOCKED OR RELEASED.

07

QUICK REFERENCE IMMOBILIZER TYPE

A type: Key start with security code

B type: Key start with no security code

D type: Push start with no security code

C and E type are for Canada vehicles

Immobilizer system in All SUBARU Vehicles ¹²		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY
Legacy	Key Access type	A type										B type	
	keyless Access with push-button start system											D type	
Tribeca	Key Access type	A type											
IMPREZA	Key Access type					A type				B type			
	keyless Access with push-button start system									D 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			
HEV	keyless Access with push-button start system									D type			
BRZ	Key Access type									B type			
	keyless Access with push-button start system									D type			
CANADA model		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY
Legacy/GBK	Key Access type	A type											E type

07

REPLACING B-TYPE BIU

The Techline has been receiving calls from Technicians replacing BIUs where the keys cannot be successfully registered. Keep in mind on a B-type system, the BIU and combination meter store key IDs when programmed. These key IDs remain stored and must match when installing a new component to the immobilizer. If the car came with three keys, then the BIU and combination meter will have three key IDs stored. When replacing a BIU, you should collect all the keys from the customer. However, if you did not do that and are looking to program the BIU, you will need to delete the keys from the immobilizer before installing the new BIU. When you program the new BIU you will only need the one key from the ignition which was not deleted, program that key, then when all the original keys are obtained, you can

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program them. This could also be used if the customer has lost a key and does not want to replace it but wants to repair the car. However, if you run into a scenario where you cannot communicate with the BIU to delete the keys, then you will need to get the original keys that were programmed to the vehicle to successfully finish the programming.

Example 1: A 2015 Legacy comes in and has BIU failure. **You cannot communicate with the BIU;** the customer has supplied three original keys. Replace the BIU and program the keys.

Example 2: A 2015 Outback comes in and has been diagnosed with a BIU issue. **Communication is normal.** The customer only has one key for the car all others were lost. Go into immobilizer and delete all keys. This will delete all except the one in the ignition. Next, install the new BIU and program the only one key you have. Extra keys can be added upon the customer's request.

Example 3: A 2015 Forester comes in and has been diagnosed as having a faulty BIU. **Communication is normal.** The customer has supplied all original keys to the Technician. Replace the BIU and program the keys. When replacing a BIU always follow the applicable Service Manual procedure.

Information below can be found in the Immobilizer Registration Manual. Navigate to STIS- online reference- publication type- other/miscellaneous- search.

S1001BE

2005-2015MY Registration Manual For Immobilizer [\[Description...\]](#)[\[View PDF\]](#)

S1046BE

2017MY Registration Manual For Immobilizer [\[Description...\]](#)[\[View PDF\]](#)

2. Parts replacement table

Note:

- When performing each registration, make sure that the ignition switch is ON, and the driver's door is kept open. If ignition switch is OFF or all doors are closed, Body integrated unit will enter sleep mode, therefore each registration can not be performed.
- For vehicle with a remote control engine starter, perform "Registering Remote Control Engine Starter" when the BIU is replaced.

<When only one part is failed or lost>

Destination		Parts failed/lost						Parts required to replace or prepared when Items on the left fail					Procedures to perform after parts replacement			
		Key		Body integrated unit	Combination meter	Security CU	ECM	Key	Body integrated unit	Combination meter	Security CU	ECM	(1)	(2)	(3)	(4)
U.K./Canada	Others	Not all	All													
			X					One registered key					"Immobilizer Key ID deletion" (Deleting lost keys)	"Immobilizer system registration" (Registering keys needed)		
				X				All registered keys	X				"Immobilizer system registration"			
						X		One registered key			X		"Meter/SCU registration"			
							X	One registered key				X	"Engine ECU registration"			
		X						One registered key					"Immobilizer Key ID deletion" (Deleting lost keys)	"Immobilizer system registration" (Registering keys needed)		
				X				All registered keys	X				"Immobilizer system registration"			
					X			One registered key		X			"Meter/SCU registration"			
						X		One registered key			X		"Engine ECU registration"			

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B type

REGIST

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
01-177-16	Technical Service Bulletin	DTC P219A: Additional Diagnostic Step Added	26-Oct-16
L1171BE	Service Manual Full	2017 Crosstrek Body Repair Manual	25-Oct-16
U1290BE	Service Manual Full	2017MY Crosstrek New Car Information	25-Oct-16
G1290BE	Service Manual Full	2017MY Crosstrek Service Manual	25-Oct-16
	HTML Diagnostics	2017 Crosstrek Service Manual	25-Oct-16
MSA5B1707A	Owner Manual	2017MY Crosstrek Quick Reference Guide	25-Oct-16
MSA5M1719A	Owner Manual	2017MY Crosstrek SUBARU STARLINK 7.0" Multimedia Plus and Multimedia Navigation System	24-Oct-16
MSA5M1718A	Owner Manual	2017MY Crosstrek EyeSight Owner's Manual	24-Oct-16
MSA5M1707A	Owner Manual	2017MY Crosstrek Owner's Manual	24-Oct-16
02-157-14R	Technical Service Bulletin	Engine Oil Consumption	19-Oct-16
07-114-16	Technical Service Bulletin	Power Seat Memory Feature Operating Concerns	13-Oct-16
J1010FL300	Accessory Installation Guide	Impreza Sport Mesh Grille	12-Oct-16
E721SFL000...	Accessory Installation Guide	2017 Impreza Subaru Impreza Trunk Spoiler Assembly	7-Oct-16
WQW-58R	Subaru Product / Campaign Bulletin	Engine Control Module (ECM) Reprogramming	7-Oct-16
12-208-16	Technical Service Bulletin	Improvement to Power Rear Gate (PRG) Operation	6-Oct-16
MSA5B1706A	Owner Manual	2017 BRZ Quick Reference Guide	5-Oct-16

All revised publications are highlighted in yellow.

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
TKC-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	3-Oct-16
TKB-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	3-Oct-16
TKA-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	3-Oct-16
WTJ-70	Subaru Product / Campaign Bulletin	Service Campaign Forester CVT Low Fluid Level	3-Oct-16
01-168-09R	Technical Service Bulletin	Replacement Key and Immobilizer Information for Authorized Subaru Dealers	30-Sep-16
MSA5P2928C	Technician Reference Booklet	2017 Systems New Technology Training	29-Sep-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.: _____

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: _____