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SUBARU TECHLINE HOLIDAYS & HOURS OF OPERATION

Independence Day (Closed)

Tuesday, July 4, 2017

Labor Day (Closed)

Monday, September 4, 2017

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

SUBARU OF AMERICA



ANNIVERSARY

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01 QMR OF THE MONTH

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

Timothy Whalen from **Cannon Subaru in Lakeland, FL**

Timothy submitted a very detailed QMR on his diagnosis and repair of a 2017 Forester with just 86 miles. The customer presented with a complaint simply stating the car won't accelerate. Timothy inspected the Forester and confirmed the condition, noting the brakes seemed to be applied continually. Using the SSM4, he checked for codes and found a C1742 Wheel Cylinder Pressure Sensor code. Following the diagnostic troubleshooting in the Service Manual, he found 16 Bar of pressure at both front wheel pressure sensors. Clearing the code caused the brakes to release. A short drive in the parking lot showed the pressure would begin to rise again and the DTC would trigger. Returning to the diagnostics, Timothy replaced the VDC Control Module and Hydraulic Control Unit (VDCCM&H/U). He was surprised when the condition seemed to return as the pressure began to steadily rise again following replacement of the VDCCM&H/U. At this point he disconnected the vacuum line at the brake booster and the pressures dropped to zero. Timothy replaced the brake booster and the condition no longer occurred. An extended road test monitoring the pressures confirmed the repair and the vehicle was released. The QMR report entered made it clear how Timothy arrived at the root cause and provided useful feedback for Subaru Corporation and the vendor.

In appreciation for going the extra mile and sharing his experience with us, Timothy 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.



SUBARU

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01 QMR OF THE MONTH AWARD PRESENTATION

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 April, was Timothy Whalen, a Technician at Cannon Subaru in Lakeland, Florida. Timothy is accompanied by: (l to r), General Manager Dave Mulder, Service Manager Jonathan Siegel, (Award Recipient Timothy Whalen) along with Brent Roberts, Field Service Engineer, SOA.



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

01 APPLICATION CHART FOR IMMOBILIZER SYSTEM

US model		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY	2017MY	2018MY	
Legacy OBK	Key Start type	A type										B type				
	keyless Access with push-button start system									D type						
Tribeca	Key Start type	A type														
IMPREZA Crosstrek	Key Start type					A type				B type						
	keyless Access with push-button start system											D type				
WRX/STI	Key Start type					A type				B type						
	keyless Access with push-button start system											D type				
Forester	Key Start 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 Start type									X type						
	keyless Access with push-button start system									Y type						
CANADA model		2005MY	2006MY	2007MY	2008MY	2009MY	2010MY	2011MY	2012MY	2013MY	2014MY	2015MY	2016MY	2017MY	2018MY	
Legacy/OBK	Key Start type	A type										E type				
IMPREZA Crosstrek	Key Access type	Same as US model													E type	

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

For Information and program details see: Subaru-U.com



Millennials in Automotive Service

One of the biggest challenges for businesses today is integrating the Millennials or Gen Y twenty-somethings into a Baby Boomer culture. They are the newest generation to enter the labor market, arriving with their distinct ideas about what they expect from their jobs. They are our future, our next generation of revenue-generators. So, who are the Millennials and how do we manage their expectations while maintaining high performing organizations?

The Millennial Generation was born between 1977 and 1998. Millennials tend to display an abundance of self-confidence and believe they are highly valuable to any organization from day one. They are extremely focused on developing themselves and thrive on learning new job skills, always setting new challenges to achieve. They are also the “can do” generation, never worrying about failure, for they see themselves as running the world and work environments.

Millennials are team-oriented, banding together to socialize in groups. In school, this generation was taught lessons using a cooperative learning style. Therefore, they feel comfortable working on teams and want to make friends with the people at work. They believe a team can accomplish more and create a better result. They also grew up in a multi-cultural world which enables them to work well on a team with diverse co-workers. They communicate in snippets through instant messaging, texting. Of all the talents Millennials bring to the workplace, being technologically savvy is their greatest skill contribution. They are constantly connected as they listen to their iPods or send text messages, all while working on a critical project. Social media is at the heart of their world.

Another characteristic of the Millennials is their need for constant feedback and, praise. They were reassured daily of their achievements and were recognized with stars and trophies for those successes. They want to be heard. In giving critical feedback, managers will need to first compliment Millennials before they will listen to any criticism. They also have little patience for ambiguity, so directions during feedback sessions must be clear and specific. Organizations will be more successful in delivering performance milestones on a more frequent basis than once a year. Once a week or month will work. The feedback sessions must be interactive, so that the Millennial is presented the opportunity to share their feelings and ideas. Brainstorming together could be a very effective technique.

With 75 million Millennials entering the workplace, we have no choice but to learn how to recruit, grow and retain these workers. If not, companies will lose talented employees who, because of their strong networking and technological capabilities, can be the most productive generation to date.

TECH TIPS GREATEST TIPS

For the second edition of Tech Tips Greatest Tips we chose BRAKE OVERRIDE SYSTEM OPERATION AND HESITATION COMPLAINTS. This Tip is still used daily by the Techline. The Brake Override system is still used on current models. Remember if you get a concern of no acceleration/ hesitation or a stalling type feeling to look into brake override. The stalling feeling can usually be diagnosed with one simple question, did the car actually have to be restarted? If it did stall, it's not Brake Override as this will not stall the car. If the car did not stall there is a good chance the brake override was activated, the next step should be looking into a customer resting their foot on the brake pedal while accelerating.

06 BRAKE OVERRIDE SYSTEM OPERATION AND HESITATION COMPLAINTS

Should you encounter a hesitation-type complaint on a 2013MY, BRZ, Legacy, Outback, XV Crosstrek, Impreza or Tribeca, don't overlook the possibility it may be customer-induced due to the operation of the Brake Override System (BOS). This feature was incorporated to avoid accidental acceleration.

Simply stated, if the brake pedal and accelerator pedal are applied at the same time, under specific conditions, engine operation and acceleration will be reduced. This reduced acceleration could be interpreted by a customer as a hesitation. During the time the BOS is activated, any further accelerator pedal application will not increase the vehicle's acceleration. Once the vehicle speed is at 0 MPH, the accelerator pedal must be fully released to return the system to normal operation.

There are some parameters which can be monitored with the SSM to determine if this might be the cause of the customer's complaint. One of the indications this may be the issue would be the customer's actual driveability complaint, but without any related DTCs in memory when the OBD system is checked. If a DTC is found, normal diagnosis should be performed using the appropriate Service Manual procedure.

Information about the operation of the BOS can be reviewed in Training Module 501 pages 87-90. It might be a good time to review this and become familiar with it.

The customer can also Google "Subaru Brake Override System" for an explanation of this system.

07 B1650 PROPER DIAGNOSIS

Techline has been receiving calls with the airbag light on and a DTC B1650 stored in the Airbag Control Module. The first step in the Service Manual trouble tree/flow chart for this DTC says to "Read the DTC of the Occupant Detection System." This step is often over looked. When you have this DTC, think of this as having a P0700 in the ECM (Engine Control Module). When there is a P0700 in the ECM, you should know to look for any stored DTCs in the TCM (Transmission Control Module). When there is a B1650 in the Airbag Control Module, always read the DTC(s) in the Occupant Detection Control Module. If there are DTC(s) in the Occupant Detection Control Module, follow the trouble tree/flow chart diagnostics. If there are no DTCs in the Occupant Detection module, continue diagnosis according to the Service Manual.

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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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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
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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.

15 LED LIGHTING

The Techline continues to receive calls where a customer has decided to use an aftermarket lighting source. We have seen multiple issues when LED or HID lights are added to the vehicle. Most common issues include but are not limited to DTCs, abnormal electronic component operation and control module failure. It is recommended that during your pre-inspection any odd looking light source be verified original before moving forward with diagnosis. If aftermarket lighting is identified, we would recommend returning the vehicle to factory specifications or offer an LED Upgrade – Map and Dome Light Kit (H461SFL100), if applicable, then proceed with the appropriate diagnostics.



Pictures of aftermarket bulbs.

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The Techline has received multiple calls from Technicians inquiring about CVTF (CVT Fluid) intervals. The CVTF is a “lifetime” fluid and has no maintenance interval. In the case the customer is towing with the vehicle repeatedly, the recommendation from Subaru Corporation is to replace the CVTF every 25,000 miles. Other than repeated towing, there is no reason to replace the CVTF unless there is an issue with the CVT assembly.

CVTF inspection intervals as outlined in the applicable Service Manual maintenance schedule require inspection for external CVTF leakage only.

While there are fluid inspection guidelines found in the Service Manual section for CVTF Inspection, these fluid inspections are only necessary under the following conditions:

- CVTF leakage is found during inspection and as a result, the CVT may have been operated with low fluid level
- CVT has been used for trailer towing and as a result, CVTF is being inspected as part of CVTF maintenance replacement
- The CVT has experienced some type of internal failure requiring CVTF replacement as part of the repair of this failure.

See inspection below from a 15 Outback Service Manual:

The screenshot shows a web-based technical manual interface. At the top, there is a navigation bar with a dropdown menu set to "TRANSMISSION/TRANSAXLE" and links for "TOP", "Visual Contents", "Index", "DTC", and "Wiring Diagram". On the left side, there is a sidebar menu with a "Synchronization" button and a tree view containing: "CONTROL SYSTEMS", "CONTINUOUSLY VARIABLE TR" (partially visible), "General Description", "CVTF", "INSPECTION" (highlighted with a red box), "ADJUSTMENT", "REPLACEMENT", and "CONDITION CHECK". The main content area on the right displays the breadcrumb "CONTINUOUSLY VARIABLE TRANSMISSION(TR580) > CVTF" followed by the heading "INSPECTION" in red. Below the heading, the text reads: "Check for leakage of CVTF from transmission."

Continuously variable transmission fluid

See information to right from the 15 Outback Owner's Manual:

There is no fluid level gauge. It is unnecessary to check the continuously variable transmission fluid level. However, if necessary, consult your SUBARU dealer for inspection.

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
MSA5B1810A	Owner Manual	2018 Forester, WRX and WRX STI...	9-Jun-17
MSA5B1814A	Owner Manual	2018 EyeSight Quick Guide	9-Jun-17
MSA5B1805A	Owner Manual	2018MY WRX and WRX STI Quick G...	9-Jun-17
E361SFL400	Accessory Installation Guide	Crossbar Kit	8-Jun-17
H4510FL000	Accessory Installation Guide	FOG LAMP KIT	8-Jun-17
E101SFL100	Accessory Installation Guide	2018 Crosstrek Sill Plates	8-Jun-17
C1010FL000	Accessory Installation Guide	2018 Crosstrek STI Leather Shi...	8-Jun-17
J101SFL600	Accessory Installation Guide	2018 Crosstrek Splash guard	8-Jun-17
E771SFL100	Accessory Installation Guide	2018 Crosstrek Bumper Cover	8-Jun-17
MSA5M1815A	Owner Manual	2018MY WRX and WRX STI EyeSigh...	7-Jun-17
MSA5M1810A	Owner Manual	2018 Forester, WRX and WRX STI...	7-Jun-17
MSA5M1805A	Owner Manual	2018MY WRX and WRX STI Owner's...	6-Jun-17
MSA5T1865A	Service Manual	2018MY WRX and WRX STI Body Re...	6-Jun-17
06-55-16R	Technical Service Bulletin	Design Change to Stop Light Sw...	6-Jun-17
MSA5T1854A	Service Manual	2018MY WRX and WRX STI New Car...	6-Jun-17
	Service Diagnostics	2018MY WRX and WRX STI Service...	6-Jun-17
G1700BE	Service Manual	2018MY WRX and WRX STI Service...	5-Jun-17

All revised publications are highlighted in yellow.

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
12-220-17	Technical Service Bulletin	Seat Belt Does Not Retract Properly	31-May-17
4/16/2017	Technical Service Bulletin	Performance of Steering Wheel Heater Feature	31-May-17
16-106-17	Technical Service Bulletin	Enhancement to Rear Wheel Traction when Turning	30-May-17
16-104-17R	Technical Service Bulletin	“Bump” Feeling from CVT at Idle in Drive	30-May-17
4/15/2017	Technical Service Bulletin	Steering Column Tilt Lock Information	25-May-17
02-167-17	Technical Service Bulletin	Apparent Engine Oil Seepage from Vacuum or Scavenge Pump	23-May-17
16-101-16R	Technical Service Bulletin	Squeaking Sound Heard While Cranking	23-May-17
TIPS0516	TechTIPS News-Letter	2016 May TechTIPS Newsletter	18-May-17
J1210CA800	Accessory Installation Guide	Chrome Fuel Door Cover (BRZ)	16-May-17
J101SFL101	Accessory Installation Guide	Splash guard, 2017 Impreza 5 door	12-May-17
J101SFL001	Accessory Installation Guide	Splash guard, 2017 Impreza 4 door	12-May-17

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 6000, Cherry Hill, NJ 08034-6000.

Your Name: _____

Signature: _____

Dealer's Name: _____

City: _____

Date: _____

Dealer Code: _____