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SUBARU TECHLINE HOLIDAY HOURS OF OPERATION

Memorial Day
Monday, May 29, 2017

Independence Day
Tuesday, July 4, 2017



01 QMR OF THE MONTH

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

Keith Astroth from **Dean Team Subaru in Ballwin, MO**

Keith submitted a very detailed QMR on his diagnosis and repair of a very unusual repair of a 2017 Legacy with 280 miles. The customer reported the left rear (LR) window would not work when using the master power window switch. Keith started his diagnosis by confirming the power supply and found the 30A fuse open. Replacing the fuse, he found the LR window now operated but slowly. Suspecting the motor was binding, he replaced it and the function showed a marked improvement. During a later quality check, he found the fuse now opens when operating the right rear (RR) window. Moving the car back into the shop he replaced the fuse and now the RR window did not operate at all and the fuse opens when the LR is operated. After swapping master and sub-switches with a known good car and performing more testing, he reached a point where operating the RR window from the master switch would cause both rear windows to operate at the same time. At that point testing the circuit showed a short between pins 15 and 7 on connector D7. Tracing these wires Keith found no concerns with pinched or cut wires. At connector i101, he found that male terminal 11 was bent over toward terminal 6. When the connector is locked, the two pins are making contact. Straightening this pin resolved the short, however the RR window was now inoperative. Swapping the master switches again, Keith found an open in the master switch. After replacement, all windows now operated as they should. The detailed report and clear photos of the root cause of this condition made it very clear how Keith arrived at the final result and provided useful feedback for us.

In appreciation for going the extra mile and sharing his experience with us, Keith 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 Tech Tips for full details. You may see your name here in a future Tech Tips.

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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



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.

Subaru-U.com

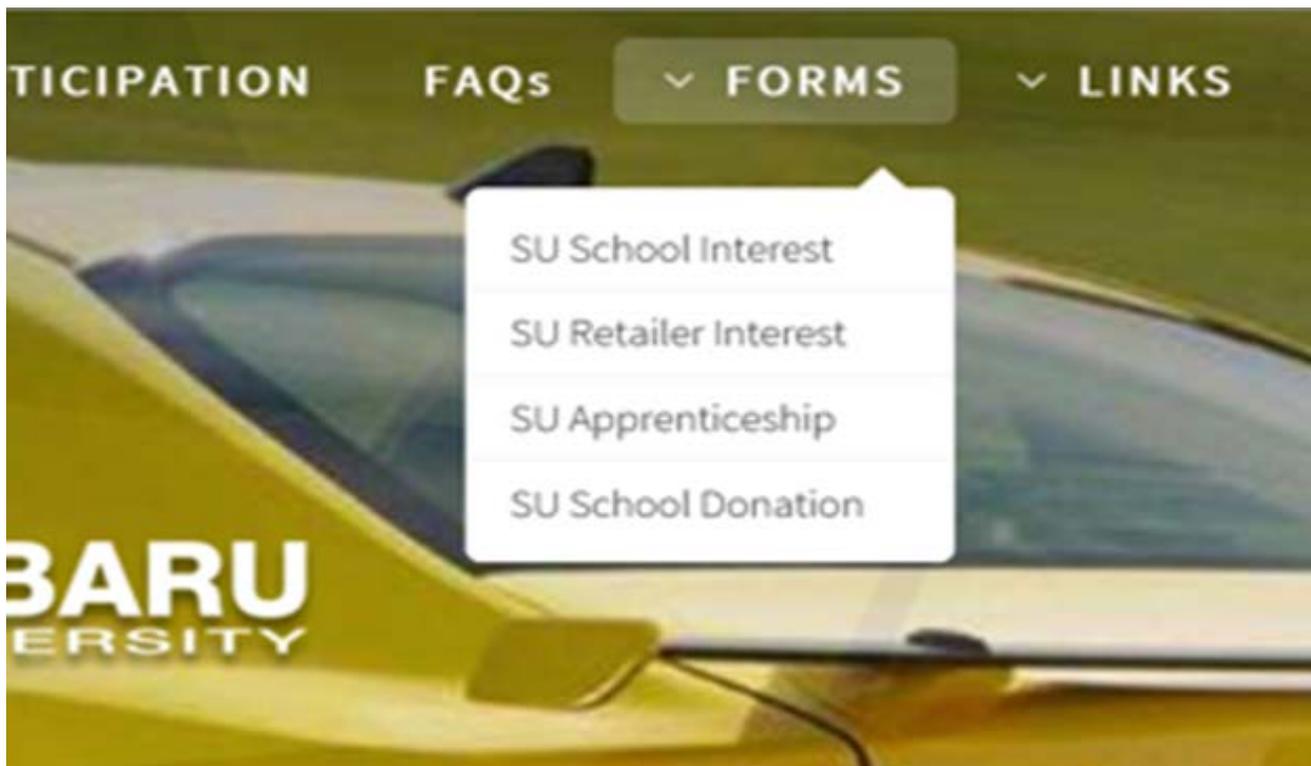
Beginning with the new year, a new chapter in the development of Subaru-U has begun. Subaru-U was designed as a partnership program between SOA, our retailer network and select NATEF certified secondary and post-secondary schools. As such, there needs to be a means in which all three legs of this partnership can access the information and features available to them. Beginning January 1, 2017 Subaru-u.com was launched. Although still under development, its primary purpose will be a one-stop portal for Subaru-U students, instructors, SOA managers and retailer personnel to be able to make the most of the program. Currently, the landing page and all currently available aspects of the program available to the public are provided.



Retailers and schools alike can get an overview of what the Subaru-U program is and how it can benefit their organization. Other features such as locator maps can help students and retailers find participating schools plus, schools can find retailers in their area who might want to work with them. Existing schools can access the resources available to them through the links tab which also provides access to SKILS, STIS and the Subaru/ASE landing page.

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In the past several months, the amount of inquiries from both retailers and schools has risen drastically. Up to this point, most new leads have come through e-mails or by word of mouth. There has been no formal way to start the process of getting a retailer or school on board or for them to express interest in participating in the Subaru-U program. With this new website, retailers and schools have forms available for both schools and retailers which can be filled out and easily submitted. This starts the process of bringing both parties together with added resources to help students succeed in the automotive industry. If your Subaru service department is currently working with a school or, if there is interest but you are unsure of how to proceed, simply fill out the retailer interest form and submit. Subaru-U staff will follow up with you and help make a connection or strengthen an existing connection with prospective automotive educators.

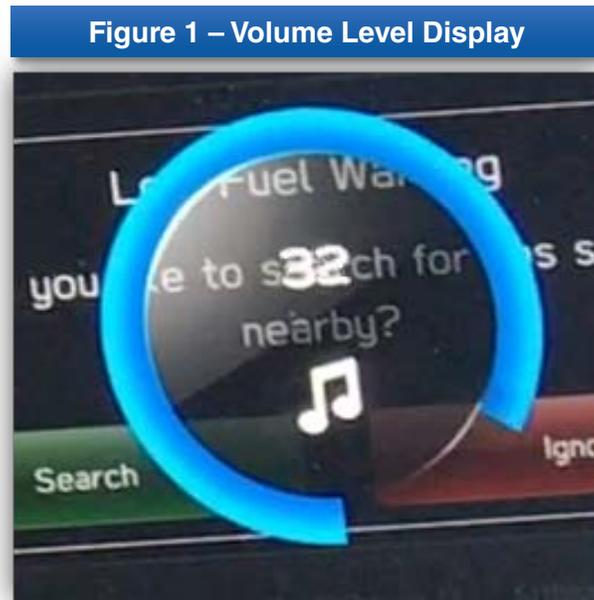


Also located under the forms tab is an apprenticeship form. This allows either the school or the retailer to report any Subaru-U students currently working in a Subaru retailer with a mentor Technician. This helps to accurately map the number of students working in the industry and where they are being placed. In addition, special shoulder patches for work uniforms are issued to students who have been reported to Subaru-U.

As site development continues, other resources will be made available to all parties depending on their role. Students, instructors, and retailers will each have features designed to enhance their experience with Subaru-U while at the same time, support the process for retailers to “grow their own” Technicians.

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If you are monitoring the Infotainment System Data Monitor and the volume level display (**Figure 1**) appears showing the volume level increasing but the sound level remains the same, this is a normal operation of the Harman unit. When Technicians access the Infotainment System Data Monitor, the unit enters “Diagnostic Mode” and the volume level will be displayed in this manner. No repairs should be performed on the unit to address this concern as it is a normal operating characteristic.



The Techline has received multiple reports on vehicles coming into the shop with hill start assist light on and no codes in the VDCCM. If there are no codes in the system this would indicate there is no current issue. What we have found during the diagnosis on these vehicles is, at some point, the hill assist was deactivated. If you come across this issue, the recommended procedure is to attempt to activate the system and see if the issue is resolved. The procedure for activation and deactivation can be found in section 7 of the Owner's Manual.

▼ Hill start assist OFF indicator light

While the Hill start assist system is deactivated, the Hill start assist OFF indicator light illuminates continuously to inform the driver that the Hill start assist system is not operational.

The Techline continues to receive calls for codes related to the Evaporative Emissions system that Technicians are struggling to diagnose. In 2011, Subaru introduced the Evaporative Leak Check Module better known as the ELCM. This was released to give Technicians the ability to run a force test on the evaporative system to confirm if the system is operating normally or not. The system also has an automatic test the vehicle performs on its own. A full description of the system can be found in the 2011 Forester New Technology Training Technician Reference Booklet.

If you run into an evaporative emissions code, it is recommended to use the force test to diagnose and verify the issue is repaired. In order to run this test, you need to meet the following conditions:

1. Battery Voltage must be greater than 10.9 volts.
2. Coolant Temperature higher than 39.9 degrees F. and lower than 113 degrees F.
3. Intake Air Temperature higher than 39.9 degrees F. and lower than 122 degrees F.
4. Engine must not be operating
5. The inspection mode connectors must NOT be connected.
6. The fuel level in the tank must be lower than 90%.

After all conditions are verified met, clear the memory of the ECM. Next turn on the key and navigate to the OBD menu and select Evaporative System Leak Test. Press OK to confirm the test is running. You will get a message indicating the conditions have been met and the test is now running. If you get a conditions not correct message, review and recheck parameters 1-6 above. While the test is running navigate to the ECM menu and select current data. Select the PIDs for the ELCM switching valve and ELCM pump. These PIDs will change when the testing is complete. There is no other indication of the test completing. After the PIDs change, navigate to the OBD menu (do NOT cycle the key) and select Temporary Code Display. If there is a stored code, diagnose the car according to that specific code. If no code is stored, the system has passed and there is no current failure.

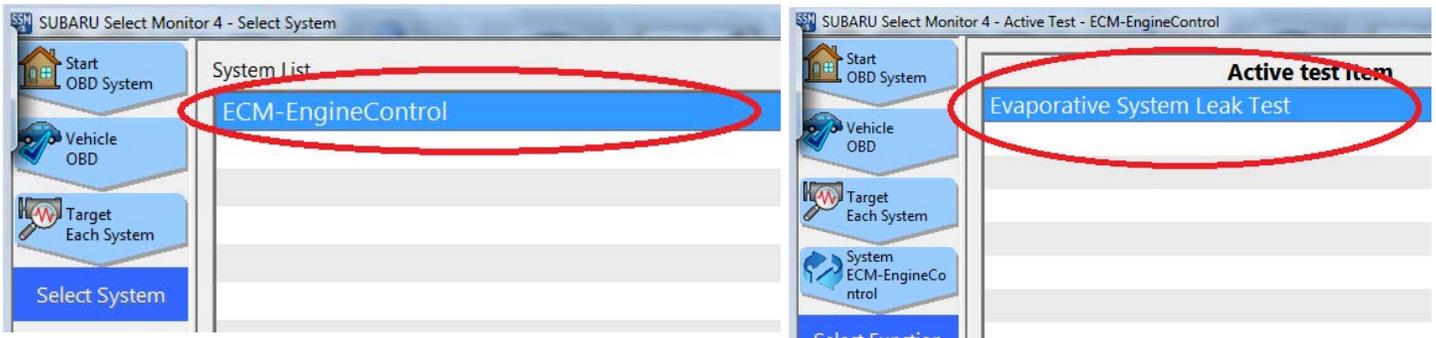
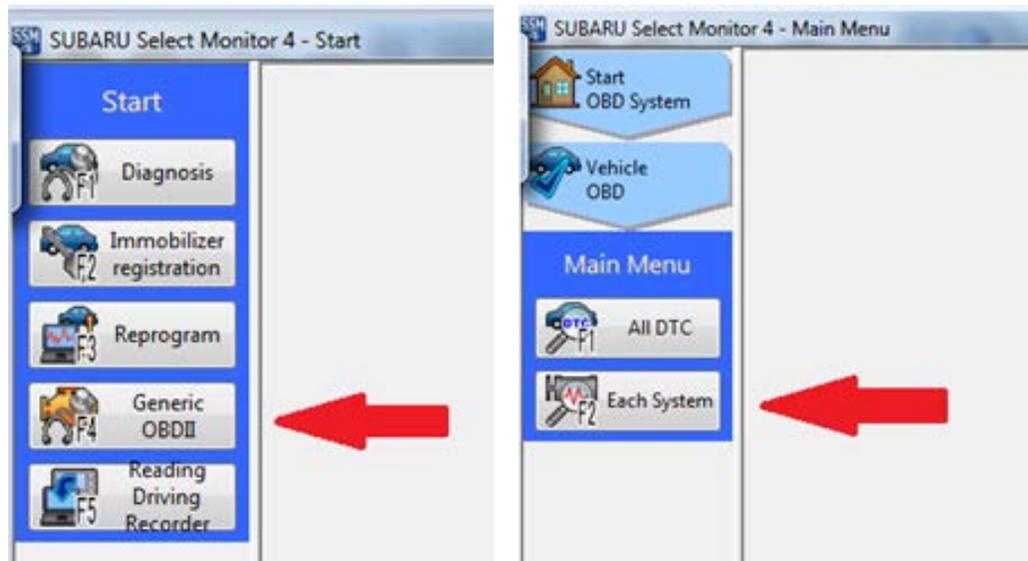
Never cycle the key before checking for temporary codes as cycling the key will delete the code.

Never run the ELCM force test more than 5 times.

For models using SSM III, specific screenshots are provided in 2011 Forester TRB

See below for SSM 4 screenshots of how to access the self-test.

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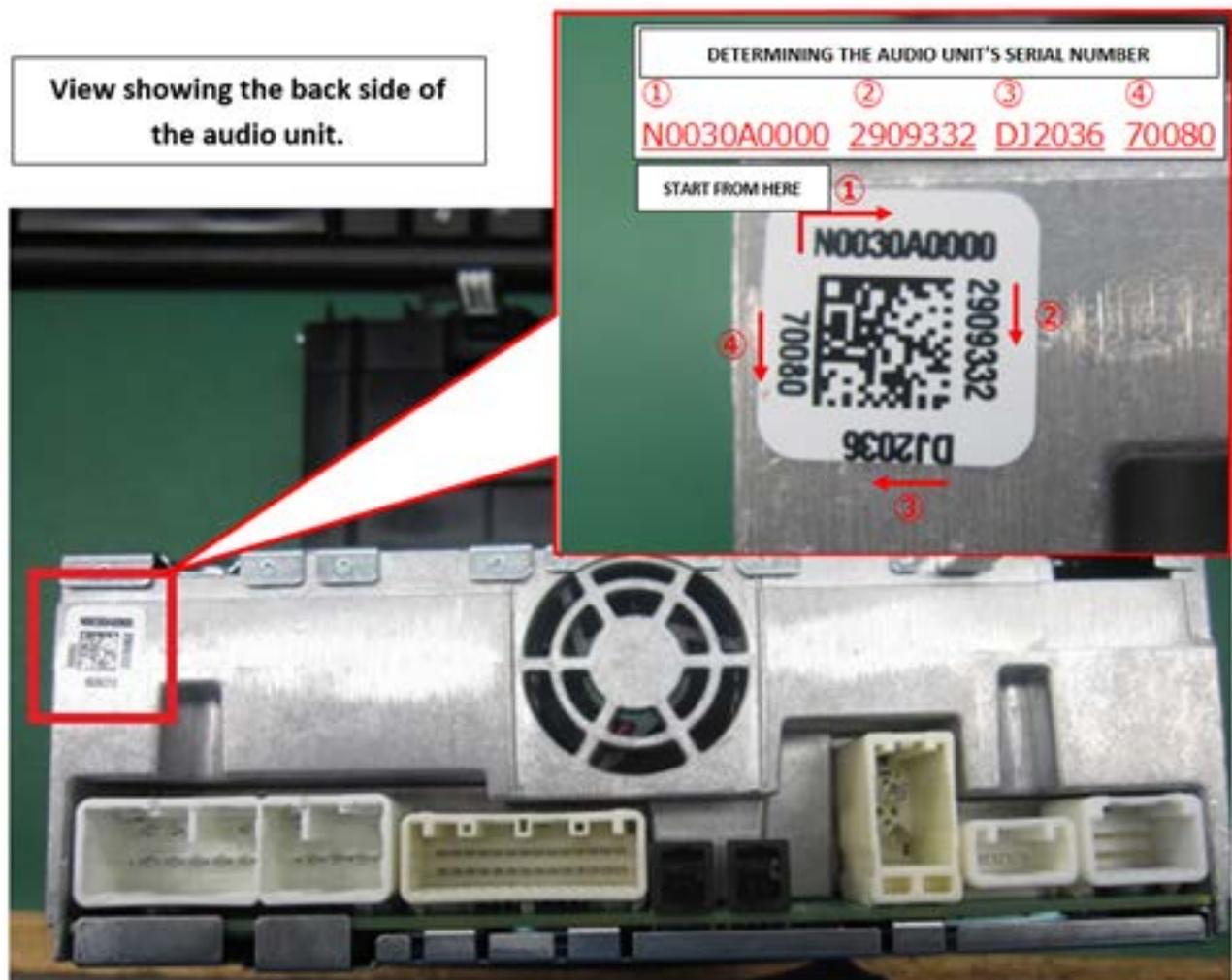


Below is the result of a failed self-test.

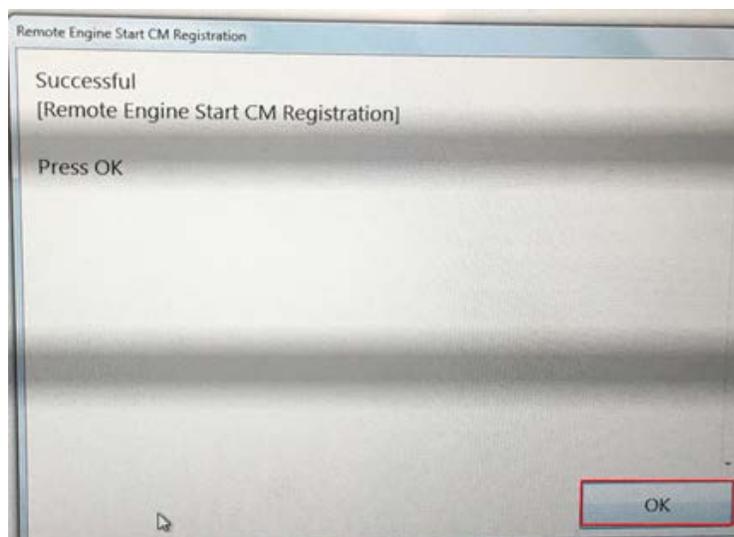
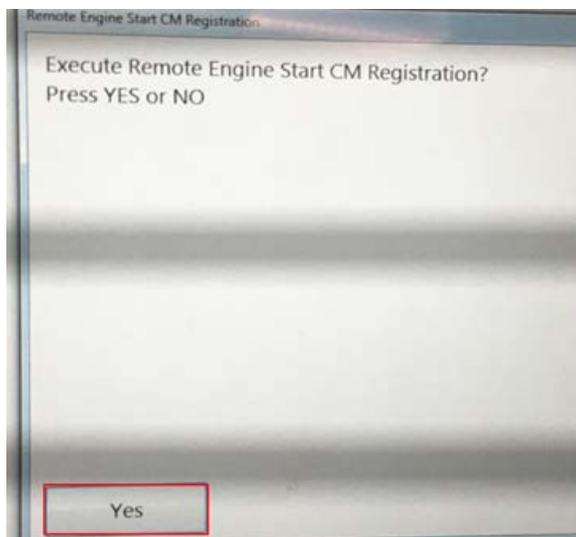
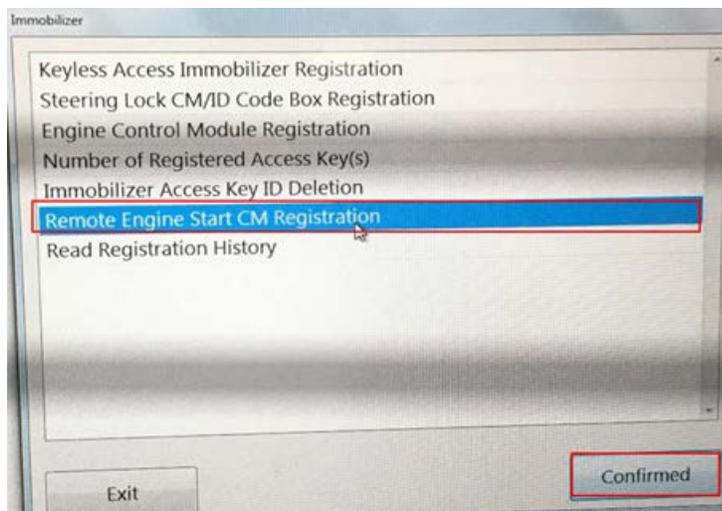
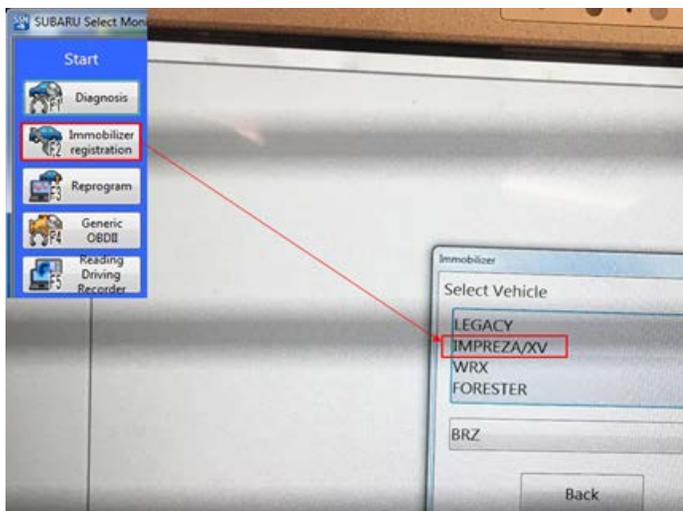
Status	Code	Description & trouble part	FFD
Service\$09:Confirmed DTC / Service\$07:Pending DTC			
Pending	P0455	EVAP System (CPC) Leak Detected (large leak)	

If the audio unit serial number is ever needed for a Gen 3 Harman audio unit, it can be found on the back panel as shown in the photo and inset below. **CAREFULLY** remove the audio unit following the service procedure in the applicable Service Manual. A small sticker with a QR code surrounded by 4 numeric segments which make up the serial number can be found on the back side of the case, upper left corner as shown in the example below. Record the 4-part serial number in order as shown in the inset.

REMINDER: Always take all proper precautions to protect the surrounding dash trim components from damage.



- The registration must be completed within 2 minutes or it will fail.
- The vehicle must be in Park.
- The DST-i firmware must be updated to the latest version (as of now 2.4 is the latest).
- The destination setting of the DST-i must be set to North America.
- If the registration cannot be completed using the DST-i in stand-alone mode, try using SSM4.



ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
H001SFL200	Accessory Installation Guide	2017 Impreza Remote Engine Starter for Canada (Push-Start)	14-Mar-17
H001SSG460	Accessory Installation Guide	RES Key Fob Kit	14-Mar-17
02-166-17	Technical Service Bulletin	Upper Oil Pan Assembly- Design Changes	10-Mar-17
14-22-16R	Technical Service Bulletin	Special Service Tool Cross Reference List	6-Mar-17
WTN-74R	Subaru Product / Campaign Bulletin	Reprogramming File Availability to Optimize Rear View Camera Operation on Harman Gen 3 Audio and Navigation Head Units	6-Mar-17
12-200-16R	Technical Service Bulletin	Rear Combination Lamp and Related Enhancements	6-Mar-17
E361SFL200	Accessory Installation Guide	Crossbar, 2017 Impreza 5 door (Base and Sport)	2-Mar-17
E361SFL100	Accessory Installation Guide	Crossbar, 2017 Impreza 4 door	2-Mar-17
E361SFL000	Accessory Installation Guide	Crossbar, 2017 Impreza 5 door (Premium and Limited)	2-Mar-17
E7210FL100	Accessory Installation Guide	STI Roof Spoiler	2-Mar-17
H001SSG502	Accessory Installation Guide	Remote Engine Starter	2-Mar-17
H001SFJ602	Accessory Installation Guide	Remote Engine Starter	2-Mar-17
15-204-16R	Technical Service Bulletin	2017 Audio/Navigation Exchange Component Identification and Procedures	2-Mar-17
F10_Gen2_N...	Troubleshooting Guide	Technical Support Guide SUBARU STARLINK 7.0" Multimedia Plus and SUBARU STARLINK 7.0" Multimedia Navigation System	1-Mar-17

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: _____