

ARTICLES CONTAINED IN THIS ISSUE

| CODE | ARTICLE..... | PAGE |
|------|---|------|
| (00) | November STIS New Releases. | 6 |
| (01) | QMR of the Month | 1 |
| (01) | QMR of the Month Award Presentation | 2 |
| (01) | Subaru World Technical Competition | 3 |
| (01) | Subaru Technical Training - Gaming Survey | 5 |
| (12) | 2015 Legacy / Outback, Rattling Sound from Front of Vehicle.... | 2 |

2015 CALENDAR OF SUBARU HOLIDAYS

Happy Holidays

Thursday, December 24, 2014
 Friday, December 25, 2014
 Techline will be closed on Saturday, December 26, 2015

Happy New Year

Friday, January 1, 2015
 Techline will be closed on Saturday, January 2, 2016



01 QMR OF THE MONTH

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

Andrew Abernethy from
Puente Hills Subaru of City of Industry, CA

Andrew submitted a very detailed QMR on his diagnosis and repair of a 2015 Forester with a rattle sound from the driver's side B-pillar area. The customer reported that the rattle sound occurred anytime they drove over uneven surfaces. Andrew performed a road test and noted a metallic buzzing sound from the left B-pillar at ear level. Finding no visible concerns, he began removing the B-pillar trim panels and test driving in between each removal until the sound was no longer present. Upon his return to the shop, Andrew used his hand to tap the B-pillar in various locations until he could hear the sound again. At that point, he opened the left front door and the sound stopped. Andrew then inspected the door and removed the door trim panel. While tapping on the door with his hand, he found the sound was coming from the lower bolt on the rear window channel. Applying pressure on the bolt head made the sound stop. Tightening the bolt made the sound stop and resolved the concern. With the trim panels installed, the condition could no longer be duplicated during an extensive road test. This report was a good example of how sound can travel through the vehicle's body and provided good feedback for vehicle manufacturing.

In appreciation for going the extra mile and sharing his experience with us in hopes of improving product quality, Andrew will be receiving the following from his FSE:

An Apple iPad® Mini tablet with a custom Subaru Confidence in Motion case

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

If you have never entered a QMR before, have an idea for one, or are not sure what should be reported, please discuss with your Field Service Engineer (FSE) or District Parts and Service Manager (DPSM) as they visit your store.

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



01 2015 NOVEMBER QMR OF THE MONTH AWARD PRESENTATION

As part of our QMR of the Month recognition program, we will include a photo (when available) of the recipient's award presentation in TIPS. Our winner selected from QMR of the Month submissions received during November was Michael Sneigle, a Service Technician from Wheeling Subaru of Wheeling, West Virginia.



Shown above are (left to right): **Dan Becker**, Service Manager, November's winner, **Michael Sneigle** and **Chris Schultz**, Subaru of America Field Service Engineer.

12 2015 LEGACY / OUTBACK, RATTLING SOUND FROM FRONT OF VEHICLE

A small number of reports have been received describing repairs to address customer concerns of a rattling sound heard inside the cabin that sounds like it is coming from the engine compartment area. If you receive this kind of complaint, here are a couple quick TIPS for 2 areas to inspect which might help isolate the source of the sound and save some time.

The first repair resulted after the sound was traced to the left fender area. The Technician removed the fender inner liner and saw where the hood release cable was contacting the inside of the fender. The contact point left a witness mark making it easy to identify where to simply add some foam tape to eliminate the sound.

The second involved the BR auxiliary chassis ground wire which runs to the CVT underneath the air box ductwork. A rub mark on the wire insulation and a corresponding witness mark on the air box duct were also identified here. The contact and rattling sound were eliminated by a slight "repositioning" of the BR wire.





45-minutes west of Tokyo and 7000 miles from the Subaru of America, Inc. Headquarters in Cherry Hill, NJ, the 5th running of Subaru World Technical Competition brought together the top Subaru Technicians from around the world to further technical skills and promote motivation. Twelve Technicians and Twelve Attendants hailed from the United States, Japan, Canada, Australia, Chile, Austria, Germany, China, Russia, Switzerland, Israel, and New Zealand. All came with

one goal in mind... to win the Gold Medal and attain the title of “World Champion”. Competing for the United States was Subaru Senior Master Technician Stephen Larson from Carter Subaru Ballard in Seattle, Washington. Attendant for the United States was Jim Riedel, Technical Training Development Manager for Subaru of America, Inc.

Larson received the honor of representing Subaru of America by triumphing in the Subaru of America National Technician Competition in July, 2014. With a similar format to the Subaru World Technical Competition, the SOA competition was meant to prepare the technicians for the environment they were likely to face in Japan. Calm and collected, Larson maneuvered through the challenges, particularly excelling during the Mechanical and Body portions and scoring highest in the Driveability category. In the months leading up to the competition, Larson diligently trained supplementing his already extensive knowledge with more advanced information and practicing speed drills to simulate the timed events in Japan.



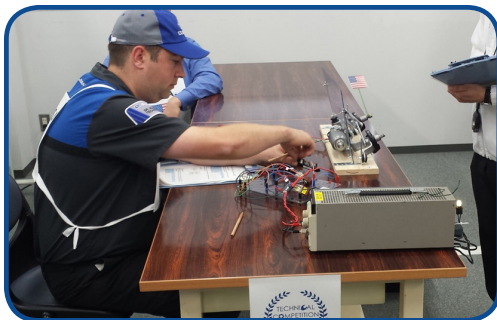
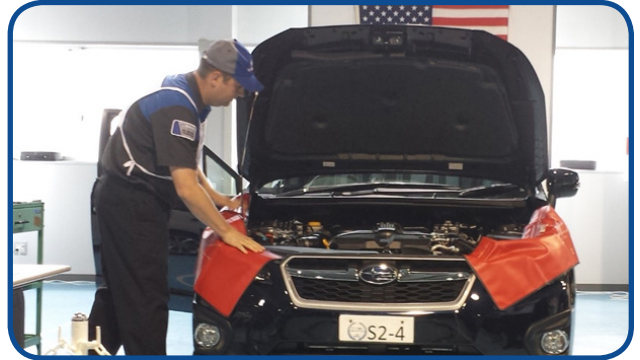
On November 10th, 2015 the grueling two-day competition began in the unfamiliar land. Day 1 featured an overall orientation of the competition consisting of 4 assessments (Driveability, Electrical, Precision Measurement, and a Written Test), each worth up to 100 points for a maximum overall score of 400. Day 1 ended with the closed door written test assessment. Competitors were challenged with a barrage of 50 intricate questions compiled from the represented countries.

Day 2 began with the Opening Ceremonies and formal introduction of the Competitors presented by the top Executives of FHI including Yasuyuki Yoshinaga, CEO of Fuji Heavy Industries. Shortly thereafter, the Competitors began their first event (Driveability) where each was presented a 2014 Impreza (Japanese Market, right-hand drive) with a “No start” customer complaint. The 50-minute time limit proved challenging as technicians worked feverously to pinpoint the concealed bugs. Those who succeeded found a series of three problems. Shrewd Competitors first found a Main Relay with an open switch contact. Once repaired, Competitors found the vehicles would crank, but not start. Further diagnosis led to a Fuel Pump relay power supply wire that was shorted to ground. Having corrected this condition, Competitors now found themselves with a rough running engine. Keen technicians noticed a roughness count which was caused by a high resistance in the #1 Injector wire control circuit. Technicians who successfully located and repaired these concerns within the time limit were rewarded

CONTINUED ON THE NEXT PAGE

with the gratifying “light” on the roof of the vehicle and well deserved applause from the audience. Larson excelled in this event demonstrating his blistering speed and efficiency as he completed the event in under 30-minutes.

After a brief resting period technicians were assembled for the final 2 events in rapid succession. The third event (Precision Measurement) presented competitors with an NA FB 2.0L engine. The event organizers had prepared a running engine test bench with unknown noise. Competitors were tasked with identifying the noise and performing the corresponding measurement on an identical engine in their assigned stall. Exactly 1-minute was allotted to isolate the noise on the running engine using a stethoscope. This left 20-minutes to execute the removal, measurement, and assembly of the suspect area. Experienced Technicians recognized the pitch and frequency of the noise as a valve related noise. Skillful use of the stethoscope narrowed the location to a #3 exhaust valve. This discovery resulted in the need to remove the corresponding valve cover and perform related valve clearance measurements. As with the Driveability event, Larson demonstrated expert skills in engine diagnosis, disassembly, precision measurement, and outright speed.



The final assessment was the dreaded electrical circuit. Year after year, this event has served as the great equalizer for the competitors. Technicians were provided 7-minutes to draw a circuit with 2 motors, supplied by 2 relays, controlled by 2 switches, and protected by a diode. Based on a front wiper motor configuration, competitors were allotted 7-minutes to successfully draw the circuit. At the end of the 7-minutes, successfully drawn or not, judges unveiled an assembled, but malfunctioning version of the circuit. Within a remaining 18-minutes competitors were tasked with diagnosing the malfunction and make the necessary repair. In this particular circuit, two different faults were present causing an unusual issue with the high-speed and return functions of the system.

With the “hands-on” events now behind them, the competitors anxiously awaited the final results filled with a mixture of exhaustion, exhilaration and the question, “was it enough?” looming in the minds. Beginning with the announcement of the 3rd place winner, the team from Japan presented with the Bronze Medal. 2nd place and Silver Medal goes to New Zealand. Finally, with a near silent anticipation, ... with an overall score of 286 points... 1st place and the Gold Medal was awarded to... Russia! Veteran Technician, Sergey Brenner delivered a consistently strong performance across all the events to edge out the competition. Having waged a hard fought battle, Stephen Larson ended with an overall score of 268 (Only 18 points from 1st!) earning him a commendable 5th place finish and the respect of his peers along with all those in attendance.

Looking forward, Subaru of America is already preparing for the next Subaru World Technical Competition Gold with in mind. As part of the first phase in this process, we’re pleased to announce the next Subaru of America National Technical Competition will be held in September 2016! Do you have what it takes? Let your local Field Service Engineer (FSE) or District Parts and Service Manager (DPSM) know if you’re interested! Selections for the competition are by nomination and will be coming up during Spring, 2016!

01 SUBARU TECHNICAL TRAINING - GAMING SURVEY

Beginning December 16th, all Technicians will receive an email invitation to complete a brief 12 question survey (via SurveyMonkey®) on your connection with... Video Games... Yes, Video Games. Did you know that in 2015, over 155 Million Americans (4 out of 5 households) currently play video games?

The Subaru Technical Training Department is researching a gaming environment to evolve the traditional Web Based Training format that you've experienced in the past years. We believe that gaming, while entertaining on the surface, can play a tremendous role in learning. The survey you complete will assist us in ensuring we "hit the mark" for our Subaru Technicians.



Since your feedback is so important to us, we're offering a chance to win a set of Subaru Special Tools from Company23 valued at \$350 just for completing the survey! ... and **not just 1** chance to win... We're giving away **3 sets!**



So please, take a few moments to complete the survey so we can gain a little insight to the ways in which you enjoy one of the most popular activities in America and help us shape the future of Subaru Technical Training!

Survey ends on Wednesday, January 6th, so don't delay!

| ITEM CODE | ITEM TYPE | TITLE | CREATED DATE |
|------------|------------------------------------|--|--------------|
| 10-83-15 | Technical Service Bulletin | HVAC Control Panel Removal Precautions | 25-Nov-15 |
| 09-60-15R | Technical Service Bulletin | Fuel Filler Door Difficult to Close | 24-Nov-15 |
| H7110FJ001 | Accessory Installation Guide | Impreza AC 110V Power Outlet | 23-Nov-15 |
| MSA5P2606C | Technician Reference Booklet | Automatic Climate Control Systems | 23-Nov-15 |
| MSA5P2603C | Technician Reference Booklet | Air Conditioning Refrigeration Systems | 23-Nov-15 |
| MSA5P2601C | Technician Reference Booklet | Intermediate Electrical Systems & Diagnosis | 23-Nov-15 |
| MSA5P2506C | Technician Reference Booklet | Brakes Theory and Diagnosis | 23-Nov-15 |
| MSA5P2501C | Technician Reference Booklet | Vehicle Dynamics and Driver Assist Systems | 23-Nov-15 |
| WQV-57 | Subaru Product / Campaign Bulletin | Repair Procedure for Subaru Recall Campaign Stop Sale WQV-57 Propeller Shaft Attaching Bolt Torque | 20-Nov-15 |
| C1010SG101 | Accessory Installation Guide | STI Shift Knob (CVT) | 20-Nov-15 |
| E7210FJ400 | Accessory Installation Guide | STI Roof Spoiler (Crosstrek and Impreza 5DR) | 20-Nov-15 |
| 07-101-15 | Technical Service Bulletin | Logic Change to Power Rear Gate Control Module | 20-Nov-15 |

| ITEM CODE | ITEM TYPE | TITLE | CREATED DATE |
|------------|------------------------------|--|--------------|
| MSA5P2927C | Technician Reference Booklet | 2016 New Technology Training | 19-Nov-15 |
| 12-192-15 | Technical Service Bulletin | Windshield Cracking Concerns | 19-Nov-15 |
| MSA5M1601A | Owner Manual | 2016MY Impreza and Crosstrek Owner's Manual | 13-Nov-15 |
| MSA5M1609A | Owner Manual | 2016MY Impreza, Crosstrek and Crosstrek Hybrid SUBARU STARLINK 7.0" Multimedia Plus and Multimedia Navigation System | 13-Nov-15 |
| MSA5B1607B | Owner Manual | 2016MY Crosstrek Quick Reference Guide | 13-Nov-15 |
| MSA5M1612A | Owner Manual | 2016MY Impreza EyeSight Owner's Manual | 13-Nov-15 |
| MSA5M1618A | Owner Manual | 2016MY Crosstrek EyeSight Owner's Manual | 13-Nov-15 |
| G1250BE | Service Manual Full | 2016MY Impreza, Crosstrek and Crosstrek Hybrid Service Manual | 13-Nov-15 |
| G2520BE | HTML Diagnostics | 2016 Impreza and Crosstrek Service Manual V0 | 13-Nov-15 |
| MSA5B1601A | Owner Manual | 2016MY Impreza Quick Reference Guide | 13-Nov-15 |
| 06-51-15R | Technical Service Bulletin | New Front Disc Brake Pad Kit Availability To Reduce Brake Squeal | 11-Nov-15 |

| ITEM CODE | ITEM TYPE | TITLE | CREATED DATE |
|--------------|------------------------------|--|--------------|
| 15-190-15 | Technical Service Bulletin | 2016 Audio/Navigation Exchange Component Identification and Procedures | 11-Nov-15 |
| 15-172-14R | Technical Service Bulletin | 2015 Exchange Component Identification and Procedures | 11-Nov-15 |
| 15-168-13R | Technical Service Bulletin | 2014 Exchange Component Identification and Procedures | 11-Nov-15 |
| 01-167-08R | Technical Service Bulletin | Recommended Materials (All Vehicles) | 11-Nov-15 |
| 12-194-15 | Technical Service Bulletin | Eliminating Gap between Headlamp and Bumper Cover | 11-Nov-15 |
| 07-100-15 | Technical Service Bulletin | Reprogramming for Vehicle Information Registration Menu Display | 10-Nov-15 |
| SOA801P010xx | Accessory Installation Guide | Legacy and Outback Door Edge Guards | 9-Nov-15 |
| SOA801P000xx | Accessory Installation Guide | Forester Door Edge Guards | 9-Nov-15 |
| TIPS1115 | TechTIPS NewsLetter | 2015 November TechTIPS Newsletter | 6-Nov-15 |
| 16-97-15 | Technical Service Bulletin | Delayed or Harsh Engagement of CVT | 4-Nov-15 |
| 18-183-15 | Service Manual Correction | Service Manual Corrections | 4-Nov-15 |

Be sure to always check the “What’s New” section on STIS for any updated or recently released information that may not be listed here.

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: _____