TECH TIPS

Subaru Service and Technical Support Line Newsletter



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2016 CALENDAR OF SUBARU HOLIDAYS

Memorial Day Monday, May 30, 2016

Independence Day Monday, July 4, 2016

Labor Day Monday, September 5, 2016



01

QMR OF THE MONTH

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

David MacDonald from Subaru of Orange Park in Jacksonville, FL

David submitted a very detailed QMR on his diagnosis and repair of a 2014 Legacy with 21K miles. The customer reported the remote door mirrors would not work and the back-up (reverse) lamps were not illuminating. Based upon the complaint, David started his diagnosis with a check for codes and confirmation of both symptoms. Inspections confirmed the conditions and made him suspect a wiring failure. A review of the related wiring diagrams for both components led David to find fuse 6 for the mirror switch and fuse 18 for the back-up lamps were both open. As he reviewed the wiring diagrams for the remote control mirror system and back-up light system, there did not appear to be any connection between the two. His next stop was the Power Supply circuit diagram. Here he found fuse 6 also powers the rear view mirror (without Homelink). At this point, he noted the compass in the mirror was not illuminated. This lead him to review the rearview mirror system diagram. It was here that he found the connection, as the mirror was powered from both fuses 6 and 18. Thinking about it, this made sense as all Subaru auto-dimming mirrors are designed to stop dimming whenever reverse is selected. Further checks confirmed the mirror was the source of the short to ground. Removing the mirror David found that a necklace the customer had hanging from it had worked its way into the mirror housing and created a short on the circuit board damaging it. Once David replaced the mirror and installed new fuses, the related circuits all functioned correctly. This report was a good example of electrical diagnosis and demonstrates how circuits which seem unrelated at first, may be connected by exploring the related circuits as found in the Power Supply circuit diagram. David's report included extensive detail with photos and copies of the various circuit and Power Supply circuit diagrams helping to explain his step by step diagnosis. This detail made it very clear how he arrived at the final

In appreciation for going the extra mile and sharing his experience with us, David will be receiving the following from his FSE:

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

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.

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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.



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2016 FEBRUARY QMR OF THE MONTH AWARD PRESENTATION

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.

Read the exciting enhancements made to the QMR of the Month program. See the January, 2016 issue of Tech TIPS for more details and keep those reports coming. All of us here at Subaru of America appreciate your feedback. 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. The winner selected from QMR of the Month submissions received during January, 2016 was David MacDonald, a Technician at Subaru of Orange Park in Jacksonville, FL. David is shown below receiving his new iPad mini. He is flanked by (from L to R): Mark Kempski, District Parts and Service Manager, David Balerna, General Manager, Cliff Oliveira, Service Manager and Jeff Sharkey, Field Service Engineer. Congratulations David!



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March 2016 TechTIPS

SPARK PLUG INFORMATION & A REMINDER

Both the Techline and Claims Group have been receiving a number of calls recently asking about spark plug coverage when performing engine repairs, especially since release of the WQW-58R Service Program Bulletin. When removing the spark plugs, and to avoid damaging the porcelain insulator, it is imperative to ALWAYS use the right tool for the job (e.g. a Snap-On S9714MKR or equivalent dedicated spark plug socket) and NOT a regular 14mm deep-well socket. Use of a standard socket or a spark plug socket that has a missing or loose rubber insert can result in plug damage.

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SPARK PLUG INFORMATION & A REMINDER





There have also been inquiries about a brownish-colored ring or stain which develops on the insulator between the top of the steel body (hex portion) of the plug and the bottom of the silicone coil or plug wire boot. This discoloration is called a "Corona Stain" and is NOT an indicator of compression leakage. It is often seen on spark plugs which are installed deep into the engine such as on many four valves per cylinder engine applications where oil particles do not get blown away by air circulating around the engine compartment. When coupled with the high voltage pulsing inside the spark plug insulator, the particles will often adhere to the insulator surface and develop the stain as shown in these photo above. This phenomenon is normal and does not compromise function of the spark plug in any way.

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BATTERY SERVICING PRECAUTIONS

If there is ever a need to service a Subaru battery, always use distilled water. Tap water can contain chemicals/heavy metals that could potentially harm the battery. Always refer to the applicable Service Manual before proceeding with any repairs.

The example below is directly from the Service Manual of a 2010 Legacy.

2. ELECTROLYTE LEVEL

Check the electrolyte level in each cell. If the level is below MIN level, bring the level to MAX level pouring distilled water into the batter cell. Do not Fill beyond MAX level.

Caution must be used to avoid overfilling a battery. If the fluid level is increased beyond the Max level this can result in battery swelling, cracking, or leakage.



ACCESSORY DOOR EDGE GUARD REMOVAL PROCESS

Accessory Door Edge Guards are designed to protect the door edge in the high impact areas. They are painted with a special polymer, and are available for most of our model line-up. If, for some reason, a customer requests a Door Edge Guard replacement and the original is still in place, it will need to be removed using the following process to prevent paint and/or door edge damages.

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<u>Caution:</u> Do not pull on the Door Edge Guard as this can damage the finished paint quality.

Start by positioning the tip of a plastic trim tool as shown in figure 1, against the leading edge of the Door Edge Guard on the exterior door surface. Begin tapping the tool gently, starting from the top of the Door Edge Guard to separate the accessory from the door. Continue to tap and separate the Door Edge Guard from the door itself until about 3" above the bottom of the accessory. Once at this point, place the tip of the tool at the bottom of the Door Edge Guard and begin tapping while working your way upward until the accessory is removed. If the Door Edge Guard requires removal for any reason, reuse is not recommended as the fitment is not guaranteed once removed.

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STIS NEW RELEASES

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
WQZ-61R	Subaru Product / Campaign Bulletin	Telematics System Data Communication Module (DCM) Reprogramming	30-Mar-16
04-14-15R	Technical Service Bulletin	Power Steering Pump Design Change	30-Mar-16
12-190-15R	Technical Service Bulletin	Elimination of Creaking Sound from Clutch Pedal Assembly	25-Mar-16
12-199-16	Technical Service Bulletin	Removing Fabric Dye Transfer from Leather Upholstery	24-Mar-16
WQW-58R	Subaru Product / Campaign Bulletin	Engine Control Module (ECM) Reprogramming	24-Mar-16
WTA-62R	Subaru Product / Campaign Bulletin	Repair Procedure for Subaru Recall Campaign Stop-Sale: WTA-62 Turbocharger Air Intake Duct	23-Mar-16

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ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
WQZ-61R	Subaru Product / Campaign Bulletin	Telematics System Data Communication Module (DCM) Reprogramming	22-Mar-16
15-194-16R	Technical Service Bulletin	Fujitsu 10/ FTEN/ F10 Navigation Voice Guidance Instructions Getting Cut Off	22-Mar-16
02-157-14R	Technical Service Bulletin	Surface Treatment Change To Oil Control Piston Rings	22-Mar-16
12-198-16	Technical Service Bulletin	Roof Rail Gapping	21-Mar-16
18-185-16	Service Manual Correction	Service Manual Corrections	16-Mar-16
EXP-1000S	Other / Miscella- neous	EXP-1000S Battery Charging and Electrical System Analyzer User Manual	10-Mar-16
TIPS0216	TechTIPS News- Letter	2016 February TechTIPS Newsletter	9-Mar-16
SUTTIPSLOC	Other / Miscella- neous	TechTIPS Article Locator Index (Updated 03-2016)	9-Mar-16
MSA5P2602C	Technician Reference Booklet	Advanced Electrical Systems Diagnosis (March 2016)	8-Mar-16
MSA5P2605C	Technician Reference Booklet	Electrical Theory and Diagnosis (Dec 2015)	8-Mar-16
09-61-15R	Technical Service Bulletin	Design Change to the Fuel Filler Door Assembly	8-Mar-16
07-106-16R	Technical Service Bulletin	DTC P1C00 / Change to Battery Sensor	7-Mar-16
WQX-59	Subaru Product / Campaign Bulletin	Tribeca Hood May Open While Driving	2-Mar-16
SOA567S010	Accessory Instal- lation Guide	Flat Top Ski Carrier	1-Mar-16
SOA567B040	Accessory Instal- lation Guide	Bike Hitch Rack w/ Lock	1-Mar-16
SOA567B010	Accessory Instal- lation Guide	Fork Mount Bike Carrier	1-Mar-16

All revised publications are highlighted in yellow.

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*** NOW YOU CAN E-MAIL YOUR TECHTIPS INPUT AND SUGGESTIONS TO: TECH@SUBARU.COM ***
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.
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SUBARU TECHLINE Hours of Operation

Monday – Thursday 8:30 am to 7:30 pm Friday 10:30 am to 5 pm and Saturday 9 am to 3 pm