# TECH TIPS

#### **Subaru Service and Technical Support Line Newsletter**

### November 2016



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### SUBARU TECHLINE HOLIDAY HOURS OF OPERATION

#### Thanksgiving (CLOSED)

Thursday, November 24, 2016 Friday November 25, 2016 Open from 10:30-3:30 Eastern Time Saturday November 26, 2016 Open 9:00-3:00 Eastern Time

#### **Holiday Break (CLOSED)**

Friday, December 23, 2016 Saturday December 24, 2016 Monday, December 26, 2016

#### **New Years (CLOSED)**

Saturday December 31, 2016 Monday, January 2, 2017

### 01

#### **QMR OF THE MONTH**

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

#### Thach Nguyen from Alexander Subaru in Montoursville, PA

Thach submitted a very detailed QMR on his diagnosis and repair of a 2016 Outback with 585 miles. The customer reported the check engine light was on (again). Based upon the complaint, Thach started his diagnosis by checking for DTCs. He connected the SSM4 and found multiple DTCs in history. By viewing the Time Stamp/ Time Count, Thach was able to determine which DTC set first and then focus on it as the others were most likely resultant codes. The earliest code was U0155- Lost Communications with the Instrument Panel Cluster (IPC) Control Module. He then checked the vehicle's repair history and determined this was the third repair attempt for this DTC. Prior repairs had included a combination meter and later a body integrated unit. Thach then proceeded with LAN diagnosis and checked the circuit resistance and found it to be 60 ohms (normal). Using this as a baseline and recognizing the random failure pattern, he then proceeded to perform shake testing over the circuit checking for any variations. Finding none, he then began sliding resistance checks at each module. It was here that Thach found a loose pin (31) at the BIU connector B281. By adjusting the pin to match the others, the concern was repaired. Additional resistance checks of the CAN circuit and road testing confirmed the DTC did not return. Thach's report included many clear photos that showed 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, Thach 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.

#### **CONTINUED ON THE NEXT PAGE**

#### 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.





A Special FHI Quality Monitoring Team is currently in the USA monitoring the launch of these much-anticipated new models. The Team is very interested in EVERYTHING related to these new vehicles. They are looking for specific and detailed information on EVERY condition identified. Naturally, this includes any and all repairs performed. It also includes cases when a customer comments on a condition deemed to be either a normal or operational characteristic, or any improvement opportunity where some feature or function could be made even better.

We are asking you to be our eyes and ears with this new model.

E-QMRs are the best and preferred reporting method for reporting any new model feedback.

For high priority, unusual, or serious issues, we ask that you call SOA's Technical Helpline right away with all details.

When you submit an E-QMR, please remember to include any FFD (electronically, not a printout) or SSM data streams where applicable. It is crucial you also include troubleshooting tree results found during your diagnosis. Including photos and videos, where practical, of the condition prior to repair are also extremely helpful to fully understanding a condition. Providing as much detail as possible on the customer complaint, the actual condition, and your findings are strongly requested and greatly appreciated.

All of these items are crucial so the team can accurately understand what condition you are seeing and how to address it.

Always save all DTCs and Freeze Frame Data electronically (printouts are incomplete) before performing any clear memory functions. Be sure to use the SSM4 for all diagnosis, as this will automatically save all DTCs and FFD.

While there is no guarantee a change will occur based upon any individual report, we can guarantee nothing will happen if we don't know about it. Our request is for you to report EVERYTHING, even if it seems to be just a small or straightforward repair.

E-QMRs, Techline Cases, CRS Cases and Warranty Claims are being reviewed daily. Team Members may contact you for additional details, photos, part collections, or to arrange for an on-site inspection. We ask your cooperation in quickly responding to these requests for additional information. Please save any and all removed parts no matter how small including gaskets, clips, fasteners, any filtered sediments, or other small bits and pieces. The rule of thumb is if you claim it, save it.

The more specific information and supplemental materials you can provide on each condition or repair the better. Otherwise, you may be contacted multiple times with follow up questions or requests for pictures, videos, FFD, TT results, etc. Please note, questions may come to you regardless if you report the condition in a E-QMR or not so, please keep detailed notes on all repairs.

For example: If you perform a wiring repair, the Team will be asking for the wire color, connector number, pin location, and the details of the condition. This would include your comments on if the wire was cut, pinched, corroded, or nicked. If there was a loose pin, bent pin, pin pushed out, wire pulled out of the pin, or simply a soft set connection (connectors not locked together fully). Was the harness strained or stretched? How? Was the circuit open or shorted? Was the operation of the circuit intermittent, or totally inoperative? What related systems were affected? Was the condition

**CONTINUED ON THE NEXT PAGE** 

## 01 2017 IMPREZA LAUNCH TEAM ACTIVITY- YOUR HELP IS NEEDED

temperature or moisture related? They will also want to know the exact details of your repair. How exactly did you fix it? If possible, try to get a photo before the condition prior to the repair as one will most likely be requested. This is the kind of detail the Team is looking for and is most helpful to them in making product or production improvements quickly and also speed up release of related service information.

As a reminder, E-QMRs must never be used to request escalation of a repair, request information, or for any other purpose than to notify SOA of a new or trending condition.

Authorization or Repair Escalation Requests must always go through normal channels for the fastest, most efficient handling. Paint or Glass Authorization requests must go through the Techline Authorization System on Subarunet. All other authorizations must be reviewed in advance with your DPSM.

We THANK YOU all in advance for your continued support and assistance in making this launch successful.



#### **SUBARU UNIVERSITY**

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.

#### Is Being Too Busy a Challenge or an Opportunity?

As Subaru continues to enjoy unprecedented growth compared to the rest of the industry, it has presented some challenges. The idea of recruiting interns who can potentially be integrated into "custom built" Technicians has been presented in past articles. As UIOs continue to climb, so too does the need to utilize space in the shop efficiently.

Recently, the entire automotive industry was rocked with the largest safety campaign in history, the Takata airbag campaigns. Every manufacturer has been affected by this issue, some more than others. Subaru has not been immune to the effects of these campaigns. As a Subaru Retailer, you continue to provide scheduled services and normal repairs for your customer base while trying to juggle the increasing number of vehicles scheduled to be repaired as part of this campaign. There are Subaru owners out there wanting these issues taken care of immediately. Some are loyal customers you see on a regular basis and some have not been to the store since their vehicle rolled off the lot. Perhaps some of you out there are feeling overwhelmed and wondering how anything good could possibly come of this?

With the need for extra personnel to help fill the gaps which have arisen from this issue, now is the CONTINUED ON THE NEXT PAGE

## 01 SUBARU UNIVERSITY

perfect time to bring interns from your Subaru-U school into your service area. Although these young interns are not fully trained or capable of extensive repairs, they can still be used as a valuable asset in your facility. One question: Is your shop performing a 21-point safety inspection on all vehicles coming in for the campaign or are your Techs just making the repairs and sending it out the door? Utilizing interns new to the industry for this task could be a step in the right direction. Teaching them to assist the Technicians in making repairs for the campaign and at the same time performing a thorough inspection of the vehicles coming through can be a huge opportunity to bring back those long lost customers who haven't been back to your retailer since the vehicle was new. An inspection shows the customer you are looking out for their safety and well-being. Although not all of these inspections will result in an immediate sale, some of them will equate into a return trip for the customer. This small act can potentially get them back in the door while keeping them coming back depends heavily on the experience they receive during regular service or repairs. This can potentially have a cascading effect setting your shop up for increased business after the campaign is long over.

As everyone knows, repetition is the key to efficiency. It can also be the key to complacency or disillusionment in a starting Technician. Keeping interns engaged is important if you want them to be an asset to your shop. Rotate them between the scheduled service or Express area and the campaign bays (many Retailers have implemented dedicated shop space set up to handle campaign vehicles. Be sure to make the most of your available resources to help these interns succeed. Effective mentorship is the most important resource but making sure the interns know how to access STIS and navigate the service information helps ensure that FRFT is target at all times. Recently, Subaru has released several short videos to address key issues which have been identified. One of these is directly related to the Takata campaign and how to properly make vehicle repairs. Interns should be not only encouraged but required to view these videos more than once to ensure any work they perform with their mentor Technician is of the highest quality. This is also an opportune time for evaluation of intern soft skills such as working with others, timeliness and customer interaction.

This flood of campaign vehicles will not last forever. But, if attention is paid to cultivating lost customer business and the development of new Technicians for your retailer, your shop will be ready for the new growth of repair business that is sure to follow.

## 03

#### **CLUTCH RELEASE COMPONENT LUBRICATION AND INSPECTION REVISITED**

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.

#### CLUTCH RELEASE COMPONENT LUBRICATION AND INSPECTION REVISITED



Example below is from the 2017 MY impresa service manual.

CLUTCH SYSTEM > Release Bearing and Lever

#### **INSTALLATION**

#### Note:

Apply the specified grease to lubricate to the following points before installation.

- Contact surface of lever and pivot
- Contact surface of lever and bearing
- Transmission main shaft spline
- Contact surface of release bearing and transmission case
   Grease

NICHIMOLY N-130 or equivalent

#### CLUTCH RELEASE COMPONENT LUBRICATION AND INSPECTION REVISITED

#### Inspect the clutch release fork for abnormal wear in the following locations:







Each location point should be thoroughly inspected for wear that would prevent smooth operation of the release fork and release bearing. Each point should also be lubricated accordingly, as shown in the images labeled 1, 2, 3, and 4. Below, in the figure labeled **Excessive Wear**, is an example of excessive release fork wear that caused a squeaking noise while the engine was running.



07

#### **FUEL GAUGE DIAGNOSIS REVISITED**

Should you receive a customer complaint stating their fuel gauge is not reading accurately or not going all the way up to the full position on any model Subaru equipped with a BIU (Body Integrated Unit), NEVER ground any of the wiring at the BIU. The proper way to diagnose both fuel sending units, BIU and combination meter can be found in the Service Manual for the particular model year you are

working on. Generally, the BIU looks at both fuel tank sending units for a combined resistance value. This value varies from model year to model year. For example, if you where troubleshooting a 2009 Forester with a customer complaint of their fuel gauge not going all the way to the full mark after filling their fuel tank, the first step should be to check for any DTCs (Diagnostic Trouble Codes). Assume the vehicle had a P0462 Fuel Level Sensor Circuit High Input DTC. After choosing a 2009 Forester on STIS and searching for the DTC P0462, you will see a search link stating to check the combination meter. If you click on the corresponding link, it will take you to a flow chart showing you what each sending unit resistance value should be at both the Full and Empty positions. In this particular case, the main sending unit value should be 1 to 3 ohms with a full tank and 31 to 33 ohms with an empty tank. The sub-level sending unit should be 1 to 3 ohms with a full tank and 61 to 63 ohms with an empty tank. The BIU is looking for a combined resistance of 90 ohms for the gauge to read properly.

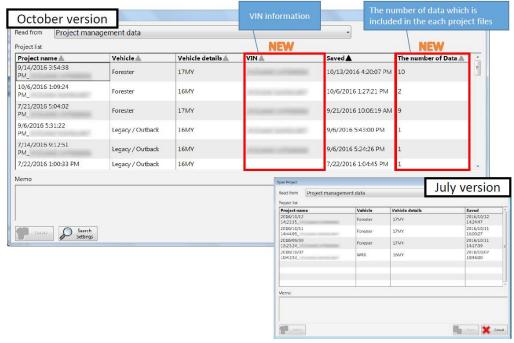
The key points to remember are, never ground out any of the wiring to make the gauge read full or empty and the combined resistance value the BIU is looking for can vary from different model years. Another point to remember is, always ask the Customer if they are fueling up the vehicle with the ignition key in the on position or with the engine running? If they are, doing so can create a situation where the BIU will not recognize the resistance changes for several key cycles causing the gauge to not move. The customer will interpret this as a problem because they do not see any gauge movement. A good way to test for this is to check where the gauge is reading then perform a battery capacitive discharge. If the gauge moves to a reading very close to the suspected fuel level, there is likely no problem other than fueling the vehicle with the ignition powered up.

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#### **NEW FUNCTION SSM4 OCTOBER VERSION**

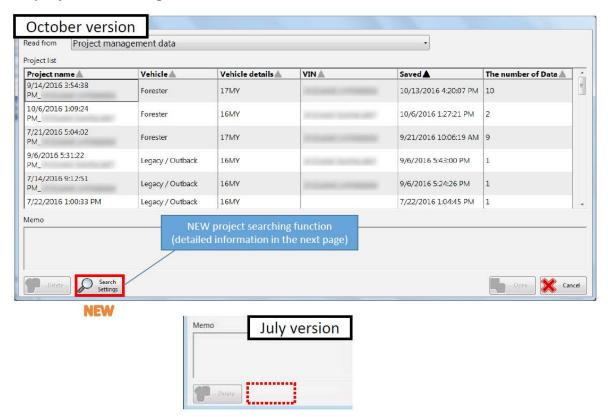
#### 1. Improvement of "Project Information"

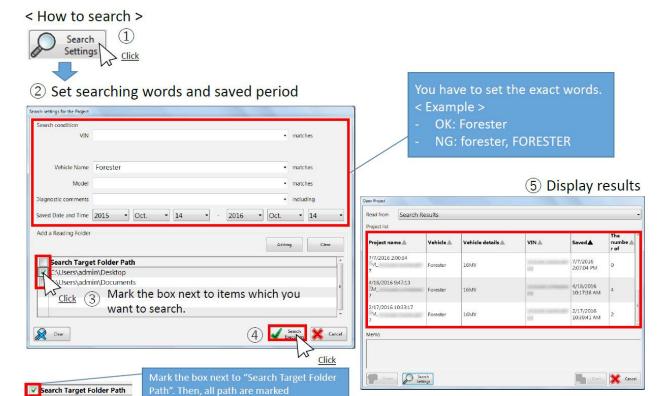
Add the new contents in "Project list"



**CONTINUED ON THE NEXT PAGE** 

#### Add new project searching function

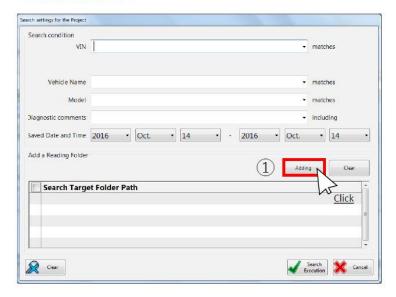




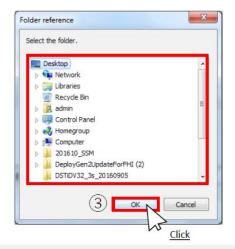
C:\Users\admin\DesktopC:\Users\admin\Documents

#### **NEW FUNCTION SSM4 OCTOBER VERSION**

#### < How to add >



Select the folder which you want to search

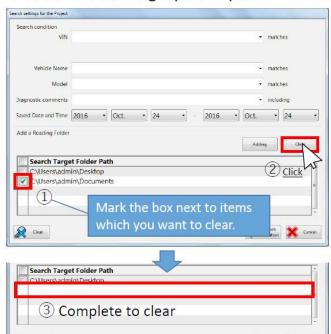


Complete to add a folder

✓ Search Target Folder Path
 ✓ C:\Users\admin\Desktop

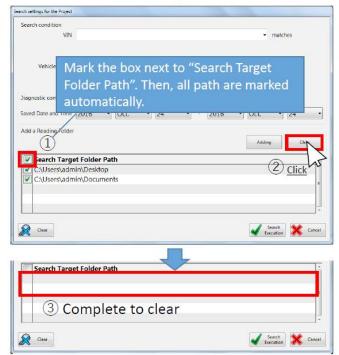
#### < How to clear >

i. In case of clearing a part of path



Search Cancel

#### ii. In case of all clearing

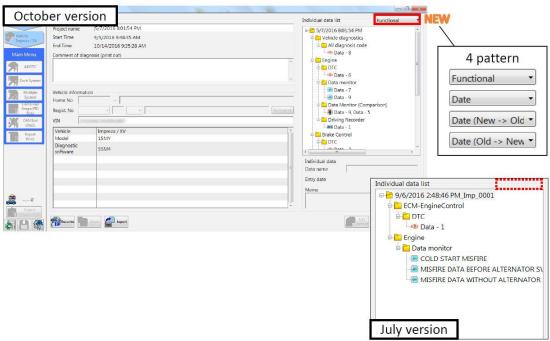


Clear

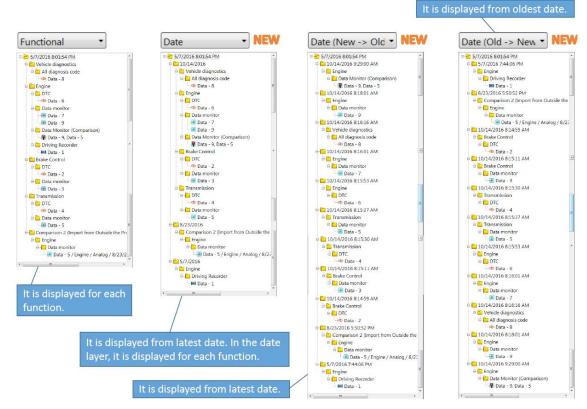
#### 2. Improvement of "Individual data list"

#### Add the new sorting modes

You can change the order of data in "individual data list".

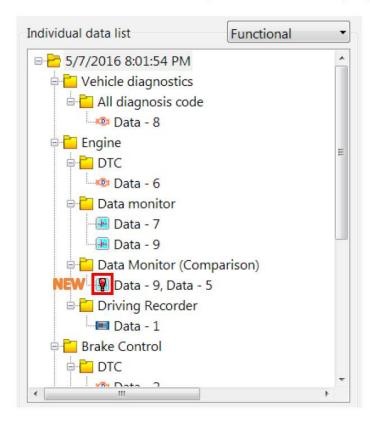


#### Add the new sort function

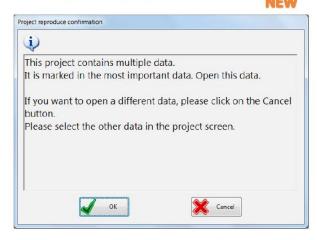


Add the marking function

You can mark the most important data if the project has several data.



If the project has the marked data, the following popup is displayed after you open the project.



- When you want to open the marked data, please click "OK" button.
- When you want to open other data, please click "Cancel" button.

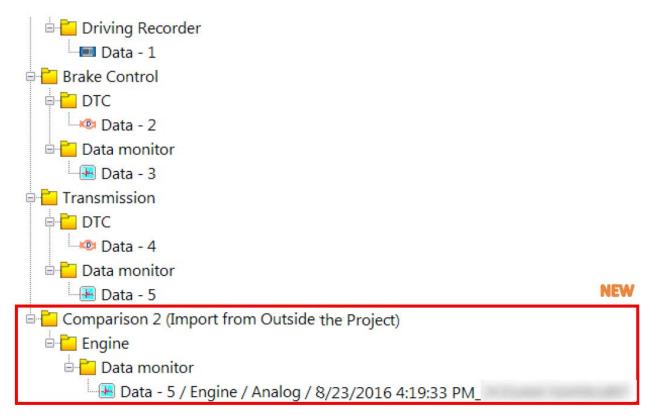
#### < How to mark >

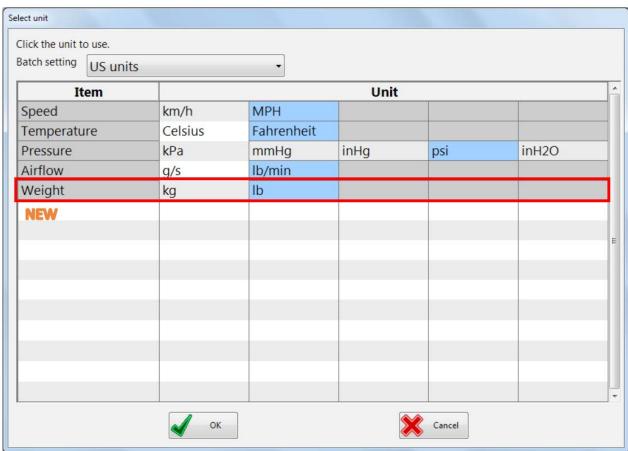
Click the icon next to data name by using left button of your mouse. Then, you can mark or unmark the data.

- You can mark only one data in each project.
- In case of default setting, the latest data is marked automatically.

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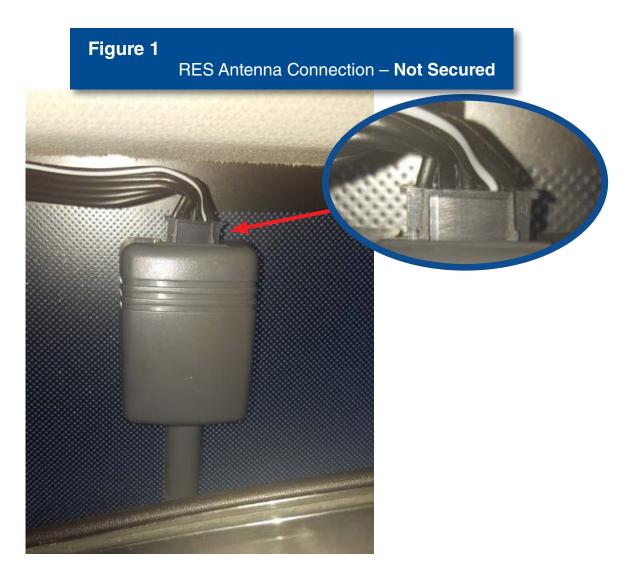
#### **NEW FUNCTION SSM4 OCTOBER VERSION**





## 15 RES INOPERATIVE? CHECK THE RES ANTENNA

Techline has received calls regarding inoperative Remote Engine Start systems after installation. Although Technicians are able to successfully register the system, when attempting to start the vehicle with the RES transmitters, there is no response from the vehicle. A quick check of the RES antenna will most likely show the connection is not fully seated as shown in **Figure 1**.



#### **RES INOPERATIVE? CHECK THE RES ANTENNA**

When routing the RES antenna harness, verify there is enough slack in the harness to tuck it under the headliner. If there is not enough slack, excessive pressure will be applied against the harness and disconnect the antenna causing the inoperative condition. Please review the applicable installation instructions for correct installation practices. **Figure 2** shows the RES antenna connection fully seated.



16

#### **BINDING ON TURNS AND OTHER TRANSMISSION ISSUES**

The Techline continues to receive calls from Technicians who have performed all types of unsuccessful repairs to transmissions with a "binding on turns" or "vehicle does not shift properly" concern from the Customer. One of the first questions we will ask is whether or not the tire circumferences have been measured. All too often, the answer is no. It is extremely important when diagnosing this type of transmission concern to make the tires one of the first variables you rule out. A difference as little as approximately 1/4" in circumference could cause binding and shifting issues due

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#### **BINDING ON TURNS AND OTHER TRANSMISSION ISSUES**

to the ratio imbalance caused by mis-matched tires. A solid method of measurement is to use a piece of rope and a tape measure. Adjust the tire pressures to specification. Next wrap the rope around the center of the tread and mark it. Repeat on all four tires then measure the difference between marks. Another method is to use a rope style tape measure. A quick keyword search on STIS of "Binding on Turns" will return a list of other bulletins and TIPS articles on this subject.



## 00

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
MSA5M1709B	Owner Manual	2017 Impreza SUBARU STARLINK	21-Nov-16
02-157-14R	Technical Service Bulletin	Engine Oil Consumption	21-Nov-16
H001SFL000	Accessory Installation Guide	2017 Impreza Remote Engine Starter for Pushbutton Start	17-Nov-16
H001SFL100	Accessory Installation Guide	2017 Impreza Remote Engine Starter for Turn Start	17-Nov-16
H501SSG300	Accessory Installation Guide	2017 Impreza Interior Auto Dimming Mirror with Compass and Homelink	17-Nov-16
H501SSG200	Accessory Installation Guide	2017 Impreza Interior Auto Dimming Mirror with Compass and Homelink	17-Nov-16
H461SFL000	Accessory Installation Guide	2017 Impreza Footwell Illumination Kit - French	17-Nov-16
H461SFL000	Accessory Installation Guide	2017 Impreza Footwell Illumination Kit - English	17-Nov-16
J201SFL000	Accessory Installation Guide	2017 Impreza Exterior Auto Dimming Mirror with Approach Light	17-Nov-16

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
H630SFL000	Accessory Installation Guide	2017 Impreza Audio System Upgrade Kit	17-Nov-16
C1010FG410	Accessory Installation Guide	STI SHIFT KNOB 6MT	17-Nov-16
C1010FG310	Accessory Installation Guide	STI SHIFT KNOB 5MT	17-Nov-16
C1010FG100	Accessory Installation Guide	2009 STI Shift Knob For 6M/T (C1010FG100)	17-Nov-16
C1010FG100	Accessory Installation Guide	2011 STI Shift Knob for 6MT	17-Nov-16
C1010FG000	Accessory Installation Guide	2009 STI Shift Knob for M/T - Forester (C1010FG000)	17-Nov-16
C1010FG000	Accessory Installation Guide	2009 Shift Knob 5MT - Forester (C1010FG000)	17-Nov-16
C1010FG000	Accessory Installation Guide	2008 Shift Knob 5MT - Legacy, Impreza, Forester (C1010FG000)	17-Nov-16
C1010FG000	Accessory Installation Guide	2009 STI Shift Knob For 5M/T (C1010FG000)	17-Nov-16
C1010FG000	Accessory Installation Guide	STI Shift Knob for 5MT	17-Nov-16
SOA567C011	Accessory Installation Guide	Carrier Basket	16-Nov-16
01-168-09R	Technical Service Bulletin	Replacement Key and Immobilizer Information for Authorized Subaru Dealers	16-Nov-16
MSA5P2411C	Technician Reference Booklet	Intermediate Fuels Injection (October 2016)	16-Nov-16
J101SFL100	Accessory Installation Guide	Splash Guard 2017 Impreza 5 door (except Sport model)	15-Nov-16
J101SFL000	Accessory Installation Guide	Splash Guard 2017 Impreza 4 door (except Sport model)	15-Nov-16
07-115-16	Technical Service Bulletin	Subaru Rear Vehicle Detection (SRVD) Information / DTC B2328	11-Nov-16

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
	HTML Diagnostics	2017MY Impreza Service Manual V0	10-Nov-16
MSA5B1701A	Owner Manual	2017 Impreza Quick Guide	10-Nov-16
MSA5M1712A	Owner Manual	2017MY Impreza EyeSight Owner's Manual	10-Nov-16
MSA5M1701A	Owner Manual	2017MY Impreza Owner's Manual	10-Nov-16
11-169-16	Technical Service Bulletin	Reprogramming Files for Spark Knock (Ping), Surging on Acceleration and / or P2270, P0137	10-Nov-16
WTM-73R	Subaru Product / Campaign Bulletin	Secondary Air Injection Pump Relay Replacement	10-Nov-16
11-167-16	Technical Service Bulletin	Reprogramming Files for DTC P2270	10-Nov-16
WQR-53R	Subaru Product / Campaign Bulletin	Takata Front Passenger Air Bag Inflator Replacement	9-Nov-16
MSA5M1718A	Owner Manual	2017MY Crosstrek EyeSight Owner's Manual	8-Nov-16
07-112-16R	Technical Service Bulletin	New Alternator Assembly to Address DTC P0300	8-Nov-16
11-168-16	Technical Service Bulletin	Reprogramming File Availability for DTCs P013F and P014B	8-Nov-16
12-209-16	Technical Service Bulletin	Loose Fitting Speaker Grilles	8-Nov-16
J101SFL520	Accessory Installation Guide	BODY SIDE MOLDING KIT (French)	3-Nov-16
J101SFL510	Accessory Installation Guide	BODY SIDE MOLDING KIT (French)	3-Nov-16
J101SFL500	Accessory Installation Guide	BODY SIDE MOLDING KIT (French)	3-Nov-16
J101SFL520	Accessory Installation Guide	BODY SIDE MOLDING KIT (English)	3-Nov-16

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
J101SFL500	Accessory Installation Guide	BODY SIDE MOLDING KIT (English)	3-Nov-16
J101SFL510	Accessory Installation Guide	BODY SIDE MOLDING KIT (English)	3-Nov-16
E101SFL020	Accessory Installation Guide	2017 Impreza Sedan Sill Plates	3-Nov-16
E101SFL010	Accessory Installation Guide	2017 Impreza Sedan Sill Plates	3-Nov-16
E101SFL000	Accessory Installation Guide	2017 Impreza Sedan Sill Plates	3-Nov-16
SOA567X010	Accessory Installation Guide	Extended Crossbar	3-Nov-16
WQP-51R	Subaru Product / Campaign Bulletin	Regional Front Passenger Air Bag Inflator Replacement	2-Nov-16
12-200-16R	Technical Service Bulletin	Rear Combination Lamp and Related Enhancements	1-Nov-16
TKA-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	31-Oct-16
TKC-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	31-Oct-16
TKB-16R	Subaru Product / Campaign Bulletin	Takata Front Passenger Airbag Inflator Replacement	31-Oct-16
A091SSG000	Accessory Installation Guide	2017 Forester Engine Block Heater Kit (Non-Turbo)	28-Oct-16
A091SSG000	Accessory Installation Guide	2015-17MY Legacy and Outback Engine Block Heater Kit (4 Cylinder)	28-Oct-16
A091SSG000	Accessory Installation Guide	2014-16 Forester Engine Block Heater Kit (Non-Turbo)	28-Oct-16
A091SSG000	Accessory Installation Guide	2014-2017 Forester Engine Block Heater Kit (Turbo)	28-Oct-16
A091SFJ001	Accessory Installation Guide	Engine Block Heater Kit (Legacy/Outback 3.6L)	28-Oct-16

ITEM CODE	ITEM TYPE	TITLE	CREATED DATE
A091SFJ001	Accessory Installation Guide	Engine Block Heater Kit (2012 Impreza)	28-Oct-16
A091SCA001	Accessory Installation Guide	Engine Block Heater Kit (BRZ)	28-Oct-16
15-204-16	Technical Service Bulletin	2017 Audio/Navigation Exchange Component Identification and Procedures	27-Oct-16
WTK-71R	Subaru Product / Campaign Bulletin	Windshield Wiper Motor	26-Oct-16

*** 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.
Your Name:
Signature:
Dealer's Name:
City:
Date:
Dealer Code:

## 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