

16 SLOPE CONTROL CHANGE FOR 2003~2004MY VEHICLES

If someone should ask, the TCM logic for Slope Control has been changed for the above listed vehicles.

It will now activate on downhill slopes/grades greater than 12% and vehicle speed under 48.5 MPH (78 km/h).

10 H6 A/C COMPRESSORS CUTTING OUT

If you come across an H6 A/C system where the compressor is cutting out when the A/C is engaged, it might be the revolution sensor on the compressor that is causing the problem. To determine if this is the cause of the concern, you can find diagnostic information in the 09/01 T.I.P.S.

Once you have determined that the revolution sensor is the problem, be advised that the sensor is now available as a separate part. It is no longer necessary to replace the entire compressor as in the past. Refer to Service Bulletin 10-74-02 for more information.



CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Technical Support T.I.P.S. are intended for use by professional technicians ONLY. They 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 knowhow to do the job correctly and safely. If a condition is described, DO NOT assume that this Technical Support T.I.P.S. applies to your vehicle, or that your vehicle will have that condition. Impreza, Legacy, Justy, Loyale, Outback, Forester, Subaru SVX, WRX, L.L. Bean, "Quality Driven" and "The Beauty of All Wheel Drive" are Registered Trademarks. Baja is a Trademark.

01 FADED OR GHOSTED FLUKE ORIGINAL 80 SERIES DISPLAY

The following information was passed on to us from one of our DSOMs. It's being printed here for your use in the event that you have this specific issue with your Fluke Original 80 Series display.

The following instructions have been tested and found to correct the fading/ghost image condition on the contributing DSOM's meter.

If you have further questions, please contact the Fluke Service Department at the number listed at the end of this article.

This information is provided directly from Fluke Instruments and any concerns regarding the procedure should be directed to their Service Department.

Instructions for correcting a Faded or Ghosted Fluke Original 80 Series display are as follows:

- 1) Remove the outside/external case covers.
- 2) Remove the battery.
- 3) Remove the circuit board and place face down on a clean work surface.
- 4) Remove the screw and the flat plastic cover covering the back of the board.

- 5) Place the board in front of you so that a long side is facing you.

(Note: the side should be chosen so that the hand which is not your primary hand, left or right handed, will be used to move the plastic clips, which secure the cover to the board.)

- 6) Your primary hand should be placed holding the center edges of the board.
- 7) Move the clips back just enough to release them. Use your primary hand to rotate the edge of the board upward, pulling the board away from the clips on the opposite side and out.
- 8) Turn the board component side up.
- 9) The metal patterns at the top of the board, where the display had been should be cleaned with a clean # 2 pencil eraser.
- 10) Gently, tap the rubber chips or filings away.
- 11) Reassemble and test the display.

If this does not correct the display, please contact Fluke Service @ 1-888-993-5853 to make arrangements to submit to Fluke.

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[illegible]

Thursday, January 1, 2004

15

2004MY FORESTER HOOD DEFLECTOR/ PROTECTOR

For the 2004MY Forester, there are two (2) hood deflectors available depending on the model on which they are to be installed.

P/N E231SSA000 is applicable to Forester non-turbo models. This is a **hood deflector** and has the 'flip up lip' at the front of the deflector to divert the air flow.

P/N SOA930P004 is applicable to the Forester Turbo models. This is a **hood protector** and is designed with no 'flip-up' in the front so the intake air will not be disturbed.

NOTE: Please refer to the **www.subarunet.com** web site for additional information before attempting to install **P/N E231SSA000**.

11

DIAGNOSTIC TROUBLE CODE (DTC) DETECTING CRITERIA

Over the years, the Subaru Technical Support Line has received questions regarding issues about the Engine Control Module and what it is looking for in order to determine if it should set a Check Engine Light. This process is also known as the Diagnostic Trouble Code (DTC) Detecting Criteria.

Some of the specific questions put to the Support Line have been:

What is considered a good input and what is considered a bad input?

What is the 'Enable Condition'?

What is the 'Judgment Value'?

What is the time needed for diagnosis?

Until recently, these and other questions could not be answered.

In the 2004MY Impreza Service Manual, Section 5, you can now get this information.

You'll find the book divided into three (3) sections.

- GD(H4SO) is for the 4 cylinder 2.5L SOHC engine.
- GD(H4DOTC) is for the 4 cylinder 2.0L DOHC WRX engine.
- GD(STi) is for the 4 cylinder 2.5L DOHC WRX STi engine.

While it may or may not answer all the questions you might have, we hope you find this information useful for those of you that were looking for specifics.

The above information can also be found in the 2004MY service manuals for Legacy and Forester as well.

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The publication number MSA5B0403A refers to the “Owner’s Reference Guide” for the 2004 Impreza WRX STi.

It’s a six (6) page booklet highlighting important areas of the referenced vehicle.

To make YOUR life easier, we STRONGLY recommend that you read and RE-READ this pamphlet to become familiar with certain aspects of this vehicle and recommend other people at the dealership do the same.

Items of interest we recommend are:

- Item 8, page 2, RPM Alarm System
- Item 3, page 3, Bremco Brake System
- Item 4, page 3, Recommended Fuel
- Item 5, page 3, Driving Performance
- Item 6, page 3, Tires
- Item 8, page 3, Front Hood & Scoop Vibration.
- Item 9, page 3, Driver Control Center Differential (DCCD)
- Item 10, page 3, Rear Limited Slip Differential

While all the information in this booklet is important, we think the above listed items will have a more direct effect on you, the Technician.

With the introduction of the WRX STi, Forester Turbo and BAJA Turbo models, you may get questions like “Can I swap this turbo/intercooler to this vehicle, and will it fit this vehicle?”

If you call the Technical Support Line to find out, you will get a simple answer... NO!

We do not, cannot, and will not recommend swapping one vehicle’s components to another vehicle.

Swapping any part from one model of vehicle to another model of vehicle is re-engineering of the vehicle and is something we do not do.

So, save yourself the trouble of a phone call and when asked this question, just say no.

Please be advised of specific part ordering, pertaining to the Legacy’s tonneau cover (00MY-03MY). If a customer complains about the hook ends loose or missing, it is not necessary to order a complete tonneau

If you are questioned by the owner of a STi who says his engine has a spark knock when accelerating, you may want to refer him to page 7-14 of the 2004 Impreza RS/TS/Outback Sport Owner’s Manual.

In the manual it states: “The engine may, on rare occasions, knock when the vehicle rapidly accelerates or rapidly pulls away from a standstill. This phenomenon is not an indication of a problem with your vehicle.”

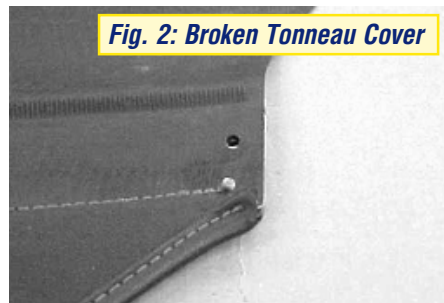
This is, of course, assuming that the owner is using the proper grade of gasoline in the vehicle.

This information can also be found in the above referenced Owner’s Manual on page 7-2.

Fig. 1: Good Tonneau Cover



Fig. 2: Broken Tonneau Cover



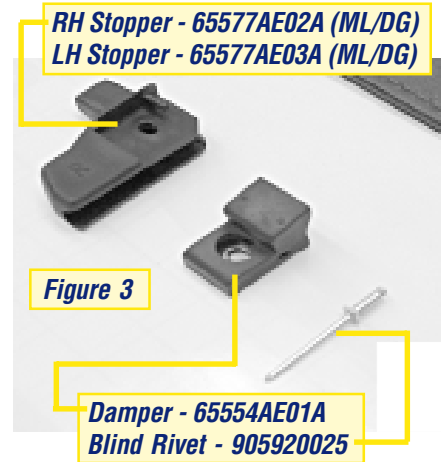
cover assembly. Simply order the hook ends, damper and rivet (see figure 3 for part number applicability).

NOTE: 2000 model Legacy’s only have the screw. 2001 may be either a blind rivet or screw. 2002 and up Legacy’s uses a blind rivet.

RH Stopper - 65577AE02A (ML/DG)
LH Stopper - 65577AE03A (ML/DG)

Figure 3

Damper - 65554AE01A
Blind Rivet - 905920025



**** ELECTRICAL DIAGNOSIS PRE-CALL WORKSHEET ****

The purpose of this form is for you, the technician, to gather basic information on electrical repairs prior to calling the Technical Support Line. Many times, the form itself will help you in diagnosing the problem. If not, it will provide the minimum information necessary for the Tech Line to assist you.

Do not fax this form to the Technical Support Line.

VIN:(Last 8) _____

Problem/Concern:_____

Is the vehicle there now? We will probably be asking you to perform tests on the vehicle when you call. If the vehicle is not there, then you will not be able to perform these tests. We ask that you get the vehicle in, provide the below information, and then call us.

Can you duplicate the customer's concern? Yes____ No____

If you cannot duplicate the customer's concern, this gives us very little to work with. It would be better to try and duplicate the condition before you call us.

Has the vehicle been in for this concern before? Yes____ No____

If yes, when was the vehicle in and what service was performed? Use the back of this form if necessary or make a copy of any previous R.O.'s.

RO#	DATE	CONDITION

Has the vehicle been in an accident? Yes____ No____

If an electrical circuit does not function properly, have you removed and VISUALLY inspected all fuses to make certain they are NOT blown? If not, please do so before you call us.

If a fuse is blown, what is the number of the position of that fuse in the fuse box?_____

What electrical items are powered by this fuse?_____

Are there any aftermarket accessories installed (hard wired) into the vehicle's wiring harness? If there are, these may be the cause of the problem. Advise the customer that it will be necessary to disconnect/remove them to make this determination. If after receiving their approval and disconnecting the item(s), the vehicle functions according to factory specifications, then you have probably found the source of the problem. Inform the customer of your findings and see how they want to proceed.

If it's a concern regarding the vehicle's external lighting, have you inspected the bulbs to be certain they are the correct type for that position, i.e. brake, tail, turn signal, marker light, etc.? Yes____ No____

Have you tried the split half technique to try and isolate the problem to a specific area of the vehicle/harness?

Have you consulted the applicable service manual for the vehicle you are working on and examined the vehicle's wiring diagram for the circuit(s) involved? Yes____ No____

Have you checked all the ground points? Yes____ No____

Have you checked the sliding resistance of all connectors/pins involved in the circuit? Yes____ No____

Has any work been performed on the vehicle prior to the problem happening? Yes____ No____

If yes, could this previous repair be causing the problem? Yes____ No____

PURPOSE

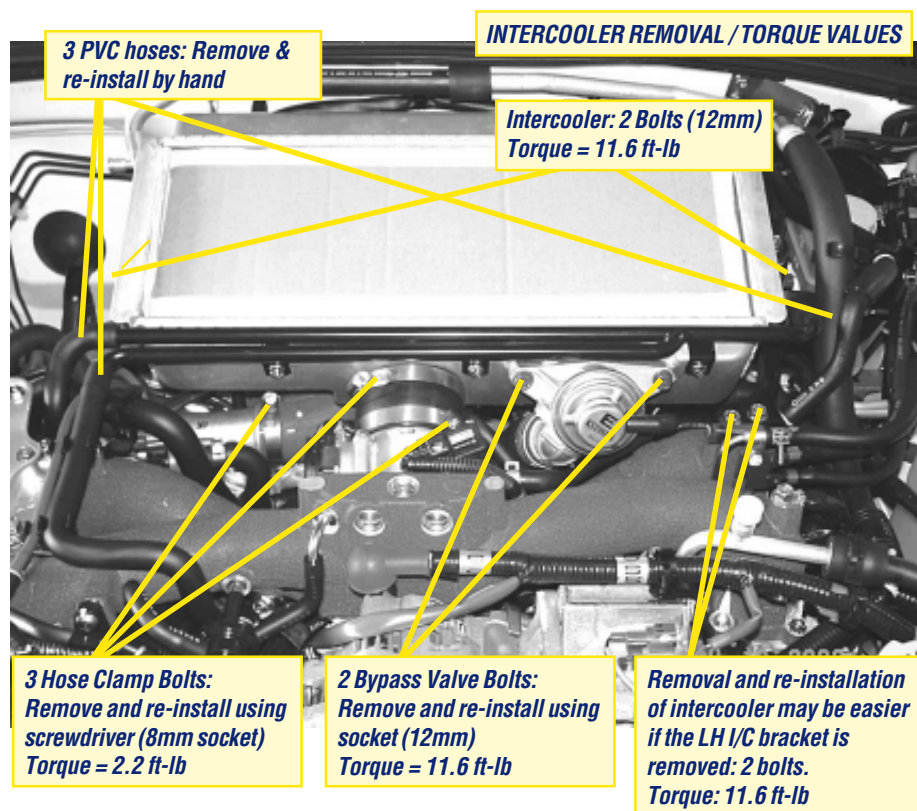
The purpose of this TechTIPS article is to alert the installer of changes and precautions to the single turbo gauge installation. If you would like a step by step guideline, please refer to the installation instructions included with **P/N H5010FE050** or you can download it from www.subarunet.com > **business** > **fixed operations** > **accessories** > **installation guides** > **performance gauge pack** > **2004MY STi**.

CHANGES

- 1) Because the STi has a larger intercooler than its WRX counterpart, the intercooler has to be removed to access the bulkhead grommet. The tools recommended to R&R the intercooler are listed in figure 1.
- 2) The turbo gauge pod has been relocated to the left side of the steering column. This will allow the driver to have an unobstructed view of the speedometer.

PRECAUTIONS

- 1) Use care when handling the intercooler. Failure to do so may result in damage to the top surface (e.g. fins). See figure 2 for one method of handling the intercooler when removing from the vehicle.
- 2) Be sure to cover all open holes (e.g. hoses, inlet and outlet pipes of intercooler and turbocharger) to prevent objects from falling inside.
- 3) After the vacuum hose is routed properly and the intercooler is ready to go back in the vehicle, ensure that the rubber intake air duct to the intercooler is secured all the way around the metal inlet pipe (see figure 2).

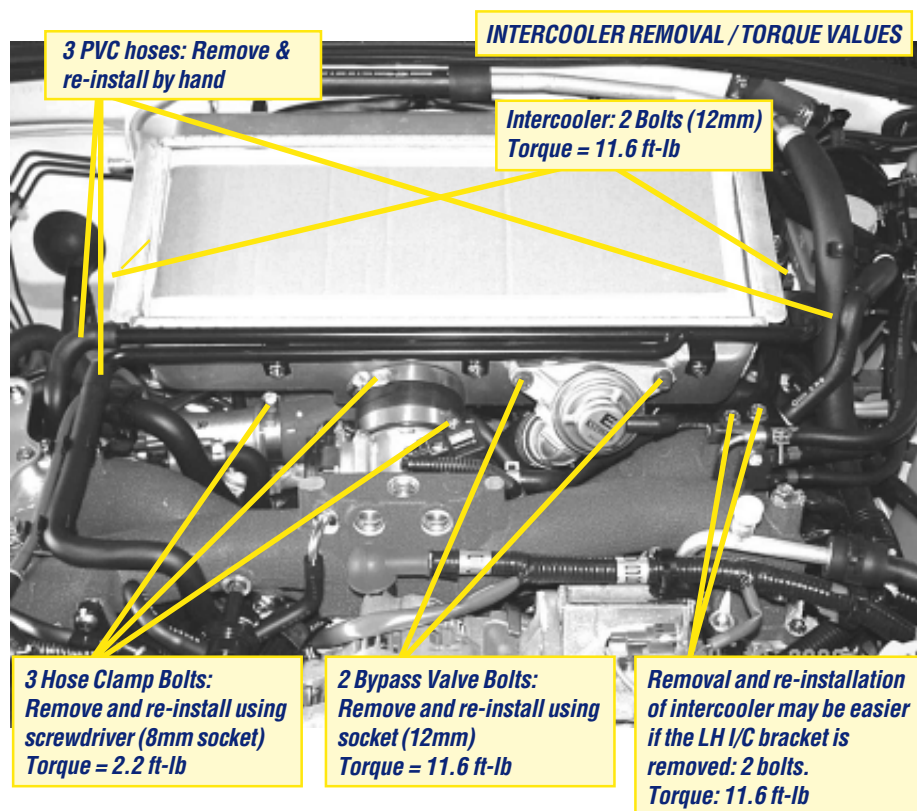
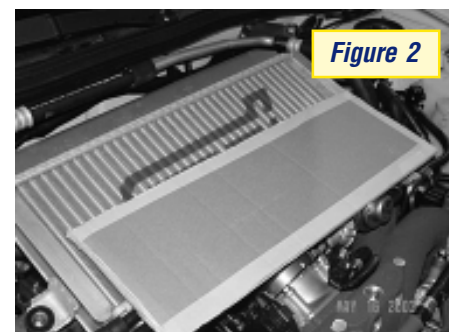


4) Due to the small area you will be working in, take caution when removing the upper column cover. The upper column cover is plastic and can be easily damaged if forced off the steering column.



The following is a list of tools needed to remove and reinstall the intercooler:

- 1) Slotted tip screwdriver (clamp removal).
- 2) Torque wrench.
- 3) 3/8" drive ratchet.
- 4) 3/8" drive extension 6" long.
- 5) 8mm deep socket (clamp bolts).
- 6) 10 mm deep socket (battery).
- 7) 12mm deep socket (Intercooler, Bypass valve).



PURPOSE

The purpose of this TechTIPS article is to alert the installer of precautions when installing the single turbo gauge. If you would like a step by step guideline, please refer to the installation instructions included with P/N H5010SA010 or you can download it from www.subarunet.com > **business** > **fixed operations** > **accessories** > **installation guides** > **single turbo gauge** > **2004MY Forester**.

PRECAUTIONS

- 1) Due to the small area you will be working in, take caution when removing the upper column cover. Pay special attention to the plastic case bosses (see arrows in pictures below). They are permanently attached to upper cover and will break if pried too far from their original form.
- 2) The installer should use masking tape to cover the outside of the instrument panel. This will avoid scratching the interior trim when reinstalling the meter visor.
- 3) When reinstalling the meter visor (combination meter cover), you will need to carefully depress the rubber gauge pod down to clear the meter visor over the upper steering column cover. Therefore, do not install the turbo gauge into the rubber pod until the meter visor is properly installed. Damage to the gauge or the interior panels could occur if the meter visor is installed with the gauge inside the rubber pod.
- 4) After routing the wiring and vacuum hose for the turbo gauge, check to make sure the adjustable steering column has full range of movement without pinching or rubbing any lines.



Turbo Gauge Pod



**Plastic Case
Bosses**

When performing a PDI, if you encounter a light film of residue on the painted surface, especially at the edges of the plastic wrap, it may be caused by leftover adhesive from the protective plastic wrap.

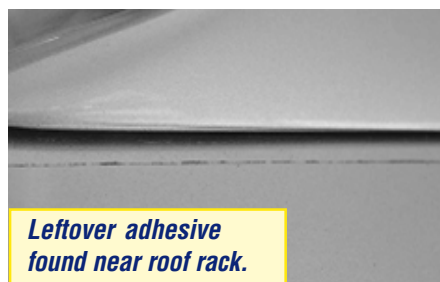
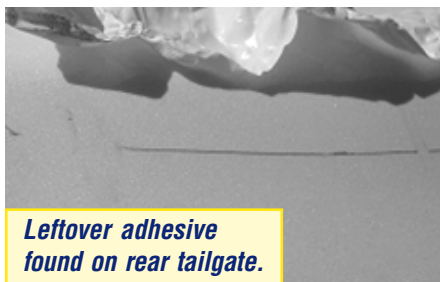
The concern could appear anywhere plastic wrap covers the vehicle, but the symptom may appear more prevalent on vehicles equipped with a hood scoop on turbo-charged vehicles. To ensure that the adhesive does not remain on the vehicle, the plastic wrap should be removed with slow and steady pressure. Removing the plastic wrap too quickly could result in adhesive remaining on the vehicle.

Special care must be taken when removing the adhesive from all painted surfaces. As a rule for leftover adhesive, use R-M Pre Kleano or equivalent product for adhesive removal. It is paint safe and it must be applied with a clean cloth. Use light pressure and let the remover do the work. Be sure to change cloth sections frequently so that any adhesive and dirt built up on the cloth won't scratch the paint. It was used on the vehicle in the photos and it removed the residue easily. You may want to follow it up with 99% isopropyl alcohol on a clean rag to remove any hazing left by residual adhesive. Isopropyl alcohol is available through any body shop supply store or local pharmacy.

Regardless of the removal technique and the chemicals used, it is critical to wash the vehicle following wrap removal to reduce the chances of paint damage from either the adhesive or chemicals being left on the painted surfaces.

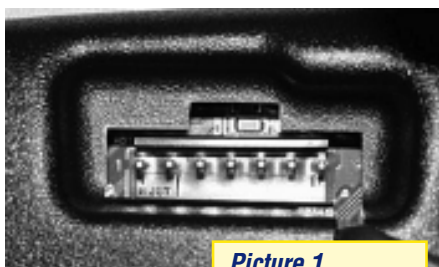
CAUTIONS

- 1) Extended exposure of paint to alcohol may cause the painted surface to lose its gloss. This can be restored by the use of a clear coat safe polish or wax.
- 2) In addition, please be sure to remove any and all traces of adhesive before performing any buffing process. Any residue remaining may get ground or burnt into the finish causing clear coat or paint damage.



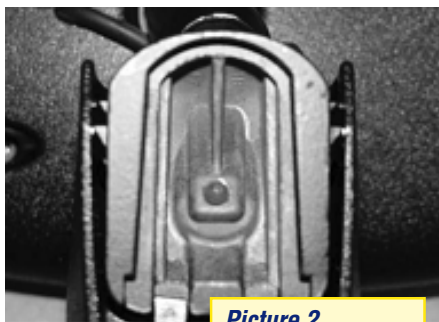
The purpose of this TechTIPS article is to alert field personnel of revisions to the EC Compass Mirror. Some key changes are as follows:

- 1) The internal components and circuitry have been revised on all models. The updated mirror is less susceptible to outside influences.
- 2) The 7-pin connector to the mirror is now recessed on all models (see picture 1 below).



Picture 1

- 3) The mounting for the 2004 Legacy, Outback, and Baja has changed. It now uses a mounting plate and setscrew (see picture 2 below) instead of a camlock (see picture 3).



Picture 2



Picture 3

- 4) The compass display of the mirror has changed from green to blue.
- 5) The part numbers for the revised Electronic Compass Mirror are Legacy/Outback/Baja: **H5010LS003** and Impreza/Forester: **H501SSA000**

NOTES

- The new EC Compass Mirror is calibrated the same way as previous model. Please refer to the appropriate owner's manual for calibrating instructions.
- The EC Compass Mirror is not available for 04 Impreza RS sedan and TS wagon.
- The mounting for the 2004 Impreza and Forester remains the same-camlock.



Old Connector

15 WRX STi AUDIO SYSTEM

As you know, the Subaru WRX STi does not come with an audio system as standard equipment. If you went to the 2004 New Model Update (NMUD) class, you should know that the necessary vehicle harnesses are there to install one.

If you didn't go to the NMUD class, now you know.

02 ALL TURBO MODEL OIL FILTERS

Be advised that the correct oil filter to use on 2003MY/2004MY turbo model vehicles is **P/N 15208AA080**.

This includes the 2004 WRX STi.

Naturally aspirated vehicles should use **P/N 15208AA024/15208AC060**.

Using the wrong oil filter on a turbo model may put the filter too close to the turbo down pipe and possibly cause an unnecessary heating of the oil filter.

2003 CALENDAR OF SUBARU HOLIDAYS

New Year's Day
Wednesday, January 1, 2003

Presidents' Day
Monday, February 17, 2003

Memorial Day
Monday, May 26, 2003

Independence Day
Friday, July 4, 2003

Labor Day
Monday, September 1, 2003

Thanksgiving
Thursday, November 27, 2003
Friday, November 28, 2003

Christmas
Thursday, December 25, 2003
Friday, December 26, 2003

New Year's Day
Thursday, January 1, 2004

"TechTIPS" INPUT & SUGGESTIONS

This is **your** chance to offer suggestions for use in future issues of *TechTIPS*!

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 T.I.P.S. 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:** _____

18

SERVICE BULLETIN 09-37-03 CORRECTION

Service Bulletin 09-37-03, '**New WRX Radiator**', has an incorrect part number listed. The part number for the manual transmission radiator should be 45111FE101. The electronic version found on the S.T.I.S. website has been corrected.

Please correct your printed copy of the above referenced Service Bulletin to reflect this change.

A corrected paper copy will not be printed.

Thanks to Bruce Smith, Parts Manager at West Houston Subaru (090-509) in Houston, Texas for bringing this to our attention.

02

ISC VALVE CLEANING

If you encounter a driveability concern such as idle surges or whistling, it may be caused by carbon buildup on the Idle Speed Control valve. In these cases, it is not necessary to replace the ISC valve. Cleaning the ISC valve could correct the condition. To clean an ISC valve, please perform the following procedure.

NOTE: See charts below for vehicle applicability and warranty submission.

Cleaning Procedure: NA Vehicles

- 1) Warm up engine.
- 2) On 2.2L/2.5L engines only, remove the bolt that attaches air cleaner case "B" to the bracket.

Undo the clips (3) that hold together air cleaner case "B" to air cleaner case "A". Remove air cleaner case "B" and the air cleaner element and set aside. (On all 3.0L H6, remove the entire air intake chamber).
- 3) Start the car and maintain engine speed between 1000-1500 rpm.
- 4) Spray engine cleaner (GM Part # 12345089 GM Top Engine Cleaner or equivalent) toward the upper air-stream of the throttle chamber for approximately 10 seconds.
- 5) Stop engine and let sit for 3 minutes.

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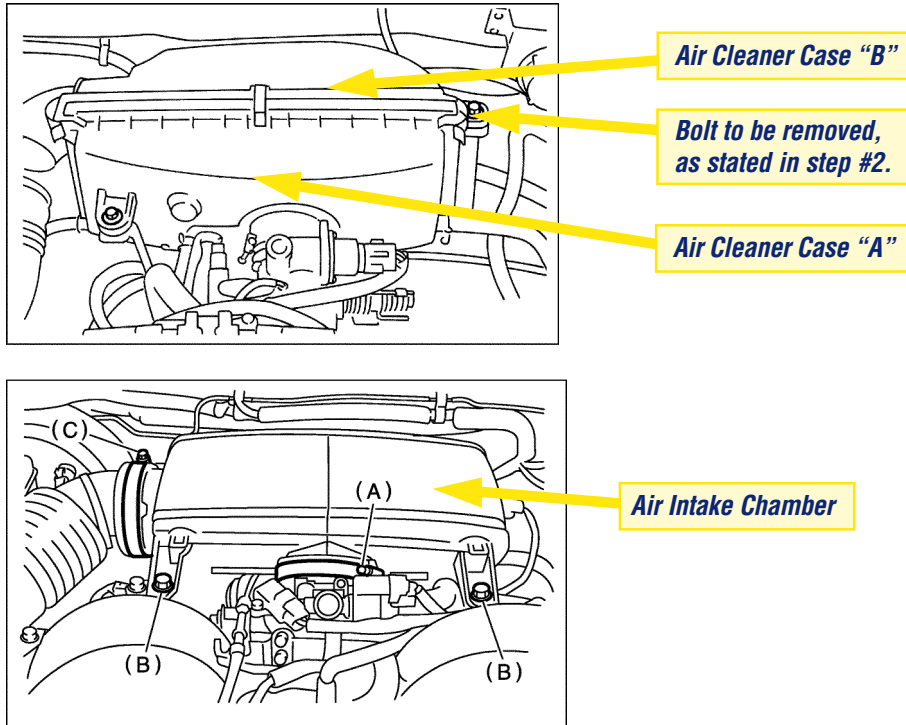
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- 6) Restart the engine and maintain 1000 to 1500 rpms.
- 7) Spray engine cleaner on the upper air-stream of the throttle chamber for approximately 10 seconds.
- 8) Turn engine off.



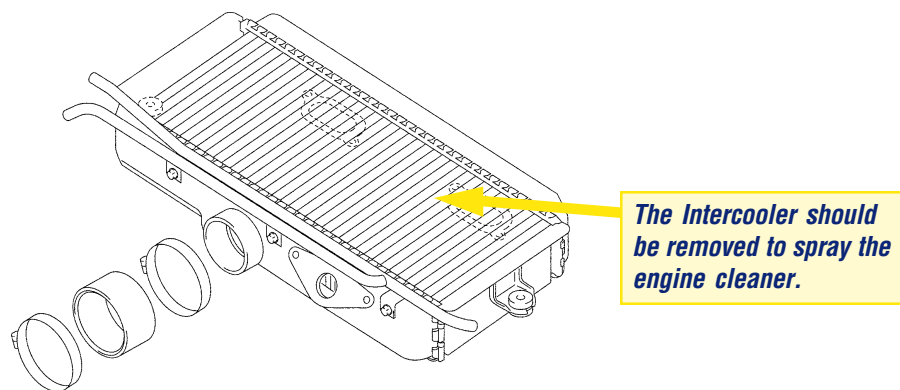
- 9) Reinstall air cleaner element and air cleaner case "B".
- 10) Operate car between 1000-2000rpms until no white smoke appears through tailpipe.
- 11) Turn ignition switch off and clear memory.

Cleaning Procedure: Turbo Vehicles

- 1) Warm up engine.
- 2) Remove the intercooler and set aside.
- 3) Disconnect the Mass Airflow sensor connector.
- 4) Cycle the key "on/off" once (to enter "failsafe" mode).
- 5) Start the car and maintain engine speed between 1000-1500 rpm.
- 6) Spray engine cleaner (GM Part # 12345089 Top Engine Cleaner or equivalent) on the upper air-stream of the throttle chamber for approximately 10 seconds.
- 7) Stop engine and let sit for 3 minutes.
- 8) Restart the engine and maintain 1000 to 1500 rpms.

...continued on pg 3

- 9) Spray engine cleaner on the upper air-stream of the throttle chamber for approximately 10 seconds.
- 10) Turn engine off.
- 11) Reinstall intercooler and reconnect Mass Airflow sensor connector.
- 12) Operate car between 1000-2000rpms until no white smoke appears through tailpipe.
- 13) Turn ignition switch off and clear memory.

2.0L/2.5L Turbo

MY	MODEL	ENGINE TYPE
99	Legacy	2.2L CAL
00~01	Legacy	2.5L MT
All	Legacy	3.0L MT
04	Baja	2.5L Turbo
99	Impreza	2.2L CAL
00~01	Impreza	2.2L
02~04	Impreza	2.0/2.5L Turbo

FAIL CODE	OPERATION NUMBER	LABOR TIME
UKW-42	455 - 272	0.4

Note: The above operation includes select monitor diagnosis, troubleshooting, component testing, and road testing.

SUBARU SERVICE
TECHNICAL SUPPORT T.I.P.S. LOCATOR INDEX

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**2003 CALENDAR OF
SUBARU HOLIDAYS**

New Year's Day

Wednesday, January 1, 2003

Presidents' Day

Monday, February 17, 2003

Memorial Day

Monday, May 26, 2003

Independence Day

Friday, July 4, 2003

Labor Day

Monday, September 1, 2003

Thanksgiving

Thursday, November 27, 2003

Friday, November 28, 2003

Christmas

Thursday, December 25, 2003

Friday, December 26, 2003

New Year's Day

Thursday, January 1, 2004

**2004 CALENDAR OF
SUBARU HOLIDAYS**

New Year's Day

Thursday, January 1, 2004

Presidents' Day

Monday, February 16, 2004

Memorial Day

Monday, May 31, 2004

Independence Day

Monday, July 5, 2004

Labor Day

Monday, September 6, 2004

Thanksgiving

Thursday, November 25, 2004

Friday, November 26, 2004

Christmas

Thursday, December 23, 2004

Friday, December 24, 2004

New Year's Day

Friday, December 31, 2004

"TechTIPS" INPUT & SUGGESTIONS

This is **your** chance to offer suggestions for use in future issues of *TechTIPS*!

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 T.I.P.S. 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:** _____

11

ECM REFLASHING CLAIM CODING

There have been some questions concerning claim coding for ECM reflashing.

This information can be found on the fax sheet that is sent to dealers authorizing them to send the ECM to SOA.

If this form is not available for your review, please use the following information.

Operation Number: A455-281

Failure Code: UEC48

16

2003 MY LEGACY 2.5GT SPORT SHIFT COLD WEATHER OPERATION

The 4EAT with 'Sport Shift' mode was first made available in the 2003MY Subaru 2.5GT model. This feature allows either automatic or manual shifting of the transmission. A little known characteristic about the 'Sport Shift' is that the manual mode will only work when the ATF temperature is between 50°F and 240°F.

If the ATF temperature is outside this range, either too cold or too hot, and the driver attempts to use the 'Sport Shift' mode, the TCM will not allow the 'Sport Shift' mode to function. Instead, the gear indicator on the combination meter will display a horizontal line (see photo) and a constant 'beep, beep, beep' tone is sounded if attempting to shift the transmission manually.

When this happens, the driver must exit the 'Sport Shift' mode and allow the transmission to operate automatically until the ATF has warmed up or cooled down sufficiently.

Once the ATF has warmed up or cooled down to the required temperature, two small arrows will appear to the left of the gear indicator. The 'Sport Shift' mode



can now be selected and the TCM will allow the 'Sport Shift' to function normally through all forward gears.

For more information on this function, consult the 2003MY Legacy & Outback Owner's Manual, starting on page 7-25.



CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Technical Support T.I.P.S. are intended for use by professional technicians ONLY. They 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 knowhow to do the job correctly and safely. If a condition is described, DO NOT assume that this Technical Support T.I.P.S. applies to your vehicle, or that your vehicle will have that condition. Impreza, Legacy, Justy, Loyale, Outback, Forester, Subaru SVX, WRX, L.L. Bean, Baja, "Quality Driven" and "The Beauty of All Wheel Drive" are Registered Trademarks.

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(Note: This is a re-release of past articles.)

We wanted to review some of the past information on engine noise.

The 2000MY and current models, with the 2.2 and 2.5 engines were made more fuel efficient, more powerful, and had a flatter, more usable torque curve than in previous years. To achieve these objectives, it was necessary to make improvements and modifications to the Subaru engine lineup. The following are some of those improvements:

1. Mechanical valve lash adjusters (reduces friction)
2. Lightweight pistons (reduces inertia)
3. Short skirt, Molybdenum coated pistons (reduces friction)
4. Increased compression ratio (improved power output)
5. Improved cylinder head design (improved cooling)
6. Improved induction system (improved breathing)

As a result of these enhancements, some engines may exhibit some engine noise during the warm-up period after a cold start-up. This noise is a consequence of the engine improvements and is not, in any way, an indication of any engine problem.

A light engine knock, after cold start, that gradually dissipates as the engine warms up and is virtually undetectable (from inside

the vehicle) once the engine has reached operating temperature, is a normal characteristic of these engines. Repair attempts to reduce this type noise are generally unsuccessful.

If you have a vehicle in which an engine noise is other than that as described above, be sure to take the time to check all possible causes prior to condemning the internal components of the engine.

Before replacing parts in an attempt to eliminate engine noise, the engine should be inspected externally and internally for another source of noise. A look at the engine oil is a good place to start. New engines will have a small amount of metal particles in them, but after that should be relatively free of metal.

Another area to look at would be the timing belt tensioner and the belt and sprockets. There have been cases where noises coming from under the belt covers and from external components sound like a deep internal knock.

If a customer complains of a cold engine knock, and the cause is from the improvements listed above, please reassure him/her that no permanent engine damage will occur. If the noise persists and is still clearly audible when the engine is warm, please consult your DSOM.

Be advised that special tool P/N 499990120 (which supersedes 499990110) is the only tool recommended for removal of the O2 Sensors.

Use of this tool will lessen the chance of damaging the threads during the removal process.

This individual tool is not available through normal SOA parts channels, as it is included in your dealership's primary tool kit. For replacement of this individual tool, please contact Kent-Moore directly at 1-800-345-2233.

If you get a complaint of a noise from the blower motor on 2002MY Legacy vehicles, please refer to the November 2001 issue of the T.I.P.S. for the inspection and repair procedure.

Leaking of coolant at the upper radiator hose is occasionally mistaken for coolant leakage from the radiator, when in fact it has oozed out of the radiator hose connection. The following information will help you correctly diagnose and repair this concern.

Models Involved

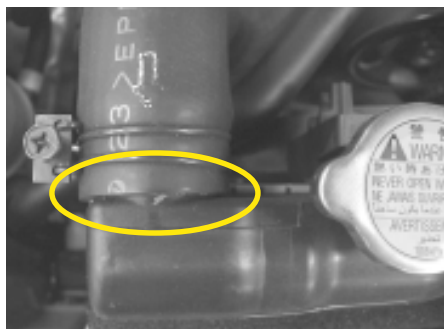
Legacy, Impreza and Forester

Condition

If coolant is found on the clinching plate of the upper radiator tank, it is occasionally misjudged that the coolant has leaked from the radiator. (See image below).



However, it is actually that the coolant has leaked out of the radiator hose connection. So you must first try to trace the coolant leakage from the upper radiator hose as shown in the picture below:



Note: The leakage of coolant is characteristic of the following phenomena:

- 1) Most of the oozing of coolant cannot be found by a conventional pressure tester.
- 2) Even though hose clamp is insufficiently tightened, coolant will not leak when static pressure 21.3psi (147KPa) is applied.
- 3) Leaking is found when hose is shaken at 14psi, corresponding to actual engine movement during running.

Repair Procedures

TROUBLE SHOOT: STEP 1

After checking the location of oozing, clean the surrounding area.

Check the remaining length of the clamp bolt after it has been tightened. If it is too loose, adjust it. (Specified value: 5 to 10mm.)

Fill radiator to proper level. After confirming it is completely filled, apply static pressure with pressure tester up to 22.8psi (157KPa) and shake the hose in the area where the oozing was first located.

Check whether coolant leaks from connection or not.

If coolant leakage is not found, the process is complete.

If coolant leakage is found, go to "Trouble Shoot: Step 2".

TROUBLE SHOOT: STEP 2

Disconnect hose where coolant leaks.

Check if inner surface of hose is damaged or foreign matter is stuck inside.

If yes, replace hose with new one or remove foreign matter.

- 1) Check if damage or dent is found on surface of pipe.

If yes, replace part with new one or repair as necessary.

- 2) Connect hose to the pipe and clamp it tightly.

Check to specifications length of clamp bolt after it has been tightened and adjust it if it is beyond the specified value.

Specified value: 5 to 10mm. (See figure #1, below).

- 3) Fill the coolant up to full, then check leakage according to "Trouble Shoot: Step 1".

- 4) If no leakage from connection is found, the process is complete.

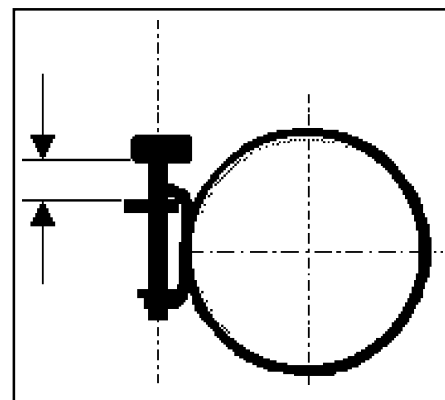
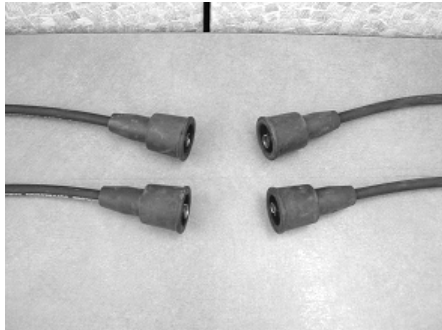


Figure 1

Please note there has been a part number switch specific to the 1998 Forester Model:



SOA430Q121 (pictured above) is the Correct Part Number for the 1998 Forester model.



SOA430Q122 (pictured above) is the previously listed part number which is not applicable to the 1998 Forester model.

NOTE: This change will be reflected in the April 1st Edition of the Dealer Parts Price Book.

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New Year's Day

Thursday, January 1, 2004

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MODEL: _____

YEAR: _____

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Description of situation encountered: _____

Your suggestion for repair procedure, product improvements, etc.: _____

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Permission is granted to Subaru of America, Inc. to print your name and suggestions in T.I.P.S. 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:** _____

01

SUMMER 2004 TechTIPS LOCATOR INDEX

Consider this your advanced notice concerning the Summer 2004 TechTIPS Locator index (which will be printed in June 2004). The Summer 2004 TechTIPS Locator index will only have information dating back to the **2000MY**. The Winter 2003 TechTIPS Locator index (December, last month's issue) has information going back to the **1995MY**. As usual, we suggest you hold onto the Winter 2003 TechTIPS Locator Index (December) issue so you can reference this older information, should you have the need. The Winter 2003 Locator index (December) is also available on the STIS web site should you need to access it.

16

PHASE II 4EAT STUD LEAK REPAIR (REVISED)

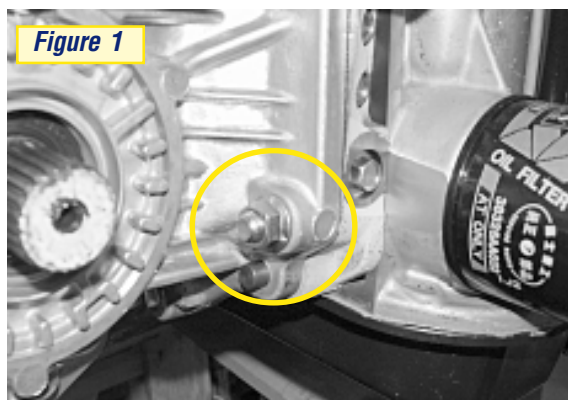
This is revised information concerning the article published in the **November 2003 TechTIPS Newsletter**.

While diagnosing a transmission leak on a Phase II 4EAT, it is advisable to inspect the left-side transmission stud area (see figure 1 for illustration). If the transmission leak originates from this stud, please perform the following repair.

- 1) Remove the left-front tire.
- 2) Separate the left-hand stabilizer link from the lower control arm (also referred to as transverse link).
- 3) Separate the left-front balljoint from the lower control arm.
- 4) Remove the axle shaft pin.
- 5) Remove the axle shaft from stub shaft and place out of the way.
- 6) Remove the transmission stud nut from the stud (see *Figure 1* for stud location).
- 7) Remove the transmission stud.

...continued on pg 4

Figure 1



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01**CLAMP-ON RACKS AND
WIND NOISE**

Clamp-on racks are intended for use with other genuine Subaru rack mounted accessories, such as the bike rack, ski rack, kayak stacker, and roof cargo basket. Customers may hear an increased level of wind noise or wind rush sound as a result of installing these racks on their vehicles. If the noise level is objectionable, the racks should be removed and installed only when in use.

11**ECM REPROGRAMMING
– A REMINDER**

When shipping ECM's to Subaru of America (SOA) for reprogramming, the units need to be shipped via **UPS Next Day Air**. Also, double check the shipping address you are currently sending the ECM's to. The correct address and the one you should be using is:

**Subaru of America, Inc.
7015 Central Highway
Pennsauken, New Jersey 08109**

06**BULLETIN #'s 06-31-03
& PT 370303**

Be advised that **Parts Bulletin # PT 370303** has been posted to SubaruNet. This bulletin is an alert to the expansion of ABS ECU availability as per the **Technical Service Bulletin # 06-31-03**. This Parts Bulletin is linked to all Hydraulic Control Unit (HCU) assemblies and all ABS ECU individual part numbers.

In the event of an ABS ECU related claim, replacement of the HCU assembly will **not** be reimbursed for the full cost of the assembly, unless extenuating circumstances are presented.

15**BAJA BED COVER REPLACEMENT
(REPRINTED FROM MAY 2003 TECHTIPS NEWSLETTER)**

If you have a situation where the Baja soft bed cover needs to be replaced do not order the entire kit. You should order the soft cover only, part number L0010LS030 or L0010LS031 depending on which soft cover kit you have.

To find out which kit you have, look at the rear rail that came with the kit which is attached to the rear tailgate. With the tailgate in the up position, look on the inside for the attaching screw furthest to the left, (driver's side). Then look for a very small dimple ½ inch to the right of the center of that left hole. If there is a dimple, a small round hole which does not go through the rail, then you have the newer style kit.

There is a difference in the size of the bed covers, so be sure to order the right kit for the vehicle you are working on.

All new replacement soft covers now come with latches attached. They are there to install a bow to aid in rain water drainage. The new style comes with the bow. If the customer wants a bow for the old style kit, it can be ordered separately.

Parts Information**Old Style**

L0010LS030 -- Soft cover replacement part includes two latches.

L0010LS080 -- Support bow. If the customer wants a bow, you will need to order it separately.

**New Style**

L0010LS031 -- Soft cover replacement part (the support bow is included in the original kit).

All the bed cover kit parts are available and listed in the 2000-2003 Accessory Manual MSA6A0212.

You can also refer to Parts Bulletin **PT100103** for more information.



The design of the Forester crossbar has been revised. The crossbar previously contained black textured tape on the top of the bar surface. The tape has been removed and is replaced with black textured paint. This redesigned crossbar is applicable to 2003 and the upcoming 2004 Forester.

Front & Rear Bar Assembly Part Numbers:

- **P/N E361SSA011**
2004 Forester Front X-Bar Assembly with black textured paint
- **P/N E361SSA012 -**
2004 Forester Rear X-Bar Assembly with black textured paint



With the start of production of the 2004 Baja the relay location for the Sport Activity Lights has changed. See below for details:

2003 MY Sport Activity Lights (P/N H1410LS000)



2003 Relay

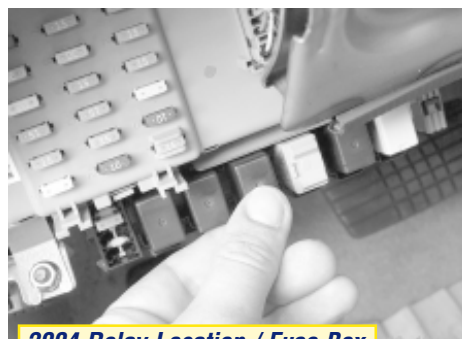


2003 Relay Location / Factory Harness

2004 MY Sport Activity Lights (P/N H1410LS200)



2004 Relay (P/N 82501AE03A)



2004 Relay Location / Fuse Box

If you encounter an H6 engine with a noise coming from the front timing chain area and suspect it might be caused by the timing chain tensioner, please follow the instructions below. SOA has tried this procedure and found it to be an effective fix.

Repair Procedure:

- 1) Start the Engine
- 2) Raise engine RPM's under cold condition, up to 5000rpm 3 to 4 times.

3) Confirm whether the noise is eliminated.

4) If the noise still exists, repeat above procedure again.

If you cannot eliminate the noise with above procedure, replace Chain Tensioner.

PHASE II 4EAT STUD LEAK
REPAIR .. continued from pg 1

NOTE: Regardless of the method used to retract the stud from the main case, be sure to inspect the stud for damage and replace if necessary.

- 8) Wrap the stud (whether it is old or new) with Teflon tape.
- 9) Reinstall the stud and tighten the stud to 13-ft. lbs.
- 10) Reinstall the stud nut and torque to 30-ft. lbs.
- 11) Reinstall the axle shaft, pin, swaybar link, balljoint, and tire in reverse order.

NOTE: Axle shaft pins are not re-useable. Please install a new axle shaft pin during re-assembly.

Labor Description	Failure Code	Operation Number	Labor Time
Transmission Stud Leak	LAK 20, 34	A354-101	0.6

NOTE: Time to diagnose the leak is included in this repair procedure.

**2004 CALENDAR OF
SUBARU HOLIDAYS**

New Year's Day

Thursday, January 1, 2004

Presidents' Day

Monday, February 16, 2004

Memorial Day

Monday, May 31, 2004

Independence Day

Monday, July 5, 2004

Labor Day

Monday, September 6, 2004

Thanksgiving

Thursday, November 25, 2004

Friday, November 26, 2004

Christmas

Thursday, December 23, 2004

Friday, December 24, 2004

New Year's Day

Friday, December 31, 2004

"TechTIPS" INPUT & SUGGESTIONS

This is **your** chance to offer suggestions for use in future issues of *TechTIPS*!

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 T.I.P.S. 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:** _____

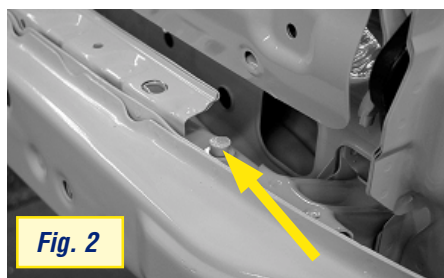
Date: _____ **Dealer Code:** _____

15 BUMPER BEAM PLUG FOR BAJA TRAILER HITCH

Before installing the trailer hitch on the Baja, please ensure that the silicone plugs are taken out of the weld nut on the bumper beam (see Fig. 1).



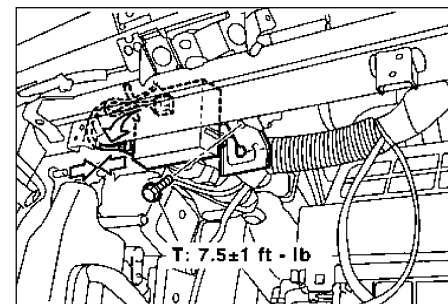
The bumper beam plugs are installed at the factory to prevent the inside on the threads from being painted (see Fig. 2 and 3).



continued on pg 2

15 STi SECURITY MODULE TORQUE SPECIFICATIONS

This article is to reinforce the importance of the specific torque specifications for the 2004 STi security system module. The security module is mounted behind the glove box and servicing it requires the removal and reinstallation of one passenger side air bag bolt (see pictures).



Please ensure that the air bag/security

continued on pg 2



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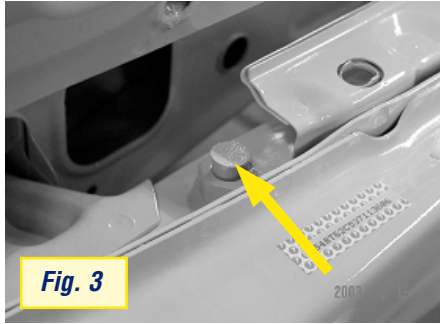
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CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.

Subaru Technical Support T.I.P.S. are intended for use by professional technicians ONLY. They 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 knowhow to do the job correctly and safely. If a condition is described, DO NOT assume that this Technical Support T.I.P.S. applies to your vehicle, or that your vehicle will have that condition. Impreza, Legacy, Justy, Loyale, Outback, Forester, Subaru SVX, WRX, L.L. Bean, Baja, "Quality Driven" and "Driven By What's Inside" are Registered Trademarks.

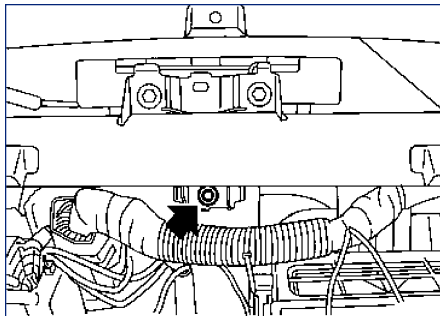
BUMPER BEAM PLUG... *continued from pg 1*



If the bumper plugs are not removed, this may cause difficulty in properly installing the trailer hitch bolt. It may be a good idea, when initially threading the bolt into the bumper beam weld nut, to start it by hand. This will avoid cross-threading the bolt. For proper installation instructions, please download the information from <http://www.subarunet.com>

STI SECURITY MODULE... *continued from pg 1*

system module bolt is torqued to 7.5 $\pm$ 1 ft. lbs (torque specification of the bolt is normally 5.4 ft. lbs.). For detailed installation guidelines, please refer to the installation guide supplied in kit # H7110SS200 or download the information from: http://www.subarunet.com/fixed_operations/accessories.



01 MODIFICATION TO VEHICLES

A modification is defined as ANY unauthorized component or alteration to the vehicle that is not designed or tested for manufacturer specification. This is including but not limited to air filters (such as K&N or anything other than OEM), aftermarket ECMs, oil filters and spark plugs.

If the vehicle has been modified and you feel the condition is caused by the modification, it is the **customer's responsibility** to return the vehicle to its original condition. Before the repair starts, please advise the customer to return the vehicle to manufacturer specifications. If the vehicle arrives and there are any signs of previous modification, it is imperative that you notify the techline support representative. If they do not know that the vehicle is or has been modified, their suggestion to repair the vehicle may lead you in the wrong direction (TIME IS MONEY). Failures caused by modifications to are not a matter for warranty.

11 CONTROL UNIT REFLASHING INFORMATION

Be advised that there is now information available on the <http://www.subarunet.com> website listing what reprogramming capabilities are available.

To access this information, go to the above website (you'll need to know your dealer's password to get in), scroll down the left side of the screen to '**Service**' and then select '**Control Unit Reprogramming**' from the dropdown box.

This will open and allow you access to tables that will list reprogramming availability.

Obviously, we suggest you make copies of this so you have ready access to it and check the site often for updates.

If it is necessary to send the ECM in for reprogramming, please make use of the ECM Reprogramming fax form that you can find on the same site through Service Publications, TechTIPS, Sept/Oct 2002.

We are seeing a large number of cambelt tensioners being replaced during other repairs (eg. crankshaft seals, camshaft seals, water pumps...) because there is a small amount of oil in the rod seal area.

Be advised that a **slight trace of oil in this area is normal**.

This information can be found in the applicable service manual for the vehicle being worked on.

Example: 2002 Legacy & Outback Service Manual Book 2, Section ME, Page ME-50, top of left hand column.

CAUTION: Slight traces of oil at rod's oil seal do not indicate a problem.

By now, you should all know that Quality Monitoring Reports must be entered on-line through the Service Menu on subarunet.com. The on-line Quality Advice Form has been discontinued.

Paper copies of QMRs, Electrical Condition Reports (ECR), and Quality Advice Forms will no longer be accepted. Please discard all unused paper forms.

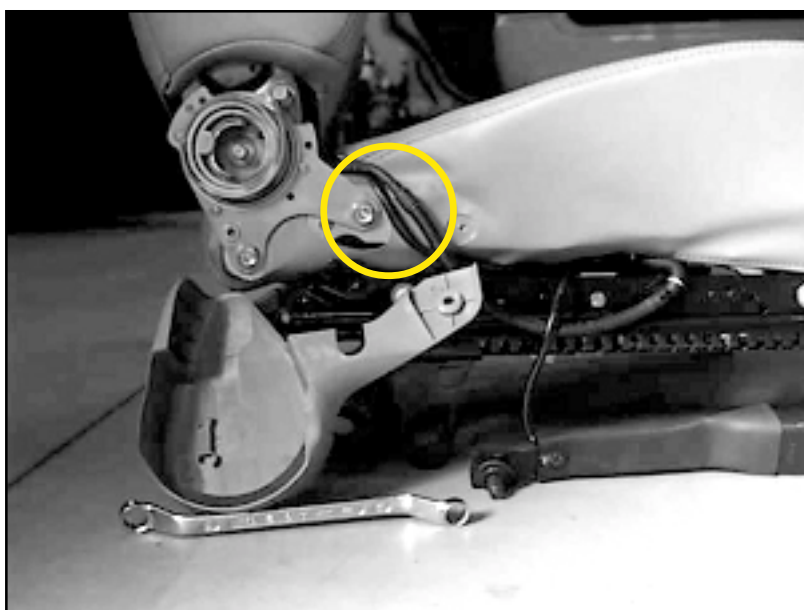
Switching to electronic QMR submission was done to facilitate compliance with the TREAD Act Early Warning Report regulations that require Subaru to submit information on dealer field reports.

If you encounter a 2003MY Forester with any of the above codes, please inspect the area shown below in the accompanying photo.

The Technical Support Line has received a few calls where the wiring harness has been pinched/cut when the seat trim cover has been installed.

The area to inspect is on the outboard side of the seat on either the driver's side (code 42) or passenger's side (code 41).

If no damage is seen in this area of the harness, please inspect the total length of the harness to ensure that it isn't damaged where it runs under the seat near the seat track.



The Technical Helpline has received some calls on vehicles equipped with the Automatic Climate Control system with the concern of the heater blowing cold air.

If you get such a concern, make certain the system's aspirator tube is properly connected and if so, also make sure it's not kinked or restricted by a harness or something else.

The vehicle's aspirator tube tells the system what the cabin temperature is.

Without this input, it cannot adjust the system properly to maintain the correct temperature.

Also, be aware that this can cause the a/c system to not cool properly as well in warmer temperatures.

This tube should be inspected anytime you have a poor heating/cooling concern on these vehicles.

The procedure for testing can be found in the applicable service manual for the vehicle you are working on.

**2003 CALENDAR OF
SUBARU HOLIDAYS****New Year's Day**

Wednesday, January 1, 2003

Presidents' Day

Monday, February 17, 2003

Memorial Day

Monday, May 26, 2003

Independence Day

Friday, July 4, 2003

Labor Day

Monday, September 1, 2003

Thanksgiving

Thursday, November 27, 2003

Friday, November 28, 2003

Christmas

Thursday, December 25, 2003

Friday, December 26, 2003

New Year's Day

Thursday, January 1, 2004

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Your Name: _____ **Signature:** _____

Dealer's Name: _____ **City:** _____

Date: _____ **Dealer Code:** _____

15

04 IMPREZA TRAILER HITCH INSTALLATION PRECAUTIONS

There is new cutting procedure for installing a trailer hitch on a 04 Impreza. When a technician makes the cut to the bumper fascia, caution must be taken to ensure that the plastic tabs on the left and right side of the bumper do not get cut off. The left and right side plastic tabs act as reinforcement and help hold the bumper in place.

Fig. 1 shows an Impreza wagon bumper before cutting. Fig. 1 also has a rough line drawn in to identify the line when cutting.



continued on page 2...

10

A/C REMINDER

It's that time of year again. Time to dust off the A/C equipment. That includes checking your recycling equipment to make sure it's ready to go and that it's been **properly calibrated**.

The Technical Support Line gets calls addressing A/C performance concerns and in talking with the tech, we find that the A/C is either under or overcharged because the recycling equipment hasn't been calibrated to recharge the system properly after it was evacuated for servicing.

Another helpful hint is the Special A/C Supplement, originally published in 1994 and updated in 2000. Sure, that was a long time ago, but it contains all the information we have published on A/C and puts it in one handy source for quick reference. Plus, it's the ONLY place you can find those rare and often sought after Justy A/C wiring diagrams.

Look for it, dust it off, and study up for A/C 101.

Additional A/C information can be found in the following Service Bulletins:

10-70-00: 2001MY Legacy and Outback; A/C Relay Disconnection

10-71-00: Some 2000MY Legacy Vehicles; *Recirculation Door Actuator Noise*

10-72-02: All 2002-2003MY Impreza Vehicles up to VIN 3*511336 & 3*801514; *Countermeasure to Prevent Icing in the Evaporator on Air Conditioned Vehicles*

10-73-02: All 2003 Legacy and Baja Vehicles; *A/C System Relay Storage and Activation During PDI*

10-74-02: 2001-2002MY H-6 Legacy Vehicles; *Legacy H-6 Air Conditioner Compressor Revolution Sensor*



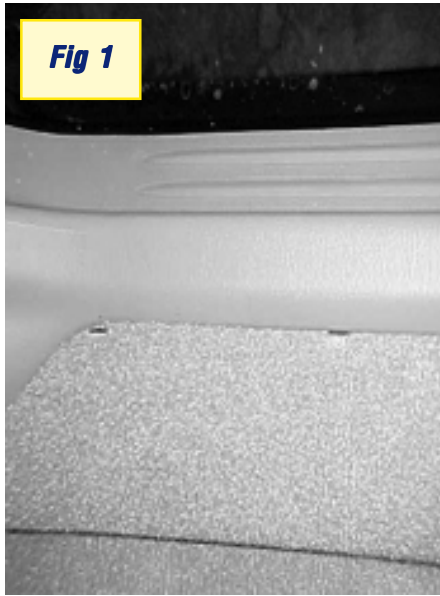
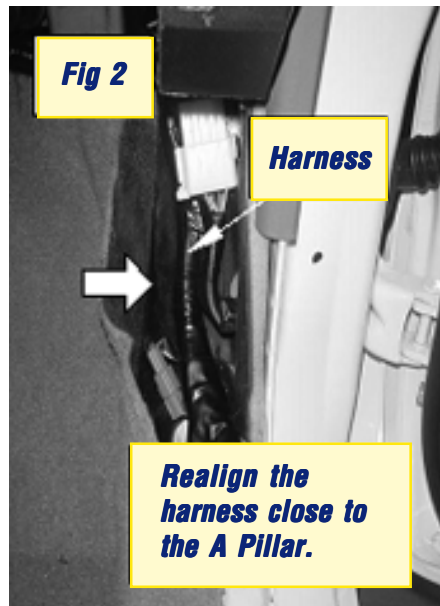
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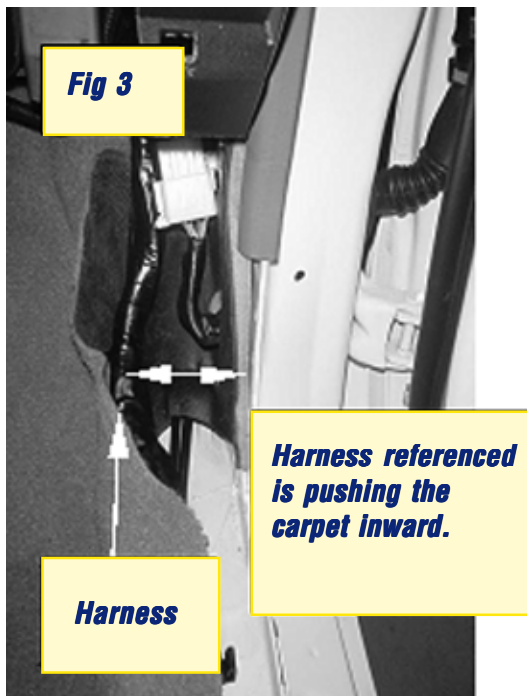
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15	03MY Forester Carpet Staple Visible Near Side-Sill Trim Cover	2
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Only noticeable on the right front passenger side of the vehicle, a customer may have a concern with carpet staple visibility (see fig. 1, below). Please check the location of the rear harness. If the harness is aligned properly (see fig. 2), the carpet staples are located under the side-sill trim cover and cannot be visible. If you find the problem (see fig. 3), please remove the side-sill trim cover and realign the harness. You do not need to replace any parts.

Fig 1**Fig 2**

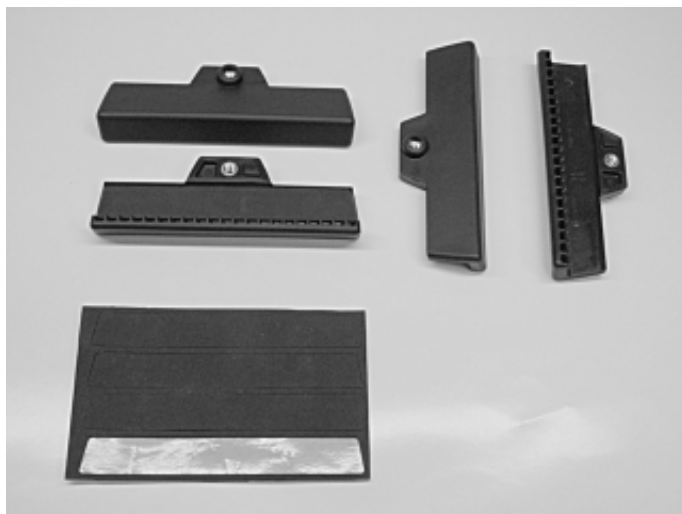
TRAILER HITCH INSTALLATION... *continued from page 1*

Fig. 2 and Fig. 3 depict a finished cut and expose the right side tabs. Be sure when you cut the bumper fascia to keep the tool parallel to the ground. This avoids cutting the tabs. Some of the tools that can be used to cut the bumper fascia are pictured in fig. 4.

Fig 2**Fig 3****Fig 3****Fig 4**

For complete details, please refer to the installation instructions included in the trailer hitch kit or download them from www.subarunet.com.

If you were to encounter a stripped brass insert on the rear clamp of any authorized Subaru Crossbar system, the lower clamp, lower clamp adhesive pad, and an M6 torx bolt can be ordered separately. It is not necessary to order the entire crossbar kit. For additional information regarding specific part numbers or availability, please see your parts counter representative. For specific installation instructions, please download the information from our web-site at www.subarunet.com



E3610LS360: Baja Lower Clamp Pad

E3610LS330: Baja Lower Clamp RH

E3610LS340: Baja Lower Clamp LH



E3610AS740: Outback & Impreza Clamps RH/LH

E3610LS050: Outback & Impreza Lower Clamp Pads



E361SSA040: Forester Clamp LH

E361SSA030: Forester Clamp RH

E361SSA060: Forester Pad Snap In

TechTIPS LOCATOR INDEX REMINDER

This is the Summer edition of the Technical Support T.I.P.S Locator Index. The next Locator index will be printed in December 2003. Please note that this, and future editions, will contain information only going back to 1995. A previous edition, published in June 2000, contained information dating back to 1991. We hope you held on to it.

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SHIFTER RATTLE	02/99
ALL 1999 MANUAL TRANSMISSION VEHICLES	03/99
TRANSMISSION/REAR DIFFERENTIAL GEAR RATIOS	06/99
POPPING OUT OF FIFTH GEAR	01/00
1999/2000MY MANUAL TRANSMISSIONS POPPING OUT OF 1ST GEAR	04/00
2001MY OUTBACK H6-3.0 VDC PRECAUTIONS	11/00
VARIABLE TORQUE DISTRIBUTION	05/01
ALL SUBARU REAR DIFFERENTIALS	10/01
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PARTS SUPERSESSION 2002MY OUTBACK & IMPREZA 1ST DRIVEN GEAR	09-10/02
TRANSMISSION POPPING OUT OF 3RD GEAR	05/03

04-STEERING

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05-SUSPENSION-WHEELS & TIRES

PROCEDURES FOR YOKAHAMA TIRE COMPLAINTS	02/95
NOISY IMPREZA REAR STRUTS	09/95
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1996 & 1997 2.2L MANUAL TRANSMISSION EQUIPPED VEHICLES	09/96
ADDITIONAL TIRE INFORMATION FOR '97 IMPREZA OUTBACK	11/96
AXLE SHAFT GREASE	08/99
RECOMMENDED WINTER TIRES FOR 2000MY OUTBACK	01/00
2000MY OUTBACK WINTER (SNOW) TIRE INFORMATION (SUPPLEMENTAL)	03/00
TIRE QUESTIONS AND INFORMATION HANDLING PROCEDURES	09/01

06-BRAKES

READING ABS CODES ON EARLY SUBARU LEGACY MODELS	07/95
SUBARU LEGACY - ABS LIGHT ON	08/95
BRAKE FLUID BASICS	09/95
ABS AND SELECT MONITOR USAGE	09/95
ABS/TCS EQUIPPED LEGACY VEHICLES	10/95
1995/1996 SUBARU LEGACY WITH ABS	11/95
1996 SUBARU LEGACY EQUIPPED WITH ABS/5.3 SYSTEM	11/95
ABS-2E CONTROL UNITS AND ABS CODE 23	12/95
VEHICLE NOT COMPLYING WITH FEDERAL AND STATE REGULATIONS	12/95
INTERMITTENT WHEEL SENSOR CODES IN EARLY LEGACY ABS SYSTEMS (NON ABS-2E)	12/95
BRAKE NOISE... WHAT IS NORMAL	02/96
5.3 ABS SYSTEM SERVICE MANUAL	06/96
COMPONENT RELOCATION WITH 5.3 ABS SYSTEM	06/96
ABS EQUIPPED SUBARU VEHICLES SYSTEM CHECK	08/96
NEW 5.3i TYPE ABS SYSTEM	02/97
5.3i ABS SYSTEM INFORMATION UPDATE	03/97
ABS 5.3i SERVICE MANUAL	04/97
IDENTIFYING ABS SYSTEMS	05/97
ABS 5.3i ABS WARNING LIGHT OPERATION	10/97
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USE OF NON-APPROVED BRAKE ADDITIVES	05/98
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BRAKE JUDDER AND NOISE; ALL MODELS	03/99
2002MY IMPREZA BRAKE ROTOR SCORING	06/01

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SPEED SENSOR 2	01/95
'94 LEGACY SEAT HEATERS	01/95
COLD SHIFT LOCKS (IMPREZA SHIFT LOCKS THAT WON'T UNLOCK WHEN COLD)	02/95
1985 AND LATER L-SERIES MPFI IMPROPER ENGINE OPERATION ABOVE 2000 RPM	03/95

BATTERY REPLACEMENT	03/95
ELECTRICAL DIAGNOSIS, THE HELPLINE, AND YOU	04/95
BATTERY CHARGING	05/95
ELECTRICAL CONDITION REPORTING	06/95
ROM INSTALLATION	08/95
1M? MIN.	09/95
1996 SUBARU LEGACY OUTBACK FOGLAMPS	10/95
1995 SUBARU LEGACY OUTBACK REAR POWER OUTLET	11/95
IDENTIFICATION OF CAM AND CRANK SENSORS	07/96
1995/96 SUBARU LEGACY BLOWS FUSE SBF-2	07/96
97 LEGACY POWER DOOR LOCK SYSTEM	09/96
STICKING OR DIFFICULT AUTO DOWN POWER WINDOW SWITCH BUTTONS (MISTAKENLY PRINTED IN SECTION 11)	10/96
DIAGNOSTIC TROUBLE CODE P0341	10/96
LOOSE WINDOW REGULATORS	10/96
REAR DEFOGGER TIMER	03/97
LEGACY HEATER CONTROL PANEL BULBS	03/97
98 FORESTER TRANSIT CONNECTOR LOCATION	08/97
98 FORESTER TRAILER HITCH WIRING HARNESS	08/97
95-97 LEGACY MOISTURE ACCUMULATION IN THE HEADLIGHTS	04/98
2000MY LEGACY BATTERY	09/99
WIRING HARNESS CONNECTOR i5	09/99
ELECTRICAL PROBLEMS? CHECK THE ALTERNATOR.	11/99
2000MY LEGACY BLOWS FUSE #5	01/00
2000MY SUBARU LEGACY TURN SIGNAL OPERATION	02/00
2000MY LEGACY & OUTBACK VEHICLES FOGLIGHT OPERATION	04/00
GROUNDS, GROUNDS, GROUNDS	07/00
DAYTIME RUNNING LIGHTS	08/00
WINDSHIELD WIPER DE-ICER SYSTEM NOT WORKING	11/00
TURN SIGNALS FLASHING RAPIDLY	11/00
BLOWER MOTOR RESISTOR REPAIRS	01/01
IN-DASH CIGARETTE LIGHTER USAGE	06/01
ALTERNATOR SUPLIER UPDATE	08/01
LEGACY TRANSIT (D-CHECK-PLUG) CONNECTORS	03-04/02
FUSE 4 BLOW-OUT	03-04/02
LEGACY REAR WIPER OPERATION	03-04/02

08-INSTRUMENT & CONTROLS

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WARNING LIGHT OPERATION	02/95
LEGACY AND IMPREZA FUEL TANK SENDING UNITS	05/95
INSTRUMENT CLUSTER CIRCUIT BOARDS	10/96
FUEL GAUGES ON "E"	10/96
1998 SUBARU FORESTER/IMPREZA DIGITAL ODOMETER	09/97
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2.2 IMPREZA AWD FUEL SENDERS	04/95
REFORMULATED GASOLINES	05/95
LOYALE WATER PUMP LEAKS	07/95
MODIFIED FUEL INJECTORS	10/96
COOLING FAN OPERATION	09/97
1999 LEGACY EXCESSIVE CRANK TIME	03/99
VEHICLE WON'T TAKE FUEL	03/99
VEHICLES THAT WON'T TAKE FUEL	09/99
FUEL SYSTEM QUICK CONNECTOR	10/99
DON'T TOUCH THAT SCREW	01/00
SULFUR SMELL FROM THE EXHAUST	05/00
USE OF GENUINE AIR CLEANER ELEMENT	11/00
H6 EXTENDED CRANK TIME	01-02/02
FORESTER FUEL LINE NOISE	09-10/02

10-HEATING VENTILATION & A/C SYSTEMS

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PAG OILS	05/95
AIR CONDITIONER HOSES	08/95
1995 MY RHD POSTAL LEGACY AIR CONDITIONING SYSTEM	08/95
A/C SYSTEM DIAGNOSTIC TIPS	08/95
A/C TESTING FOR SYSTEM LEAKAGE	08/95
SVX A/C CUTTING OUT WHEN AMBIENT TEMPERATURE IS HOT; SVX ENGINE RUNNING HOT	09/95
SVX EVAPORATOR THERMOSENSOR, INTAKE SENSOR	10/95
A/C PERFORMANCE-ALL MODELS	10/95
REFRIGERANT RECOVERY AND RECYCLING CERTIFICATION	06/96
CFC R-12 SUBSTITUTE REFRIGERANTS	06/96
REFRIGERANT SUBSTITUTIONS WARNING	08/96
SVX A/C TEMPERATURE CONTROL INDICATING CENTIGRADE VS. FAHRENHEIT	10/96
A/C ODORS	05/97
'97 LEGACY A/C SEAL RING (AXIS SEAL) CHANGE	05/97
1998 SUBARU FORESTER DASH VENT NOISE	09/97
1998 SUBARU FORESTER SQUEAKING NOISE WITH A/C ON	09/97
DUST AND DIRT ENTERING REAR OF VEHICLE	11/97
SUBARU IMPREZA CENTER DASH VENT AIRFLOW	07/98
SUBARU A/C RETROFIT KITS	09/98
USE OF A/C DYES IN SUBARU AIR CONDITIONING SYSTEMS, MANUFACTURER'S RECOMMENDATIONS	09/98
SEASONAL REMINDER	05/99
A/C RETROFIT KIT INFORMATION	07/99
A/C INOPERATIVE – IMPREZA/FORESTER VEHICLES	10/99
2000MY LEGACY HEATER CONTROL CABLES	05/00
2001MY A/C DISCONNECT PROCEDURE	07/00
MODE CONTROL PANEL CHANGE	02/01
2001MY LEGACY EVAPORATOR THERMOSTAT PROBE LOCATION	07/01
LEGACY H-6 A/C COMPRESSOR'S CUTTING OUT	08/01
VALEO/ZEXEL A/C TXV FASTENER TORQUE SPECIFICATION	08/01

H-6 CLIMATE CONTROL SYSTEM INFORMATION	09/01
CHANGE TO 2002MY LEGACY/OUTBACK A/C INFORMATION	09/01
2001/2002MY LEGACY BLOWER MOTOR NOISE	11/01
BLOWER MOTOR NOISE	08/02
BLOWER MOTOR NOISE	01-02/03
H-6 A/C COMPRESSORS CUTTING OUT	04/03

11-EMISSION SYSTEMS

LEGACY AND IMPREZA ENGINES WITH NO INJECTION PULSE #1 CYLINDER	03/95
IMPREZA AIR SUCTION VALVE NOISE	03/95
1995 SUBARU LEGACY DTC P0505 - IDLE CONTROL SYSTEM MALFUNCTION	06/95
1995 SUBARU LEGACY DTC P0325 - KNOCK SENSOR CIRCUIT MALFUNCTION	06/95
1995 SUBARU LEGACY DTC P0130 - FRONT O2 SENSOR CIRCUIT MALFUNCTION	06/95
ROUGH IDLE ON MPFI VEHICLES	07/95
94 IMPREZA ROM SOCKETS	07/95
DTC P0505 IDLE CONTROL SYSTEM WHEN SOLENOID MEASURES 5? OR LESS	09/95
EXTREME COLD WEATHER ENGINE WARM UP AND OBD II	12/95
LOOSE FUEL CAPS AND TROUBLE CODE P0440	07/96
1997 LEGACY WARRANTY CLAIMS FOR LOOSE FUEL CAPS	09/96
LEGACY (NON TURBO), SVX, AND IMPREZA ISC VALVES	09/96
P0440 AND LEGACY FUEL CAPS	11/96
BLUE VS. GRAY CONNECTORS DURING DIAGNOSIS	11/96
EXTREME COLD WEATHER ENGINE WARM-UP AND OBDII	11/96
DTC P1500 RADIATOR FAN RELAY ONE CIRCUIT	03/97
1997 SUBARU IMPREZA OUTBACK SPORT	03/97
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DTC P0507-IDLE CONTROL SYSTEM RPM HIGHER THAN EXPECTED	05/97
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ADDITIONAL INFORMATION REGARDING CODE P0440	07/97
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MORE P0440 INFORMATION	10/97
EXHAUST SMELL DURING COLD START	01/98
MODEL YEAR 1998 CHANGES IN P0440 EVAP OPERATION	1/98 & 05/98
DTC P0440 REVISITED	05/98
P0440 TIP	11/98
DTC P1507	11/98
DTC P0705 DIAGNOSTICS	05/99
FREEZE FRAME DATA	08/99
EVAPORATIVE SYSTEM DIAGNOSIS	09/99
OBD READINESS CODES	11/99
P0440 1998/1999 FORESTER	11/99
WXV-79 ENGINE CONTROL MODULE SERVICE PROGRAM	11/00
FREEZE FRAME DATA	05/01
IGNITION COIL SERVICE PRECAUTION	01-02/02
2002MY LEGACY ATMOSPHERIC PRESSURE SOLENOID VALVE OPERATION	03-04/02
DTC P1591 2002MY IMPREZA WRX M/T	03-04/02
C.I.D. NUMBER FOR REPROGRAMMING	03-04/02

WWG-90 CAMPAIGN BULLETIN CORRECTION	08/02
ECM REFLASHING CLAIM CODING	01-02/03
DIAGNOSTIC TROUBLE CODES AFTER WWK-94	05/03
ECM CALIBRATION IDENTIFICATION NUMBERS	05/03
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12-BODY, GLASS, & UPHOLSTERY

1995 SUBARU LEGACY "FLUTTERING" NOISE	08/95
SUBARU OUTBACK FRONT LICENSE PLATE MOUNTING KIT	10/95
WINTER DRIVING TIP, INTERIOR WINDOW FOGGING	01/96
FOGGY FILM ON WINDOWS	01/96
LEGACY WIND NOISE	02/96
WATER IN THE ROCKER PANELS	07/96
LOOSE BOLTS ON WINDOW REGULATORS	09/96
POOR DRAINAGE FROM ROCKER PANELS: 1995/96 LEGACY MODELS	09/96
'97 LEGACY BODY CREAKING NOISE, RH SIDE ROCKER PANEL AREA	02/97
PROPER OPERATION OF SEAT BELTS, ELR VS. ALR	08/97
NEW CUP HOLDER FOR '98MY LEGACY	11/97
REPLACEMENT WIPER BLADE REFILLS	09/98
IMPROPER DRIVER'S SIDE WINDOW OPERATION	10/98
1999MY IMPREZA WIND NOISE	01/99
BUMPER COVER INSTALLATION TIP	02/99
FRONT SEAT TRACKS	04/99
1999 FORESTER RADIO ANTENNA	04/99
TETHER ANCHOR POINTS 1995 – 1999MY LEGACY SEDAN/SUS	07/99
2000MY LEGACY FRONT LICENSE PLATE MOUNTING	09/99
2000MY WIPER WASHER SYSTEM	09/99
UPHOLSTERY ITEMS – REPAIR/REPLACE	10/99
FORESTER TAILGATE SQUEAKS/RATTLES/POPPING	11/99
METALLIC WINDOW TINT FILMS	04/00
FRONT LICENSE PLATE MOUNTING FOR 2001MY FORESTER	04/00
WIND NOISE/CROSSBAR INSTALLATION	08/00
INOPERATIVE WINDSHIELD WASHERS	02/01
WRX ALUMINUM HOOD PRECAUTION	10/01
2002MY IMPREZA SEDAN TRUNK LOCK CYLINDER	01-02/02
WINDSHIELD WIPER WASHER CONNECTION	11/02
SOUND DAMPENING PAD	04/03

13-PAINT

'95 LEGACY OUTBACK PAINT	01/95
CORRECTION TO SERVICE BULLETIN 13-67-95R	11/95
HELPLINE UPDATE	01/96
WATER SPOTTING ON PAINTED SURFACES	09/96
PAINT PROCEDURES FOR SUBARU BUMPERS	08/01

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SELECT MONITOR REPAIR	11/96
2001MY SUBARU FORESTER SELECT MONITOR CARTRIDGE	02/00
NEW SELECT MONITOR REPAIRS – AN UPDATE	11/00
NEW SELECT MONITOR CARTRIDGE	01/01
SUBARU FUEL INJECTOR CLEANER TOOL	05/01
SELECT MONITOR CABLES	10/01
SELECT MONITOR IMAGE LOADER SOFTWARE/HARDWARE	03-04/02
OXYGEN SENSOR REMOVING TOOL	01-02/03
2003MY IMPREZA SELECT MONITOR CARTRIDGE APPLICATION	01-02/03

15-ACCESSORY

IMPREZA ACCESSORY	01/95
HUBCAPS	01/95
ACCESSORY "OUTBACK" WHEEL COVERS	03/95
1995 SUBARU LEGACY FRONT END COVER (BRA)	03/95
INSTALLING IMPREZA FOG LAMP KITS	03/95
CRUISE CONTROL AND THE USE OF THE SELECT MONITOR	04/95
1995 LEGACY CRUISE CONTROL CORRECTIONS	04/95
1995 LEGACY LSi SECURITY SYSTEM MODULE I/O CHART	04/95
1995 LEGACY S/W ACCESSORY FORK MOUNT BIKE CARRIER	05/95
IMPREZA FOGLIGHT INSTALLATION	05/95
RADIO NOISE	06/95
1995 SUBARU LEGACY LSi ALARM SYSTEM	06/95
1995 SUBARU LEGACY CRUISE CONTROL	06/95
TESTING CRUISE CONTROL PUMPS	09/95
INSTALLATION OF SUBARU IMPREZA 'LX' S/W REAR SPOILER	09/95
1995 SUBARU LEGACY WITH PANASONIC RADIOS	11/95
1995/1996 SUBARU IMPREZA & LEGACY CRUISE CONTROL APPLICATIONS	11/95
ALLOY WHEEL CENTER CAPS	12/95
IMPREZA ACCESSORY FOGLAMP KIT PART NUMBER H4510FA100 FUSE LOCATION AND WIRING CHANGES FOR '96MY	12/95
OUTBACK TRAILER HITCH PART NUMBER L1010AS000 CHANGE IN TORQUE SPEC	12/95
CRUISE CONTROL FOR 2.2 LITER '96MY IMPREZA MANUAL TRANS VEHICLES	12/95
CRUISE CONTROL FOR NEWER LEGACY MODELS	12/95
LEGACY REMOTE KEYLESS ENTRY SYSTEM	12/95
LEGACY KEYLESS ENTRY DIAGNOSIS	01/96
LEGACY ACCESSORY KEYLESS ENTRY SYSTEM	01/96
LEGACY ROOF RACK INSTALLATION INFORMATION	02/96
INSTALLATION INSTRUCTION SUPPLEMENT FOR 96MY IMPREZA FOGLAMP KIT #H4510FA100	04/96
INTERIOR LIGHTS STAY ON LEAVING CAR	04/96
'95 & UP LEGACY LSi KEYLESS REMOTE SYSTEM	04/96
KEYLESS ENTRY ERRATIC TRANSMITTER OPERATION	05/96
MODIFICATION TO KEYLESS ENTRY SYSTEM INSTRUCTIONS	05/96
REVISED 1996 1/2 AND 1997 LEGACY CRUISE CONTROL SUPPLEMENTAL INSTALLATION INSTRUCTIONS .	07/96
1995/96 SUBARU LEGACY W/POWER ANTENNA	08/96
'97 LEGACY KEYLESS ENTRY	08/96

LEGACY OUTBACK TRAILER HITCH HARNESS	08/96
LEGACY OUTBACK CROSSBAR INSTALLATION TIPS	08/96
LEGACY LSi SECURITY SYSTEM	10/96
1996 IMPREZA ACCESSORY KEYLESS ENTRY KIT H7110FS000	01/97
1997 IMPREZA ACCESSORY CRUISE CONTROL	01/97
OUTBACK ROOF RACK CROSSBAR BOLT PART NUMBER CORRECTION	01/97
LEGACY SUBWOOFER/PREAMP, P/N H6300AS030	02/97
LEGACY OUTBACK TRAILER HITCH WIRING HARNESS	02/97
LEGACY KEYLESS ENTRY WITH SECURITY UPGRADE	02/97
CORRECTION TO INSTALLATION INSTRUCTIONS FOR KEYLESS ENTRY KITS	
H7110AS000 AND H7110AS300 FOR 1995 AND 1996 LEGACY	02/97
1997MY IMPREZA KEYLESS ENTRY KIT H7110FS000 WITH INCORRECT WIRING HARNESS	02/97
1997MY LEGACY KEYLESS ENTRY/SECURITY SYSTEM PROGRAMMING BUTTON LOCATIONS	02/97
1997 LEGACY KEYLESS ENTRY & SECURITY UPGRADE MODIFICATIONS	03/97
LEGACY KEYLESS ENTRY/SECURITY SYSTEM UPGRADE	04/97
'97 IMPREZA FOGLAMP INSTALLATION TIPS FOR KIT #H4510FA200	05/97
1997 LEGACY; PROGRAMMING REPLACEMENT KEYLESS ENTRY CONTROL UNIT	07/97
NEW CD CHANGER INSTALLATION PROCEDURES	08/97
FORESTER REMOVABLE ANTENNA	09/97
1996 SUBARU LEGACY KEYLESS ENTRY SYSTEM NOT OPERATING CORRECTLY	09/97
SUBARU KEYLESS ENTRY BATTERIES	09/97
ACCESSORY GAUGE PACK INFORMATION	10/97
1998 FORESTER KEYLESS ENTRY SYSTEM INFORMATION	10/97
1998 IMPREZA CRUISE CONTROL CONNECTOR	01/98
KEYLESS ENTRY SYSTEM OPERATION	01/98
FORESTER ACCESSORY BRUSH GUARD	01/98
1998 IMPREZA FOGLIGHT KIT #H4510FA200	02/98
1998 SUBARU FORESTER POWER MIRROR KIT	03/98
UPDATE OF KEYLESS ENTRY BULK HEAD HARNESS CHANGE	04/98
KEYLESS ENTRY/ALARM SYSTEM UPGRADE	04/98
1998 IMPREZA FOGLIGHT KIT #H4510FA200/220 CORRECTION	04/98
SUBARU KEYLESS ENTRY/SECURITY SYSTEM REFERENCE GUIDE	04/98
SUBARU ACCESSORY INSTALLATION MANUAL	04/98
PROGRAMMING SVX ALARM SYSTEMS	04/98
1998 SUBARU FORESTER POWER MIRROR KIT P/N CORRECTION	05/98
LEGACY STATION WAGON AUDIO HARNESS	05/98
ACCESSORY OPERATOR INSTRUCTIONS FOR 1999MY	07/98
1999MY LEGACY ACCESSORY CHANGES AND CORRECTIONS	07/98
REAR DIFFERENTIAL PROTECTOR	08/98
POOR AM RADIO RECEPTION ON FORESTER VEHICLES	10/98
1999MY LEGACY ACCESSORY CRUISE CONTROL	11/98
KEYLESS ENTRY/SECURITY SYSTEM TRANSMITTER BATTERIES	01/99
1999 CAL. SPEC. IMPREZA SECURITY KIT AVAILABILITY	01/99
SHOCK SENSOR MOUNTING FOR FORESTER/IMPREZA WITH SECURITY UPGRADE	01/99
KEYLESS ENTRY INTO 1999 FORESTER VEHICLES WITH 'ALL WEATHER PACKAGE	01/99
KEYLESS AND SECURITY SYSTEM QUALITY IMPROVEMENTS	01/99
1999MY FORESTER RADIO NOISE/POOR RECEPTION	04/99

1999MY FORESTER – CLICKING NOISE FROM RIGHT FRONT SPEAKER	05/99
ALPINE KEYLESS ENTRY WITH SECURITY UPGRADE SYSTEM OPERATION REMINDER	07/99
LIGHTED MIRROR SUNVISOR REPLACEMENT BULBS	08/99
NO RADIO VOLUME – 2000MY LEGACY LIMITED MODEL WAGONS	08/99
1999/2000MY LEGACY ALPINE KEYLESS ENTRY/SECURITY SYSTEM DOME LIGHT OPERATION	10/99
TRAILER HITCH BIKE ATTACHMENT	11/99
2000MY LEGACY REAR SPOILER	11/99
AUTO DIMMING MIRROR/COMPASS	01/00
REAR GATE BAR P/N E7510LS001 2000MY LEGACY WAGONS	05/00
COMPASS MIRROR 2000MY LEGACY/2001MY FORESTER	05/00
ELECTROCHROMIC COMPASS MIRROR	05/00
ACCESSORY INSTALLATION INSTRUCTIONS ON WEB	05/00
CD PLAYER/CHANGER VISUAL REFERENCE	05/00
PERFORMANCE GAUGE PACK OPERATION	05/00
2000MY LEGACY/OUTBACK HOOD DEFLECTOR ‘W’ CLIPS INSTALLATION	07/00
REPLACING A KEYLESS ENTRY TRANSMITTER BATTERY	08/00
2001MY FORESTER FRONT SPLASH GUARD INSTALLATION (P/N J1010FC000)	08/00
ACCESSORY BLOCK HEATERS	10/00
INTERNAL TRUNK RELEASE HANDLE	01/01
2002MY IMPREZA ACCESSORY APPLICATION – COMPASS MIRROR	03/01
2002MY IMPREZA TRAILER HITCH P/N L1010SS000	03/01
2002MY WRX/IMPREZA TECH T.I.P.S. SPECIAL EDITION	03/01
CROSS BAR POSITIONING	05/01
SHORT THROW SHIFTER	05/01
ACCESSORY UPDATES	07/01
TITANIUM SHIFT KNOB (P/N C1010FA100) SHIFT EMBLEM LOCATION	09/01
WRX PERFORMANCE GAUGE PACK	10/01
IMPREZA SEDAN SPOILER INSTALLATION TIPS	10/01
FORESTER SPLASH GUARD INSTALLATION TIPS	10/01
WRX STEERING COLUMN MOUNTED BOOST GAUGE	11/01
2002MY IMPREZA SUBWOOFER/AMPLIFIER COMPATIBILITY	11/01
2002MY IMPREZA FRONT UNDER SPOILER INSTALLATION CHANGE	01-02/02
2002MY WRX FRONT END COVER	01-02/02
2002MY IMPREZA 120 WATT SUBWOOFER BRACKET CHANGE	01-02/02
EC COMPASS MIRROR CALIBRATION	03-04/02
BAJA BED EXTENDER	09-10/02
SEAT HEATER INFORMATION	03/03
NEW BAJA/LEGACY HOOD DEFLECTOR INSTALLATION	03/03
IMPREZA SEDAN SPOILER CHANGES	05/03
BAJA BED COVER REPLACEMENT	05/03

16-AUTOMATIC TRANSMISSION

ECVT LOSS OF LINE PRESSURE	03/95
95MY 4EAT VEHICLE NOISE	05/95
1995 SUBARU LEGACY/IMPREZA SHIFT LOCK DIAGNOSIS	09/95
4EAT LOW OR ERRATIC LINE PRESSURE	09/95
REPEAT ECVT ECU FAILURES	10/95

CORRECT AXLE RATIOS	11/95
OVER-CAUTIOUS NOVEMBER UPDATE "CORRECT AXLE RATIOS" INFORMATION	12/95
1996 SUBARU LEGACY ATF COOLER HOSE RE-ROUTING	02/96
CHANGE IN CONFIGURATION OF 4EAT PINION SHAFT	04/96
4EAT DELAYED ENGAGEMENT INTO DRIVE WHEN WARM	05/96
MANUAL ROM ID...ERROR 3	05/96
4EAT AWD EXTENSION CASE ROLLER BEARING REMOVAL	07/96
4EAT SYSTEMS DIAGNOSIS	07/96
4EAT TRANSMISSION BINDING IN TURNS	08/96
LATE (1995) & 1996MY TRANSFER CLUTCH CHATTER	09/96
LIMITED SLIP ADDITIVE	11/96
4EAT COLD WEATHER OPERATION	11/96
4EAT SPEED SENSORS	04/97
CHECKING TIRE PRESSURES AT PDI	05/97
REMANUFACTURED TRANSAXLE PROGRAM	07/97
VEHICLE ENGINE RPM GOES TO ZERO WHEN COMING TO A STOP	08/97
1998 SUBARU IMPREZA FWD FUSE HOLDER	11/97
REAR AXLE BINDING ON TURNS - (ONE MORE TIME)	01/98
1999 2.2L 4EAT SUBARU LEGACY MODELS HARSH DOWNSHIFTING	09/98
1999 4EAT TRANSMISSION OPERATION	10/98
TRANSMISSION REPAIRS OR REPLACEMENTS	04/99
TRANSMISSION CONTROL UNITS (TCM) PART NUMBERS	09/99
1999MY AND LATER (SECOND GENERATION 4EAT) TROUBLE CODES	02/00
4EAT TORQUE BIND	11/01
PHASE 2 4EAT (1999 TO PRESENT) REPAIRS	03-04/02
4EAT REMANUFACTURED TRANSAXLE PROGRAM – A REMINDER	08/02
REMANUFACTURED TRANSMISSION PAPERWORK PACKETS	09-10/02
2003MY 4EAT DIFFERENTIAL DRAIN PLUG	11/02
2003MY LEGACY 2.5GT SPORT SHIFTER COLD WEATHER OPERATION	01-02/03
SLOPE CONTROL CHANGE FOR 2003-2004MY VEHICLES	04/03

17-SRS AIR BAG

1995 SUBARU LEGACY PASSENGER SRS	06/95
DIAGNOSING SRS (AIR BAG) CODES	07/95
REMOVAL OF PASSENGER'S AIR BAG MODULE	04/96
DEPLOYED SRS AIR BAGS	06/96
PASSENGER'S SIDE AIR BAG	11/96
DEPOWERED AIR BAGS	02/98
ALL 1998 MODEL AIR BAG APPLICABILITY	03/98
AVAILABILITY OF RETROFIT AIR BAG 'ON - OFF' SWITCHES	08/98
SUBARU VEHICLES EQUIPPED WITH SRS SIDE AIRBAGS	08/00
10 YEAR SRS INSPECTIONS	08/00
DIAGNOSING SRS (AIR BAG) CODES	10/00
SUBARU VEHICLES EQUIPPED WITH SRS SIDE AIRBAGS	07/01
2002MY IMPREZA SRS HARNESS CHANGE	10/01

18-SERVICE MANUAL CORRECTIONS

1995 SUBARU LEGACY SERVICE MANUAL CORRECTIONS	03/95
1995 LEGACY SERVICE MANUAL REVISION	07/95
1996 LEGACY SERVICE MANUAL SUPPLEMENT	09/95
IMPREZA SERVICE MANUAL SUPPLEMENT	12/95
SERVICE BULLETIN MANUAL AND SERVICE HELPLINE UPDATE SUPPLEMENT	12/95
1998 IMPREZA SERVICE MANUAL	11/97
COPYING PAGES FROM SERVICE MANUALS	03/98
CORRECTION TO SUBARU FORESTER SERVICE MANUAL	04/98
EVAPORATIVE SYSTEM DIAGNOSIS T.R.B. CORRECTIONS	08/99
2000MY SUBARU LEGACY AND IMPREZA SERVICE MANUALS	01/00
REAR WHEEL ALIGNMENT SPECIFICATION CORRECTION	01/00
2000MY SUBARU LEGACY SERVICE MANUAL CORRECTION	02/00
SERVICE BULLETIN 13-74-00 CORRECTION	08/00
SERVICE MANUAL CORRECTIONS, 2001MY FORESTER AND LEGACY	08/00
SERVICE MANUAL CORRECTION 2001MY LEGACY	08/00
CORRECTION TO SERVICE BULLETIN 10-70-00	03/01

**2003 CALENDAR OF
SUBARU HOLIDAYS**

New Year's Day

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Thanksgiving

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Your Name: _____ **Signature:** _____

Dealer's Name: _____ **City:** _____

Date: _____ **Dealer Code:** _____

15 NEW BAJA/LEGACY HOOD DEFLECTOR P/N E2310LS101

The new Deflector design, featuring three metal clips with one in the center, replaces the previous design, and fits 2000MY-2004MY Legacy and Baja vehicles.



New installation with metal clip and screw



Old installation with plastic "W" clip

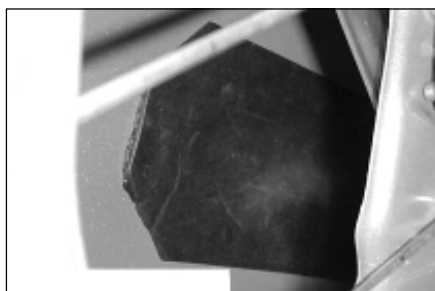
continued on page 3...

12 SOUND DAMPENING PAD

If a customer complains of a rattle in the door panel (with the window lowered) or an asphalt like substance stuck on the outside of the door glass, the cause may be the result of the sound-dampening pad not being fully secured to the inner door shell. See photos below.

In most cases simply repositioning the sound deadening pad to the inner

door shell and applying adequate pressure over the entire surface of the pad will solve the problem. In the event that the pad is severely distorted or will not adhere to the door shell, the sound-dampening pad will need to be replaced. The dampening pad part number is 90841AC000, and is applicable to 2000 to current Legacy, Outback and Baja vehicles.



Pad Properly Installed



Pad Incorrectly Installed



Here's a sneak peak of the new 2004 WRX STi.



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01	2003 Baja Owners Manual Supplement	2
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10	Blower Motor Noise	2
12	Sound Dampening Pad	1
15	Seat Heater Information	2
15	New Baja/Legacy Hood Deflector Installation	1

Please make note that Subaru Service publications are available via Portable Document Format (PDF) on www.subarunet.com. They can be found in the Service section, under Service Publications. Here are the publication types that can be found there:

- Product Campaign Bulletins
- Service Bulletins
- Service Manuals
- Service Campaign Bulletins
- State I/M Program Bulletins
- TechTIPS Newsletters
- Warranty Bulletins

If you get a complaint of a noise from the blower motor on 2002MY Legacy vehicles, please refer to the November 2001 issue of the T.I.P.S. for the inspection and repair procedure.

Please be aware that there is a supplement to the 2003 Baja Owner's Manual. The three sections covered in the supplement are: Front Seats, Ignition Switch, and Replacing bulbs - Headlight.

The Subaru parts number for this item is MSA5M0306A.



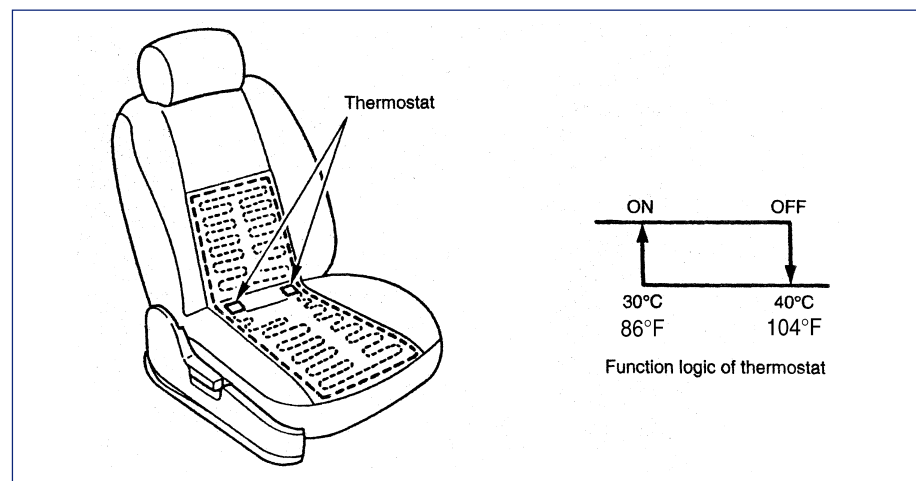
The Technical Support Line occasionally gets questions concerning the seat heaters in our vehicles.

Once the heater reaches it's operating range, the seat heaters are thermostatically controlled and designed to turn on at approximately 86°F (30°C) and to turn off at approximately 104°F (40°C).

This information can be found in the 1996 Subaru Legacy Service Manual Book 4, Mechanism and Function, Section 5-3, page 6. See figure below.

If the vehicle is equipped with leather seat trim, they may not feel as hot as a vehicle with fabric seat trim.

The reason is that the fabric seats are more porous and allow more of the heat to reach the body.



**New Installation****Old Installation****Installation of Center Clip on New Deflector requires R&R of Grille.****3M Adhesive Strips included in New Deflector Kit to protect paint surfaces from clips.****2003 CALENDAR OF SUBARU HOLIDAYS****New Year's Day**

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02 COOLANT SEEPAGE FROM WATER PUMP

If you encounter some minor coolant seepage at the coolant drain hole located on the passenger's side of the water pump, this is a normal condition and replacement of the water pump is NOT required.

This seepage may already be dry or slightly wet when inspected. A drop of coolant may be adhered to this area but no further seepage is found even when the engine is revved up.

Reason:

The water pump shaft is sealed with a mechanical type seal between the pump and the outer housing.

This mechanical seal is lubricated by engine coolant and because of its construction, some coolant will seep out. Therefore, a coolant drain hole is provided.

This can be compared to the water pump used on the Justy engine of years ago. It had the same type seal and a slight amount of coolant at the drain hole was considered normal.

11 DIAGNOSTIC TROUBLE CODES AFTER WWK-94

If you have a vehicle come in with any of the following Diagnostic Trouble Codes (DTCs), check the Vehicle History to see if prior work was performed on the transmission that involved removal of the transmission oil pan. The Technical Support Line has received several calls concerning these codes on vehicles where the WWK-94 campaign had recently been done.

The codes are:

ECM	TCM	ABS
P1700	31	44
P1711	38	
P1712	45	

In most cases, these codes were the result of a loose ground wire in the transmission where it fastens to the valve body. Tightening the ground wire was all it took to repair the problem.

Be advised that this condition is considered a comeback and is NOT a matter for warranty.

11 ECM CALIBRATION IDENTIFICATION NUMBERS

When calling the Technical Support Line with any issue concerning the vehicle ECM, make sure you have the ECM Calibration Identification Number (CAL. I.D.).

To obtain this number, use the New Select Monitor (N.S.M.) and proceed as follows:

1. Turn the Monitor on and select 'Each System Check' from the menu.
2. Select 'Engine Control System'.

Engine type is shown.

3. Press 'Yes'.

4. Select 'OBD System'.

5. Select 'Getting of Vehicle Identification' at the bottom of the menu.

6. The next screen should show two (2) numbers. A 'Verification I.D.' and the 'Calibration I.D.'

7. We need the first 8 digits of the Calibration I.D. number.



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11	ECM Reflashing	4
15	Impreza Sedan Spoiler Changes	2
15	Baja Bed Cover Replacement	3

There is a part number change to the rear spoiler kits on all 2002 and up Impreza sedans. The new kit provides an easier installation and a cleaner look. Part #E7210FE501 and E7210FE502 will be available consecutively.

The most important difference in the "502" is the retention cable. It is affixed to the spoiler through front mounting stud. This means that no holes have to be drilled into the decklid for the retention cable. Additionally, the seal around the cable and removal and reinstallation of hinge bolts is no longer required.

Please be aware of the following situations:

1) Pay close attention to what spoiler kit is being installed on a vehicle for the first time. There are important differences between spoiler kit number "501" and "502". Please go to www.subarunet.com for a complete copy of the installation instructions for either kit.

2) If a vehicle had a spoiler previously installed (kit #501) and only kit #502 is available, the installer will need to ensure that the sheet metal foam piece is reinstalled to provide a tight seal around the hole previously drilled for the cable. A new sheet metal foam piece (part # E7210FE520) is available if the original foam piece is not reusable.



Older Version Kit (501): Cable assy. in kit is routed through this hole for mounting on the trunk lid hinge right and left.

The spoiler part numbers listed are invalid without the ending two digit color code.



New Version Kit (502): Has pre-installed cable that is incorporated with the front stud on each side of the spoiler.

2004MY Turbo models of the Baja and Forester will be equipped with a smaller sized (68mm) oil filter instead of the current 80mm size.

Please keep this in mind when you service these 2004MY vehicles.

The larger 80mm size filter should not be fitted to turbo engines of 2004MY Baja & Forester vehicles.

If you have a situation where the Baja soft bed cover needs to be replaced do not order the entire kit. You should order the soft cover only, part number L0010LS030 or L0010LS031 depending on which soft cover kit you have.

To find out which kit you have, look at the rear rail that came with the kit which is attached to the rear tailgate. With the tailgate in the up position, look on the inside for the attaching screw furthest to the left, (driver's side). Then look for a very small dimple ½ inch to the right of the center of that left hole. If there is a dimple, a small round hole which does not go through the rail, then you have the newer style kit.

There is a difference in the size of the bed covers, so be sure to order the right kit for the vehicle you are working on.

All new replacement soft covers now come with latches attached. They are there to install a bow to aid in rain water drainage. The new style comes with the bow. If the customer wants a bow for the old style kit, it can be ordered separately.

Parts Information

Old Style

L0010LS030 -- Soft cover replacement part includes two latches

L0010LS080 -- Support bow. If the customer wants a bow, you will need to order it separately.



New Style

L0010LS031 -- Soft cover replacement part (the support bow is included in the original kit).

All the bed cover kit parts are available and listed in the 2000-2003 Accessory Manual MSA6A0212.

You can also refer to Parts Bulletin PT100103 for more information.



The Technical Support Line has supplied dealers with a fax form to be used whenever they have an ECM that requires reflashing.

This form can be found in the September/October 2002 issue of T.I.P.S.

It was hoped that this form would eliminate/lessen the need for dealers to call us directly and thus speed up the process.

However, many dealers are still calling in with the vehicle information and requesting we fax them the form that authorizes the ECM to be sent in to SOA.

If you have an ECM that you know needs to be sent to SOA for

reflashing, please use this fax form. The fax machine is available 24 hours a day.

03 TRANSMISSION POPPING OUT OF 3RD GEAR

If you are rebuilding a WRX 5M/T and during the rebuild, it is necessary to replace the 3-4 gear set, we suggest you consult Part Bulletin PT070302.

The Technical Support Line has gotten a few calls where the transmission was popping out of 3rd gear after replacing the 3-4 gear set.

Installation of the new part set mentioned in the above bulletin should prevent this problem from happening.

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05

WRX AND WRX STi RECOMMENDED WINTER/SNOW TIRES

Yokohama Tires has provided us with their recommendations for fitting Winter/snow tires to the above referenced vehicles.

They are:

**WRX: 90104; 205/55R16;
94H; Extra Load**

**WRX STi: 90112; 225/45R17;
94H; Extra Load**

Yokohama is working with The Tire Rack to have a supply of these tires available.

As always, if you have any questions concerning this, contact the Technical Support Line.

09

H6 DRIVEABILITY

If you get an H6 vehicle in the shop with a driveability concern, i.e. hesitation, please make certain the owner is using a premium grade fuel, 91 octane or higher, in the vehicle.

With the recent increase in fuel prices, there may be some people who have dropped down a notch or two in octane ratings to save a few pennies. While this is understandable, these

If you are able to duplicate the owner's concern, we suggest you perform a 'Clear Memory' function of the ECM and then road test the vehicle again. If the concern has gone away, then the most likely cause of the problem is the fuel being used in the vehicle at that time.

Another factor to take into consideration is the use of oxygenated or reformulated fuels, know as State Winter Oxygenated Gasoline. Oxygenates

vehicles were designed to operate properly on a Premium grade fuel. If the owner says they are using a premium grade fuel, ask them if they tend to buy just ONE brand. If so, suggest they try another brand to see if the concern goes away. Different companies blend their fuels differently.

We've had first hand experience with this at the Support Line. Understand also that it will take a few tanks of the different brand of fuel for the Engine Control Module (ECM) to 're-learn' its operating parameters on this different fuel.

are fuel additives (alcohols and ethers) that contain oxygen which can boost gasoline's octane quality, enhance combustion, and reduce exhaust emissions. The term oxygenated gasoline most commonly refers to the wintertime program that reduces emissions of carbon monoxide (CO) from motor vehicles. Although required by the federal Clean Air Act, winter oxygenated gasoline programs are implemented by the states. For more information on state fuel programs go to: www.epa.gov/otaq/regs/fuels/oxy-area.pdf

H6-3.0



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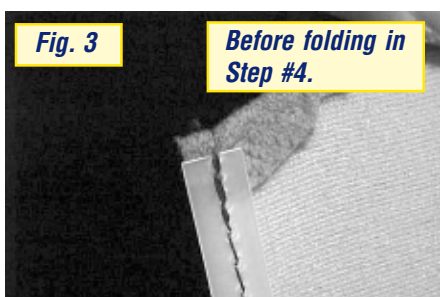
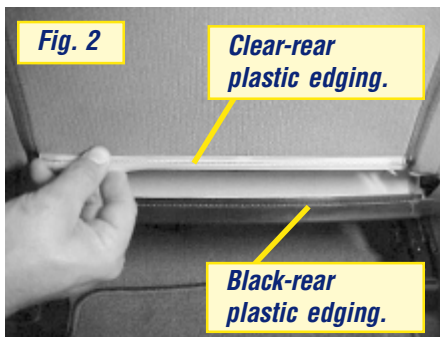
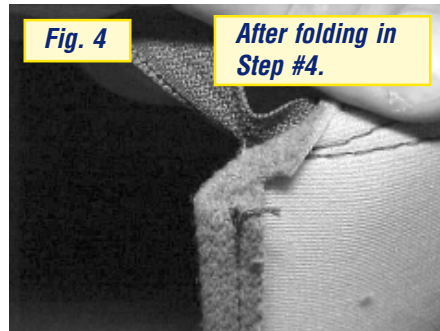
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16	Phase II 4EAT Stud Leak Repair	3

If you encounter a concern where the front seatback cover has come loose from the seatback, the cover can be easily reattached without removing or replacing any parts. The following procedure should be used to reattach the driver or passenger-side seatback cover.

- 1) Move the front seat backrest to the full upright position.
- 2) Move the front seat to the full front-end position.
- 3) Sit in the rear seat facing the suspect seat cover.
- 4) Fold the clear plastic hook as depicted in *Fig. 4*.
- 5) On the lower portion of the seatback cover, pull down on the clear rear plastic edging and engage it into the black plastic edging located on the seatback (see *Fig. 2* for illustration).
- 6) You will hear a snap when the seatback cover is fastened properly.
- 7) Return the seat back to its original position.

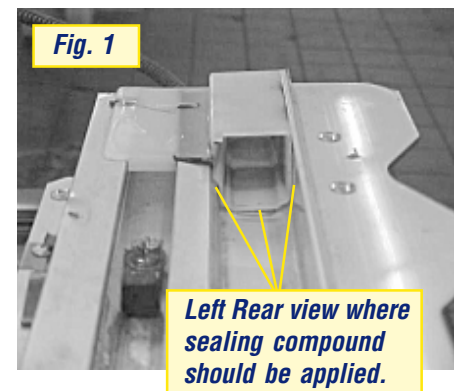
NOTE: Reimbursement can be obtained by submitting a warranty claim during the Basic New Car Limited warranty period using the operation number and fail code for the seatback cover. Labor hours are limited to straight time.

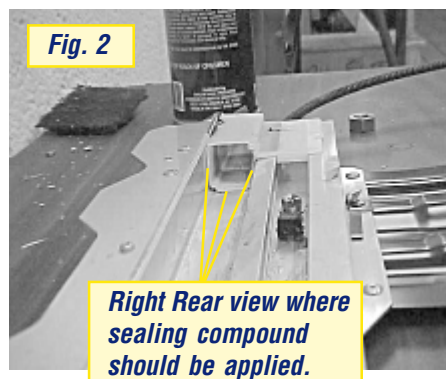


If you encounter any evidence of water leaks in the roof trim panel and/or headliner, it may be caused by a shortage of sealing compound at the end of the rear drain caps. You will need to lower the sunroof assembly to access the end of the rear drain caps. Please see instructions below to access the rear drain caps without removing the sunroof assembly. See chart below for vehicle applicability.

Procedure for repairing suspect sunroof leak:

- 1) Retract the sunroof glass all the way open.
- 2) Disconnect the battery ground cable.
- 3) Remove roof trim panel. <Ref. to service manual and/or Subaru STIS web-site for removal instructions>
- 4) Disconnect the rear drain tubes from the sunroof frame.
- 5) Disconnect the sunroof harness connector.
- 6) Remove the rear bolts from the sunroof assembly to lower the assembly enough to access the rear end caps through the sunroof opening.
- 7) Apply a small bead of 3M Heavy Drip-Chek Sealer (**3M P/N 05113508531**) or equivalent between the rear drain cap and the water channel (see fig. 1 and 2 for an illustration of application points).





8) Install in the reverse order of removal.

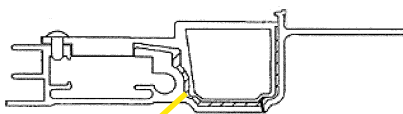
CAUTION: Be careful not to snag the harness during assembly.

NOTE:

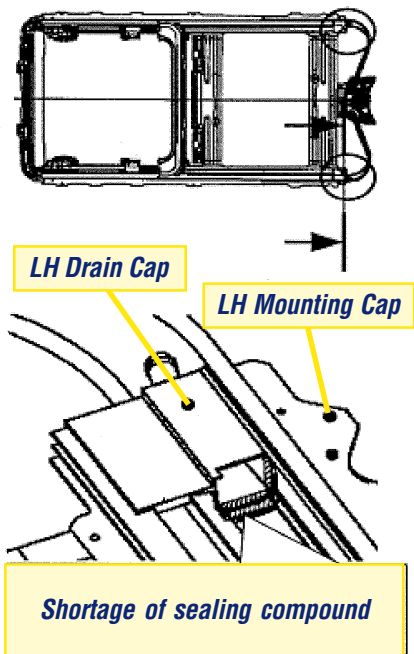
-- Make sure to connect the harness connector.

-- When installing the drain tubes, insert them 15mm(.59 in) or more over the snout of the drain cap.

-- RTV sealer is not a viable substitute for 3M Heavy Drip-Chek Sealer.



Cross-section view. Dashed line indicates area that should be resealed.



16

PHASE II 4EAT STUD LEAK REPAIR

While diagnosing a transmission leak on a Phase II 4EAT, it is advisable to inspect the left-side transmission stud area (see fig. 1 for illustration). If the transmission leak originates from this stud, please perform the following repair.

- 1) Remove the left-front tire.
- 2) Separate the left-hand stabilizer link from the lower control arm (also referred to as transverse link).
- 3) Separate the left-front balljoint from the lower control arm.
- 4) Remove the axle shaft pin.
- 5) Remove the axle shaft from stub shaft and place out of the way.
- 6) Remove the transmission stud nut from the stud (see fig. 1 for stud location).
- 7) Remove the transmission stud.

NOTE: Regardless of the method used to retract the stud from the main case, be sure to inspect the stud for damage and replace if necessary.

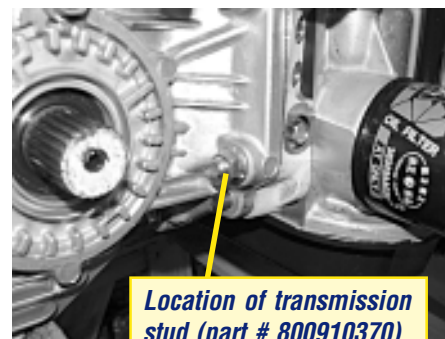
8) Wrap the stud (whether it is old or new) with Teflon tape.

9) Reinstall the stud and tighten the stud to 13-ft. lbs.

10) Reinstall the stud nut and torque to 30-ft. lbs.

11) Reinstall the axle shaft, pin, swaybar link, balljoint, and tire in reverse order.

NOTE: Axle shaft pins are not re-useable. Please install a new axle shaft pin during re-assembly.



Location of transmission stud (part # 800910370) on main case (left-hand side).

02

OIL FILTER APPLICATION CLARIFICATION

As mentioned on page 8 of the August 2003 TIPS, the 2003MY and 2004MY turbo vehicles come equipped with and should only use oil filter P/N 15208AA080. Non-turbo vehicles for the 2003MY and 2004MY can use P/N 15208AA060 or 15208AA080.

Some confusion has come up with 2004MY Forester non-turbo models coming through with the smaller 15208AA080 filter installed.

The 15208AA080 filter has been installed by FHI in production since last April.

FHI says it is acceptable to use either the 15208AA060 or the smaller 15208AA080 oil filter on non-turbo vehicles but, the smaller 15208AA080 filter is the only one recommended for use on the turbo models.

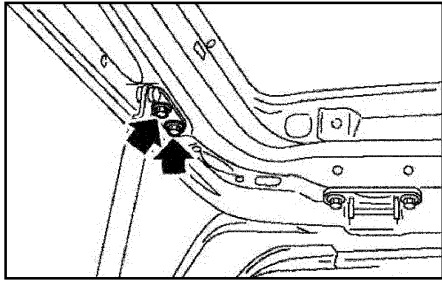
We hope this information helps clear this matter up and apologize for the confusion.

Please also be aware that a parts bulletin was issued concerning the oil filter P/N 15208AA080. The Parts Bulletin was #PT120103, dated 5/8/03.

12

2004MY FORESTER REAR GATE DAMPER STAY

Pay special attention to Forester vehicles built during July and August of 2004 for a potentially loose Rear Gate Damper Stay (both driver and passenger side). If this condition is found during PDI please torque the two identified bolts as specified (5.5 ft.lbs.) in the Subaru Service Manual.



02

HEAD GASKET REPAIRS

Attn: Subaru Service Mgr. and Warranty Personnel

Be advised that when replacing cylinder head gaskets as a result of an oil or coolant leak, labor operation C 243-111, Engine Compression and/or Cylinder leak down testing, is not required. Labor operation C 245-001, Engine oil and/or coolant leak, testing and diagnosis have been added as an option to be used with head gasket operation numbers. Please provide this information to the appropriate personnel at your dealership.

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Your Name: _____ **Signature:** _____

Dealer's Name: _____ **City:** _____

Date: _____ **Dealer Code:** _____

14

SELECT MONITOR REPAIRS – AN UPDATE

If you need to send your Subaru Select Monitor (SSM) out for repairs, please use one of the following procedures depending on which one you need to have repaired.

The **BLUE** Select Monitor will need to go to **Kent-Moore** to be repaired. You will have to call Kent-Moore at **1-586-578-7211**. This is a new number. The former telephone numbers are no longer in service. They will give you instructions for shipping it to them.

The **RED** Select Monitor, used to reflash ECMs, needs to come to **Subaru of America** for repairs. **DO NOT SEND IT TO KENT-MOORE.**

Call the Technical Support Line for instructions on where/how to send it.

04

2004MY IMPREZA AND FORESTER STEERING COLUMN COVER

If you find an upper steering column cover and the screw tower is cracked in the area where the screw threads tighten (see attached photo), it should be replaced.

This condition is caused by chlorine in the oil that is used to wash the column during production.

Order a new part number (34341AE010ML), if this number applies, and wipe the metal portion of the column to remove any residue of oil that may be present. Then install the new part.

A countermeasure has been put into place since June 2, 2003, starting with the following VIN's:

VIN breaks:

4*511591 – Impreza Sedan

4*812197 – Impreza Wagon

4*713742 – Forester



04

PARTS ORDERING UPDATE FOR VDC STEERING ANGLE SENSOR

Steering angle sensors for all Legacy VDC models are now available as a separate part. The part number for the steering angle sensor is 27582AE001. Previously, the combination base assembly had to be purchased in order to get the steering angle sensor. Please see the brake section of the appropriate service manual for the removal and

reinstallation procedures for the steering angle sensor. You can download the R&R procedures from our website:

www.subarunet.com/Service/STIS.

NOTE: Although the parts catalog does not reflect the separation of the steering angle sensor, you can still order the part, if that's all that's required to make the repair.



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10**SERVICE BULLETIN
10-72-02R – AN UPDATE
TO A/C FREEZE UP**

Service Bulletin number 10-72-02R, which deals with the “Countermeasure to Prevent Icing in the Evaporator on Air Conditioned Vehicles”, has updated information.

The Service Bulletin indicates that ‘O’ rings P/N 73039FA100 and P/N 73039FA110 are required. Be advised that 4 ADDITIONAL ‘O’ rings are needed, **2** of 73561FA040 and **2** of 73561FA030.

Please correct your printed copy of the above bulletin to reflect this change.

16**REMANUFACTURED
TRANSMISSION
INSTALLATIONS**

It's a common sense thing but when installing any transmission (remanufactured or otherwise) always check the fluid levels ATF and/or gear oil.

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Your Name: _____ **Signature:** _____

Dealer's Name: _____ **City:** _____

Date: _____ **Dealer Code:** _____

16

2004 DIRECT AT CONTROL VALVE BODY ASSEMBLY COLLECTION (2004 BAJA TURBO AND FORESTER TURBO)

As part of Subaru's ongoing quality assurance activities, Subaru Service would like to collect a sample of 2004 Direct Automatic Transmission (DAT) Control Valve Body Assemblies suspected of improper operation. Therefore, should you encounter such a condition, please contact the Subaru Technical Support Line at 1-800-762-8324 and a valve body will be sent to you at no charge. Please return the original valve body to:

**Subaru of America, Inc. West Gate
5000 State Road 38 East
Lafayette, IN 47905**

Please remember to perform the D-AT recalibration process whenever performing this operation. Any subsequent warranty claim should be submitted as labor only utilizing the applicable failure code.

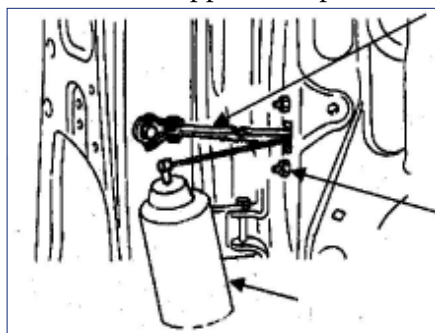
Thank you for your assistance in this quality initiative.

12

CREAKING NOISE FROM DOOR CHECKER

There is a reported "creaking noise" when opening or closing some vehicle doors. This noise has been attributed to the door checker. Applicable models for this customer issue are 2003-04MY Legacy, Forester, and Impreza vehicles.

The following procedures address the creaking noise from the door checker and details an approved repair.



Repair Procedures

1. Open the door fully, and loosen the two (2) nuts 1/3 to 1/2 turn where the door checker attaches to the door.
2. Push the door open as far as it will go.
3. Retighten the 2 nuts. Tightening torque is 5.5 Ft Lbs.

If creaking noise is still audible, please proceed to the next step.

4. Apply spray grease (White Lithium Grease) to the door checker as shown in the drawing.
5. Open and close the door several times, working the grease into the effected area.



BACK TO SCHOOL, KIDDIES!

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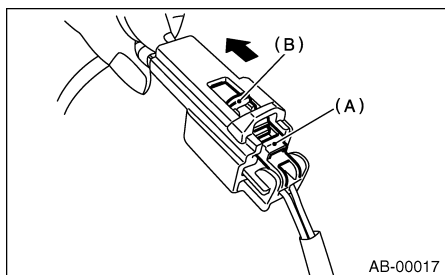


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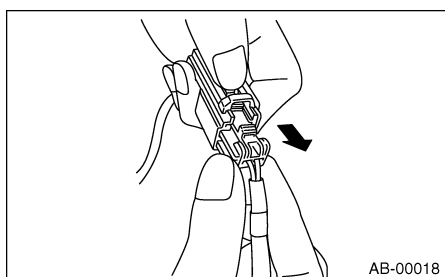
17 AIRBAG CONNECTORS

Recently, here at the Tech Line, we have been receiving calls where technicians have mentioned the difficulty they are having getting air bag connectors apart for the side airbag on some vehicles. In particular, this information applies to 2003-04MY Forester left-side airbag (steering wheel), roll connector, side-airbag and pre-tensioner.

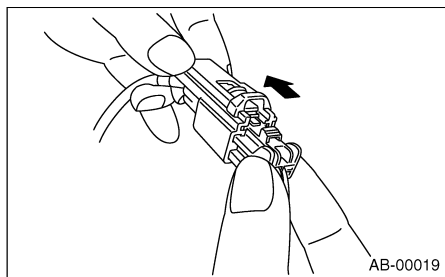


To Disconnect:

- (1) Press tab (A) and hold.
- (2) While holding (A) depressed, pull back green slide lock (B) FULLY.
- (3) While still holding green slide lock (B), release tab (A)



- (4) Now (grasping the connector body - **not** the wire) separate the connector.
- (5) If the connector does not come apart easily, most likely the green slide lock (B) is not pulled back fully. Do not force the connectors apart! Start over at step (1).



To Reconnect:

- (1) Carefully push the connector together till a distinct “click” is heard.
- (2) Gently pull on connector body to insure it is locked.

This information is also available on page AB-23, of Section 6, in the 2003MY Forester SERVICE MANUAL.

11 ROUGH IDLE/CHECK ENGINE LIGHT AFTER BATTERY DISCONNECT

APPLICATION: 2001MY up to and including the 2003MY Legacy and Baja. The rough idle condition only affects 4 cylinder, non-turbo vehicles. This condition is likely to apply to 2004MY vehicles as well.

Please be aware that a rough engine idle condition may occur when the vehicle's battery is disconnected for less than 30 minutes. Clearing the memory with the Select Monitor will correct this condition. If the battery is left disconnected for more than 30 minutes, the ECU will most likely clear itself.

Please feel free to share this information with your customers who perform their own service work or those who may have a need to disconnect their vehicle's battery such as during certain accessory installations.

03 ON THE CAR REAR WHEEL BEARING REPLACEMENT PROCEDURE

Be advised that the on-car rear wheel bearing replacement procedure has application to the 2002-04 Impreza WRX (**excluding** the STi model) using special tool **J-45697**. A revised Service Bulletin 03-50-02 will be published in Subarunet in the near future. Replacement of rear wheel bearings on WRX (excluding STi) will require use of the on-car repair procedure effective immediately.

We realize this is common sense but, thought we'd mention it anyway.

While reviewing the 2004MY Legacy Service Manual, Section 1, page **PM-18** we found this information:

9. Fuel Filter

A: Replacement

B: Installation

The installation steps contained in the manual **do not** indicate that you must **install a new filter** and **reconnect the ground cable**. Please be sure that you do both of these steps.

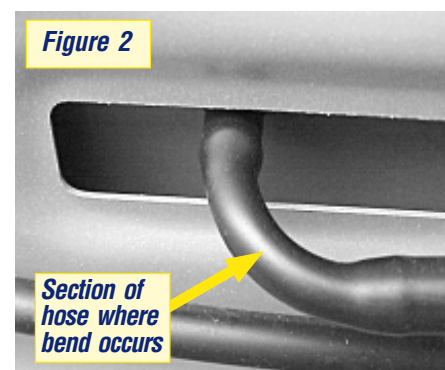
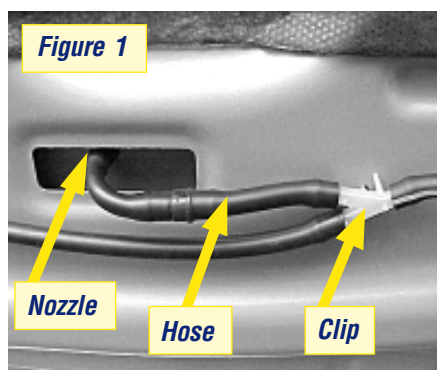
Be advised that the WRX Performance Suspension Kit as shown in the Genuine Subaru Performance Parts brochure (MSA6M0302) does NOT have application to the 2004MY WRX.

A kit is being developed for the 2004MY but, as of this date, there is no targeted release date. Please see that the people who need to know this are informed so there will be no problems from a misapplication standpoint.

In the event that you encounter poor discharge from the Left Front Windshield Washer, replacement of the washer hose between the nozzle and clip may be necessary (See Figure 1). The hose could be bent near the nozzle. See Figure 2 for the suspect area. Prior to replacing this part, be sure to inspect the LF washer nozzle for obstruction and all other related components for proper operation.

Suggested repair procedures are as follows:

- 1) Replace "Hose LH" between nozzle and clip with new one (part # 86659SA010)
- 2) Please pay special attention not to twist the hose when installing it. A ribbed hose is provided to prevent twisting the hose
- 3) Test the system for proper operation of windshield washer components.



Sport activity lights will only operate when the parking brake is engaged. Push the "SPORT LIGHTS" switch to turn the sport activity lights on. Press the switch again to turn them off.

The indicator light located on the switch will illuminate when the sport activity lights are on.

Notes:

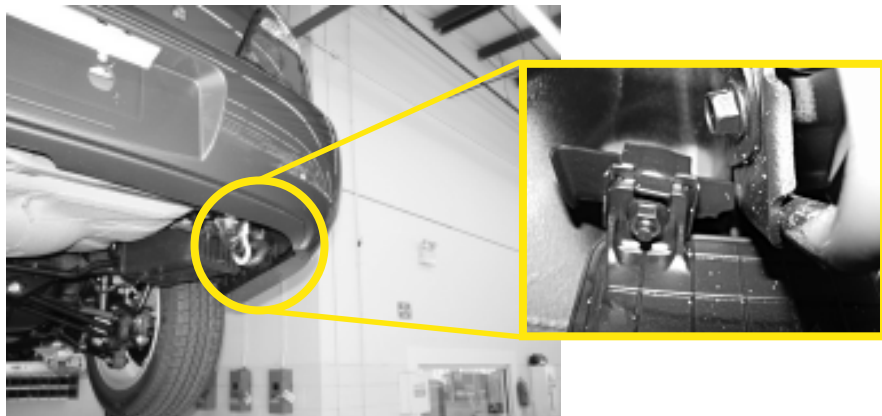
In most states, the sport activity lights must have stone shields installed when the vehicle is operated on public roads.

In most states, the sport activity lights may not be operated when the vehicle is in motion on a public road.

For more detailed information on installation and mounting of the Sport Activity Lights you may reference section 6-29 of the 2003 Baja Owner's Manual or www.subarunet.com.

If you encounter a rattle noise while driving or when closing the rear doors of a 2004 Impreza, check that the Evaporative Canister Bracket is not rubbing on the right rear Tie Down Hook.

If you do encounter this condition, push or bend the Canister Bracket slightly to the left allowing enough clearance for the two parts not to rub together. This can be done by hand in most cases.



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