

07

## LEGACY TRANSIT (D CHECK-PLUG) CONNECTORS

The transit connector may no longer reside in its 'normal' location. Some have been observed in numerous locations above and in the area of the steering column. In some cases the harness is lodged above the steering column in a somewhat inaccessible area.

Previously, the connector was located on the RH side of the steering column and was easily accessed by reaching under the 'D' panel.

Once the connector has been located, it may be difficult to work the connector free, the tape may not break and the wire may be pulled loose from the connector.

An effort is being made to see that the connector is relocated to its 'normal' location. In the meantime, good hunting! **TT**

07

## FUSE 4 BLOW-OUT

If you encounter a situation on a 2000MY-2002MY Legacy where the heated seats, lighted visor mirrors, or power mirrors are inoperative, check to see if **fuse 4** is blown. H-6 vehicles equipped with Automatic Climate Control will also experience a failure of this system should fuse 4 blow.

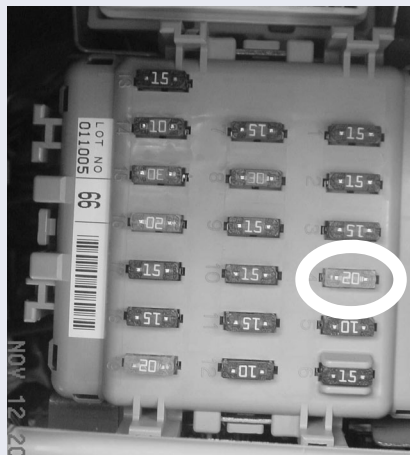
Investigation of this has shown that the power mirror wiring harness may be the cause. The wiring

harness for the power mirrors may have been routed incorrectly within the mirror housing. This routing may cause the harness to rub, and eventually pinch against the door gusset mounting screw. Once the harness is pinched the insulation is cut and eventually blows the fuse.

Currently only the RH mirror is causing the problem but, it can be assumed that the LH mirror may cause the same concern.

Replacing the fuse may or may not lead to a second immediate failure of the fuse. In some cases, the wire may move away from the gusset screw and the condition would then become an intermittent concern.

A secondary area to check is where the harness for the lighted visors travels through the roof panel. The harness has no protection in this area and could become pinched. **TT**



Additional images can be found on the bottom of Page 2.

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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, "Quality Driven" and "The Beauty of All Wheel Drive" are Registered Trademarks.

**16****PHASE 2 4EAT (1999MY TO PRESENT) REPAIRS**

Over the last few months, we have become aware of several units (new and remanufactured) with the transmission oil pan dented, causing it to break the line pressure duty solenoid on the valve body. Our investigation found even a slight dent on the pan could cause the connector to fall or break off any one of the seven solenoids, depending on the location of the impact. Any damage to the unit caused by outside influences is *not a matter for warranty* and should be discussed with the customer prior to any repairs being made to their vehicle. Keep in mind that other internal damage could be possible depending on the severity of the impact, contamination caused by the impact, and length of time driven after the impact. **TT**

**02****OIL FILTERS: H-4 VERSUS H-6 ENGINES**

H-4 engines come with an OEM P/N 15208AA060 and the same number is used for replacement.

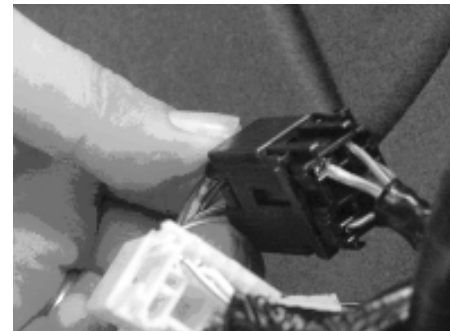
H-6 engines come with an OEM P/N 15208AA031 and SOA5165109 is used as a replacement.

Both filters have the same physical dimensions as far as threads, 'O' ring, and bypass valve opening pressure (23 p.s.i.). However, the H-4 filter has 141 square inches of filtration surface and the H-6 filter has 201 square inches of filtration surface.

The H-4 filter should not be used on the H-6 engine. Using the H-4 filter may cause it to become contaminated faster and allow the bypass valve to open, allowing unfiltered oil to circulate through the engine. Any resulting engine failure due to this condition would not be a matter for warranty. **TT**

**07****LEGACY REAR WIPER OPERATION**

The symptom is the rear wiper will not complete its cycle when the switch is turned to the "OFF" position. The wiper stops immediately, regardless of its position on the glass. The cause, as you can see in the attached photo, is either a pulled wire from the connector, or in one other case the pin was pushed out of the connector. This connector is located in the lower RH "D" pillar, and can be accessed at the same location as the rear combination light.

**TT****FUSE 4 BLOW-OUT...  
continued from page 1**

*Left: Area where the mirror harness becomes unseated.*

*Below: The Gusset screw that causes the circuit to short out.*



**01****DEALER CODE - DEALER  
CODE - DEALER CODE!**

PLEASE have your SUBARU dealer code ready when calling the Technical Support Line.

We have been getting too many calls where there has been no dealer code given. Granted, as long as there is a phone number, we don't need the dealer code to return your call. However, to establish a case that you did in fact call, we must have your dealer code.

If for some reason you don't know your dealer code when calling, please get it prior to our callback because we will ask you for it. Our database is set up to locate the dealer and phone number based on the dealer code. Omitting it delays our response time in getting back to you. **TT**

**11****2002MY LEGACY ATMOSPHERIC PRESSURE SOLENOID VALVE  
OPERATION**

A new component was introduced to the On Board Refueling Vapor Recovery (ORVR) system with the launch of the 2002 Legacy, the 'Atmospheric Pressure Solenoid Valve'. The operation of this new component enhances the ECM's measurement of the fuel tank pressure while on board diagnostics are being performed.

During normal engine operation the Atmospheric Pressure Solenoid Valve is open, exposing the backside of the Fuel Tank Pressure Sensor to atmosphere. When the ECM decides to check the fuel tank pressure, the solenoid valve closes, which traps the atmospheric pressure from the backside of the Fuel Tank Pressure Sensor. This will ensure that the atmospheric pressure remains constant. The difference between the atmospheric pressure and the fuel tank pressure is displayed on the select monitor. The sensor opens again after the diagnostic test so that changes in atmospheric pressure can be sensed.

Refer to 2002 Legacy Service Manual EC-10 and EC-11 for the location and removal procedure of the Atmospheric Pressure Solenoid Valve. **TT**

**11****DTC P1591 2002MY IMPREZA WRX M/T**

If you encounter a 2002 M/T WRX with DTC P1591, check the harness for the transmission neutral switch. Pay close attention to the harness where it goes above the reverse light switch on the transmission. You're looking for a pinched and/or cut wire.

If you check the applicable service manual for this code, you'll see that it only has application to Automatic Transmission vehicles. If you do find a M/T vehicle with this code, call the Technical Support Line with all the vehicle information.

Thanks to Harold Murray, Continental Motors Co. (140-192), Anchorage, Alaska for this information. **TT**

Subaru's owner manual states that once the EC Compass Mirror is calibrated, further calibration is not necessary. When the mirror is first installed the letters "CAL" are shown on the display until the mirror has calibrated itself through normal driving. However, there may be circumstances where outside influences cause the mirror to begin operating inaccurately, such as reading only one or a few directions. To restore compass accuracy, the following Zone and Calibration procedures (Fig. 1.1) should be followed.

### **Zone Setting:**

1. The Zone number is factory preset to Zone 8. Refer to "Compass Zone Map" (Fig 1.2) to verify that the compass Zone setting is correct for your geographical location.
2. Press and hold the right button for approximately 3 seconds until the word "ZONE" is visible in the display, then release the button. When the button is released, the display will show "ZONE" and the current Zone number. Press the right hand button repeatedly to cycle the display through all possible Zone numbers (1-15). Stop cycling when the correct Zone number for your geographical location is displayed.
3. No button activity for approximately 4 seconds will exit the Zone setting mode. The compass display will return to normal operation and the new Zone number will be set.

### **Calibration of the EC Compass Mirror:**

1. For optimum calibration, switch off all nonessential electrical accessories (A/C, blower, wipers, defrost, etc.) and ensure all doors are shut.
2. Drive to an open, level area away from large metallic objects or structures.
3. Press and hold the left button for approximately 3 seconds until the word "CAL" is visible in the display, then release the button. This puts the compass into Calibration mode. "CAL" and direction will be displayed.
4. Drive slowly in a circle until "CAL" disappears from the display and then verify compass accuracy (about two or three circles).
5. The Compass is now calibrated. (Utilize this Calibration procedure in the future if circumstances cause the mirror to become inaccurate).

**Note:** For further assistance in troubleshooting the mirror, please reference Service Bulletin 15-105-01. **TT**



**Figure 1.2**

When calling the Subaru Technical Support Line concerning an ECM that may need to be reprogrammed, **have the Calibration Identification number (C.I.D) handy.**

We will ask you for this number to make certain the ECM is in need of updating. Some ECMs already contain the updated logic.

Obtaining the C.I.D. number is easy.

1. Turn the New Select Monitor on.
2. Select 'Each System Check'
3. Select 'Engine Control System'
4. Engine type is shown, press 'YES'.
5. Select OBD System.
6. Select 'Getting of Vehicle Identification'.
7. The Calibration Identification number is shown as the first 8 digits of the 16 digit number on the screen.

You will soon receive a new special tool from Kent Moore, Part Number **22775AA050**, Image Loader software and communications cable. This software and cable will enable you to print and /or save information that appears on the select monitor display screen.

The software must be loaded into a desktop or laptop computer that uses Windows 95 or newer. Follow the directions on the software package for installing the Image Loader program.

Next you will need to configure the program for use. Open the program and click on "Communication" and then "Setup". Make the following selections:

**Port-COM1 (1-4 are available)**

**Baud Rate-38400**

**Stop Bit-1**

**Parity Bit- None**

Click "OK" when these adjustments have been made.

The Image Loader program is now ready for use, however, the Select Monitor must be adjusted correctly to send information.

Connect the Select Monitor to a vehicle or power supply and turn on the Select Monitor.

From the **Main Menu** select item number 6 "**Function Setup**". Now Select item number 2 "**Interface Setup**".

Make the following adjustments:

**Baud Rate-38400**

**Data Bit-8bit**

**Stop Bit-1bit**

**Parity Check-None**

**Flow Control-RTS/CTS**

**Com. Type-RS-232C**

Press the "Yes" key after making these adjustments. The Select Monitor will maintain these settings in memory as long as the back up power supply batteries are in good condition.

Turn off the Select Monitor and connect the communications cable in the slot that resembles a phone connection in the top of the Select Monitor. Connect the other end to the port on the computer that will accept it.

Turn on the Select monitor and place the information that you want to print on the display screen. Press the hold button if necessary. On the computer click the icon that looks like a lightning bolt. Now press the print key on the Select Monitor. The desktop computer will indicate that it is collecting data. After the data is displayed it can be printed or saved. **TT**

The fax number listed in the last paragraph of the 'H6 Extended Crank Time' article on page 2 of the January/February *TechTIPS*, is incorrect.

It should be **856-xxx-xxxx** NOT xxxx . Please make the correction to your issue. **TT**

**CALENDAR OF  
SUBARU HOLIDAYS****Presidents' Day**

Monday, February 18, 2002

**Memorial Day**

Monday, May 27, 2002

**Independence Day**

Thursday, July 4, 2002

**Labor Day**

Monday, September 2, 2002

**Thanksgiving**

Thursday, November 28, 2002

Friday, November 29, 2002

**Christmas**

Tuesday, December 24, 2002

Wednesday, December 25, 2002

**New Year's Day**

Wednesday, January 1, 2003

**"TechTIPS" INPUT & SUGGESTIONS**

This is **your** chance to offer suggestions for use in future issues of *Tech T.I.P.S.!*

**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:** \_\_\_\_\_