

ATTENTION:

GENERAL MANAGER PARTS MANAGER
 CLAIMS PERSONNEL SERVICE MANAGER

IMPORTANT - All Service Personnel Should Read and Initial



SERVICE BULLETIN

APPLICABILITY: 2002~2003 MY Subaru WRX 5M/T
SUBJECT: ABS Control Unit Customer Satisfaction Program

NUMBER: 06-35-05R
DATE: 08/19/05

INTRODUCTION

Subaru of America, Inc. (SOA) has developed a Customer Satisfaction Program to address a concern related to ABS performance on 2002-2003MY WRX with 5M/T. Subaru has received some customer reports expressing concern over a feeling of a delayed braking response when ABS is activated during initial braking on bumps, potholes, irregular or other low friction road surface conditions. With assistance from Subaru, the National Highway Traffic Safety Administration (“NHTSA”) conducted over 11, 500 tests to extensively investigate those reports. While NHTSA and Subaru did not identify a problem with the WRX ABS that would require a recall, we did identify a certain performance characteristic of the ABS that cause some drivers to experience a delayed braking response feel during the first second of braking.

Following this analysis, Subaru developed an alternative method of calibrating the ABS to address this performance characteristic and to provide a better braking response feel during initial braking when the ABS is activated. No perceptible difference in overall stopping distance will result when the ABS is re-calibrated.

If the driver of an affected vehicle encounters this set of conditions and is uncomfortable with this “delayed response feel” upon ABS activation, a complimentary replacement ABS electronic control unit (“ECU”) with a different calibration is now available at no cost to the customer.

The ECU change is not mandatory. Rather, this service is being offered to enhance customer satisfaction. Only some owners will experience this ABS braking characteristic depending on such factors as driving habits and road conditions. Therefore, dealerships should only replace the ABS ECU in response to a direct request from the owner for such a change. Dealership personnel should only respond to owner requests and not take a position for or against ECU replacement.

DEALER PROGRAM PARAMETERS

The purpose of this program is to address the concerns of customers experiencing the ABS braking characteristics previously described. Dealers should only replace the ABS control unit when an owner of an affected vehicle expresses a specific concern over this braking characteristic and requests the change be made. Vehicles with unauthorized modifications to their brake systems are not eligible to receive a re-calibrated ECU due to potential compatibility problems.

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

Subaru Service Bulletins 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 know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.



ELIGIBLE VEHICLES

Note: Only vehicles found within the following VIN range equipped with a manual transmission are affected.

Eligible vehicles fall within the VIN range chart below:

2002MY WRX Sedan	JF1GD296*2G500001 – 531625
2002MY WRX Sport Wagon	JF1GG296*2G800001 – 837226
2003MY WRX Sedan	JF1GD296*3G500001 – 513811
2003MY WRX Sport Wagon	JF1GG296*3G800001 – 814065

Note 1. Various characters may occupy the VIN positions Identified by ""*

OWNER NOTIFICATION

SOA will contact owners of eligible vehicles by first class mail advising them of the availability of an alternative ABS ECU. A copy of the Owner Letter is included at the end of this bulletin. Because of limited parts availability, owner notification letters will be mailed in three phases as indicated in the following schedule. These dates are tentative and may be adjusted at some point during the program. Owner notification groupings are based on vehicle model year and Region / Distributor areas below.

Mailing	Date	Region / Distributor Area
Mailing 1 - 2002MY	August 26, 2005	010, 020, 140
Mailing 2 - 2002MY	September 30, 2005	030, 040, 070, 090
Mailing 3 - 2003MY	October 28, 2005	All

PARTS INFORMATION

ABS control units are available through normal parts channels. Quantities have been distributed to facing warehouse locations that coincide with the owner notification mailing schedule. **Dealers should only order parts for those customers actually requesting replacement of the ABS control unit.**

Description	Part Number
ABS Control Unit Kit	27529FE050

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REPAIR PROCEDURE

- 1) Turn off the ignition switch.
- 2) Disconnect the air intake duct from the Air Box.
- 3) Remove the air cleaner case from the inner fender well.

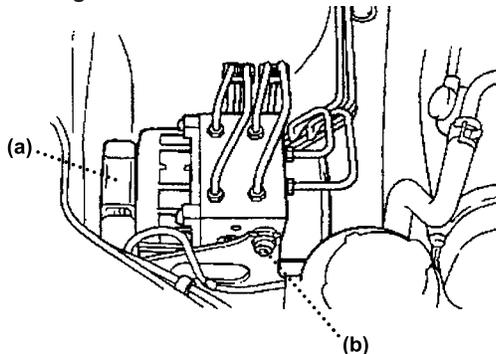
Removal of ECU

NOTE: When removing the ECU, the brake pipes remain connected.

- 1) Disconnect all electrical connections from the ECU (top and bottom).
- 2) Remove the two installation bolts (M8) from the bracket of the hydraulic unit and the ECU assembly.

Figure 1

- (a) The ECU harness connector
- (b) The Bracket Installation Unit



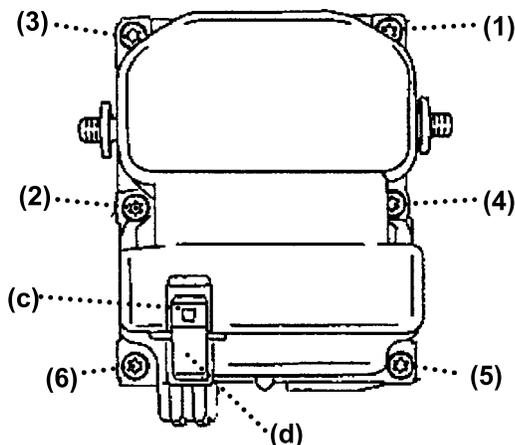
- 3) Lift the hydraulic unit and the ECU assembly from the bracket by about 5 cm (0.2 inches) and support it with a small piece of wood.

CAUTION: Be careful not to deform the brake pipe during this procedure.

- 4) Unlock the connector for the motor power source and disconnect the connector as shown in figure 2, items “c” and “d” below.

Figure 2

The torx head screws shown in this image are numbered 1 to 6. You must follow the numerical order when removing and then replacing these screws. Only the new screws provided in the kit should be used.



- 5) Remove the 6 tamper-proof torx head screws (TP20) which join the hydraulic unit and the ECU.

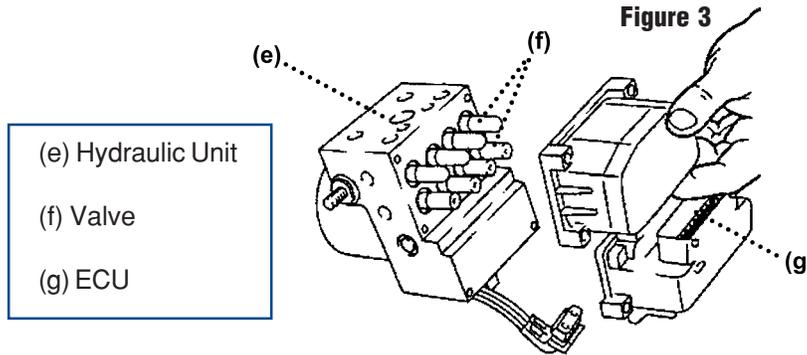
NOTE: Do not reuse the torx head screws once removed. New screws are provided in the ABS Control Unit Kit.

- 6) Remove the ECU from the hydraulic unit by pulling it gently.

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NOTE:

- A) *Do not insert anything into the gap between the ECU and the hydraulic unit.*
- B) *Do not pry off the ECU, but pull it straight out from the hydraulic unit.*
- C) *Do not reuse the seal from the ECU.*



Installation of new ECU

- 1) Confirm that the sealing surface of the hydraulic unit is clean.

NOTE:

- A) *Do not machine the sealing surface.*
 - B) *If the sealing surface is damaged, replace not only ECU but also the hydraulic unit and the ECU assembly with new one.*
 - C) *Clean dust or foreign material from the sealing surface with a clean cloth and alcohol.*
 - D) *Do not blow compressed air onto the ECU surface or the hydraulic unit.*
- 2) In order to prevent **damage on the valves** protruding from the hydraulic unit, do not tilt the ECU against the hydraulic unit when assembling.
 - 3) Install the new ECU.
 - 4) Temporarily tighten 6 new screws by hand.

NOTE: Do not reuse the screws that were previously removed from the ECU. Only use the new screws provided in the kit.

- 5) Tighten the 6 screws in the exact order shown in Figure 2; use the specified tightening torque of $2.65 \pm 0.30\text{Nm}$ ($1.95 \pm 0.22\text{ft-lbs}$) (26.4 inch-lbs).
- 6) Check if the screws are securely tightened by confirming that there is no visible clearance between the ECU and the hydraulic unit.
- 7) Connect the motor power source connector to ECU.

NOTE: Confirm that you hear a clicking sound when locking the connector lock.

- 8) Install the hydraulic unit and the ECU assembly onto the bracket and tighten the two nuts with a tightening torque of $18 \pm 5\text{Nm}$ ($13.28 \pm 3.69\text{ft-lbs}$) (44.28 inch-lbs).

NOTE: Attach the damper under the hydraulic unit with the hydraulic unit and the bracket securely.

- 9) Reconnect the ECU harness connector with the ECU.

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Restoration of surrounding parts

- 1) Install the air cleaner case.
- 2) Install the air intake duct.

Testing after replacement

- 1) Confirm that the ABS warning lamp light comes on normally and then turns off when the ignition switch is turned on.

NOTE: If the above test procedure indicates an abnormality, follow the repair instructions described in the diagnostic procedures of the vehicle's Service Manual.

WARRANTY COVERAGE

Warranty coverage for the ABS Control Unit has been extended on vehicles affected by this Customer Satisfaction Program. This coverage extension only applies for a one-time replacement of the ABS Control Unit to address customer concerns related to the braking characteristic associated with this program.

CLAIM REIMBURSEMENT AND ENTRY PROCEDURES

Credit for performing this Customer Satisfaction Program will be based on the submission of properly completed repair order information. Dealers may enter the applicable warranty claim information through their Dealer Communications System.

Listed below is claim entry information:

Replace WRX ABS Control Unit – Use the following information for claim submission:

Enter labor operation **A153-601** for **0.4** labor hours.

Claim Type	Failure Code	Labor Operation	Labor Time	Labor Description
Warranty WC	QCU-48	A153-601	0.4	Replace ABS Control Unit

Enter the applicable part number. Parts will be reimbursed at dealer cost plus applicable handling allowance.

Description	Part Number
ABS Control Unit	27529FE050

OWNER NOTIFICATION LETTER



SUBARU

Subaru of America, Inc.

PO Box 6000

Cherry Hill, NJ 08034-6000

www.subaru.com

Dear Subaru WRX Owner:

We appreciate your being a member of one of the most enthusiastic group of vehicle owners anywhere--Subaru WRX owners. We are writing in response to feedback from some owners of manual transmission 2002 and 2003 WRX models regarding braking characteristics when driving over certain road surfaces that activate the anti-lock braking system ("ABS").

We have received some reports expressing concern over a feeling of a delayed braking response when ABS is activated during initial braking on bumps, potholes, irregular or other low friction road surface conditions. With assistance from Subaru, the National Highway Traffic Safety Administration ("NHTSA") conducted over 11,500 tests to extensively investigate those reports. While NHTSA and Subaru did not identify a problem with the WRX ABS that would require a recall, we did identify a certain performance characteristic of the ABS that could cause some drivers to experience a delayed response feel in the first second of braking.

Following this analysis, Subaru developed an alternative method of calibrating the ABS to address this performance characteristic and to provide a better braking response feel during initial braking when the ABS is activated. No perceptible difference in overall stopping distance will result when the ABS is re-calibrated.

If you have encountered this set of conditions and are uncomfortable with a "delayed response feel" upon ABS activation, a complimentary replacement ABS electronic control unit ("ECU") with a different calibration will be available from your Subaru dealer. If you want a re-calibrated ECU installed in your vehicle, please contact your Subaru dealer for availability information and to arrange an appointment. Subaru will have the dealer install a modified ECU in your vehicle at no charge. Vehicles with unauthorized modifications to their brake systems are not eligible to receive a re-calibrated ECU due to potential compatibility problems.

This ECU change is not mandatory. Rather, this service is being offered to enhance your satisfaction. Only some owners will experience this ABS braking characteristic as it depends on such factors as driving habits and road conditions.

Sincerely,

Subaru of America, Inc.