

ATTENTION:
 GENERAL MANAGER ☐
 CLAIMS PERSONNEL ☐

 PARTS MANAGER ☐
 SERVICE MANAGER ☐
IMPORTANT - All Service Personnel Should Read and Initial



SERVICE BULLETIN

APPLICABILITY: 1997~04MY Legacy, Outback & Baja
 (Excluding VDC Equipped Vehicles);
 1998~04MY Impreza and Forester

SUBJECT: Replacement of ECU for ABS Repair

NUMBER: 06-31-03R
DATE: 12/08/04

INTRODUCTION

In order to improve serviceability of ABS system, the ECU was subdivided and has been newly established as a spare part. This service bulletin details the part numbers and replacement procedures of the ECU as a spare part.

PARTS NUMBERS AND APPLICABLE MODELS

VEHICLE	MODEL YEAR	TRANS TYPE	ECU SPARE PART	IDENTIFICATION MARK	HYDRAULIC CONTROL UNIT / ECU ASSY
Legacy* (1)	97 & 98	AT	27529AC03A	C3	27539AC03A
		MT	27529AC04A	C4	27539AC04A
	99 to 01	AT	27529AC05A	C5	27539AC05A
		MT	27529AC06A	C6	27539AC06A
	02 to 04	AT	27529AE04B	CG	27539AE04B
		MT	27529AE05B	CH	27539AE05B
Outback* (2)	00 & 01	AT	27529AE02A	CE	27539AE02A
		MT	27529AE03A	CF	27539AE03A
	02 to 04	AT	27529AE06B	CI	27539AE06B
		MT	27529AE07B	CJ	27539AE07B
Impreza	98 to 01	AT	27529AC050	C5	27539AC050
		MT	27529AC060	C6	27539AC060
	02 & 03	AT	27529FE110	CC	27539FE110
		MT	27529FE120	CD	27539FE120
	04	AT	27529FE170	CU	27539FE170
		MT	27529FE180	CV	27539FE180
		MT with DCCD	27529FE200	CY	27539FE200
Forester	98	AT	27529AC030	C3	27539AC030
		MT	27529AC040	C4	27539AC040
	99 to 02	AT	27529FC000	C7	27539FC000
		MT	27529FC010	C8	27539FC010
	03 & 04	AT	27529SA001	C0	27594SA000
		MT	27529SA011	CP	27594SA010



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.



***NOTES (FOR TABLE ON PREVIOUS PAGE):**

- (1) Legacy includes Outback models from 97MY to 99MY.
- (2) Outback models includes Baja.

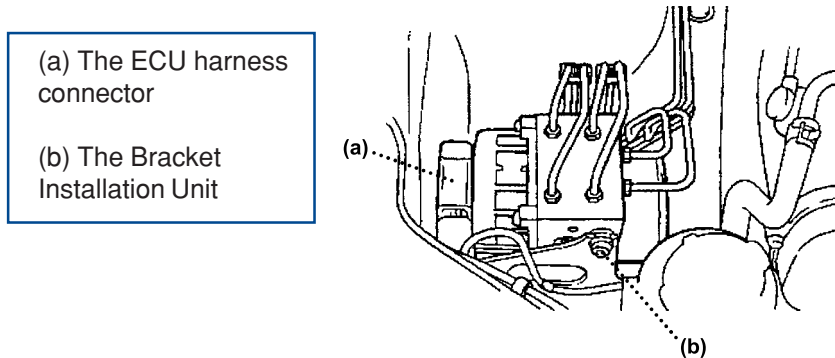
REPAIR PROCEDURE

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

Removal of ECU

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

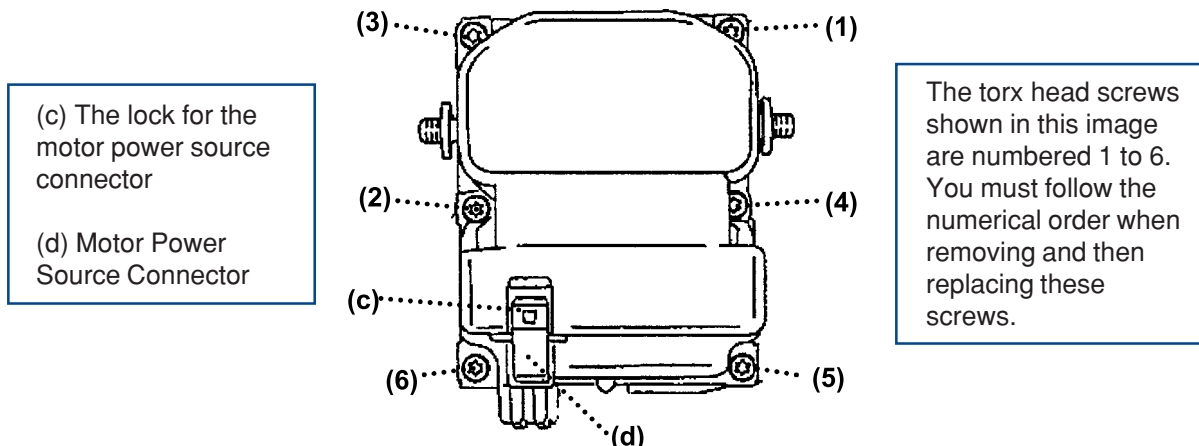
- 1) Disconnect all electrical connections from the ECU (top and bottom).
- 2) Remove the two installation bolts (M8) from the bracket of the hydraulic unit and the ECU assembly.



- 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 below.



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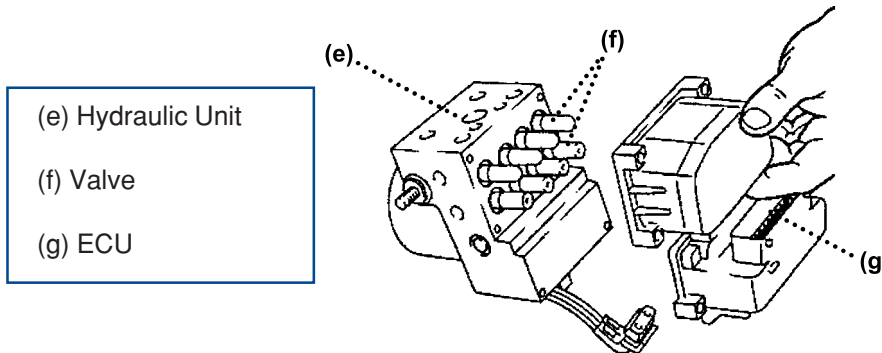
- 5) Remove the 6 torx head screws (T20) which join the hydraulic unit and the ECU.

NOTE: Do not reuse the torx head screws once removed.

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

NOTE:

- A) *Do not insert anything into the gap between the ECU and the hydraulic unit.*
- B) *Do not pry the ECU, but pull it straight 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** protruded from the hydraulic unit, do not tilt the ECU against the hydraulic unit when assembling.
 - 3) Install the new ECU.
 - 4) Temporarily tighten 6 screws by hand.

NOTE: Do not reuse the screws that were previously removed from the ECU.

- 5) Tighten the 6 screws in the exact order shown in Figure 4.4; 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 no clearance between ECU and hydraulic unit visually.
- 7) Connect the motor power source connector to ECU.

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

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- 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.

Restoration of surrounding parts

- 1) Install the air cleaner case.
- 2) Install the air intake duct.
- 3) Connect the negative terminal to the battery.

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.
- 2) Connect the select monitor and confirm in the first display that the model year, driving system and transmission system are correct.
- 3) Confirm that the ABS warning lamp does not light when starting the engine and driving up to more than 12.5 m/h (20 km/h).

NOTE: If something abnormal was found in above three testing procedures, follow the repair instructions described in the diagnostic procedures of the vehicle's Service Manual.

CLAIM REIMBURSEMENT/WARRANTY INFORMATION

For vehicles within the warranty period, this repair can be claimed using the following warranty information:

LABOR DESCRIPTION	LABOR OPERATION	FAIL CODES	LABOR TIME
ABS Testing and Diagnosis	B 566-001		0.5
ABS Electronic Control Unit	C 536-101	UCD 39, 40, 41, 42, or 43	1.0