

# General Description

## BRAKE

### 1. General Description

#### A: SPECIFICATION

Front disc brake	Type	Disc (Floating type, ventilated)	
	Effective disc diameter	mm (in)	261 (10.28)
	Disc thickness x Diameter	mm (in)	30 x 316 (1.18 x 12.44)
	Effective cylinder diameter		42.8 (1.685) x 2
	Pad dimensions (Length x Width x Thickness)	mm (in)	130.0 x 53.5 x 11.0 (5.118 x 2.106 x 0.433)
	Clearance adjustment		Automatic adjustment
Rear disc brake	Type	Disc (Floating type, ventilated)	
	Effective disc diameter	mm (in)	284.5 (11.2)
	Disc thickness x Diameter	mm (in)	18 x 320 (0.71 x 12.59)
	Effective cylinder diameter	mm (in)	40.46 (1.592)
	Pad dimensions (Length x Width x Thickness)	mm (in)	95.5 x 34.8 x 11.0 (3.759 x 1.370 x 0.433)
	Clearance adjustment		Automatic adjustment
Master cylinder	Type	Tandem	
	Effective diameter	mm (in)	23.8 (15/16)
	Reservoir type		Sealed type
	Brake fluid reservoir capacity	cm <sup>3</sup> (cu in)	285 (17.39)
Brake booster	Type	Vacuum suspended	
	Effective diameter	mm (in)	238 + 261 (9.37 + 10.28)
Brake line		Dual circuit system	
Brake fluid		FMVSS No. 116, DOT3, or DOT4	
<b>CAUTION:</b>			
<ul style="list-style-type: none"> <li>• Avoid mixing brake fluid of different brands to prevent fluid performance from degrading.</li> <li>• When filling with brake fluid, be careful not to allow any dust to enter the reservoir.</li> <li>• Use new SUBARU genuine brake fluid when replacing or refilling the fluid.</li> </ul>			

#### NOTE:

Refer to "PB" section for parking brake specifications. <Ref. to PB-2, SPECIFICATION, General Description.>

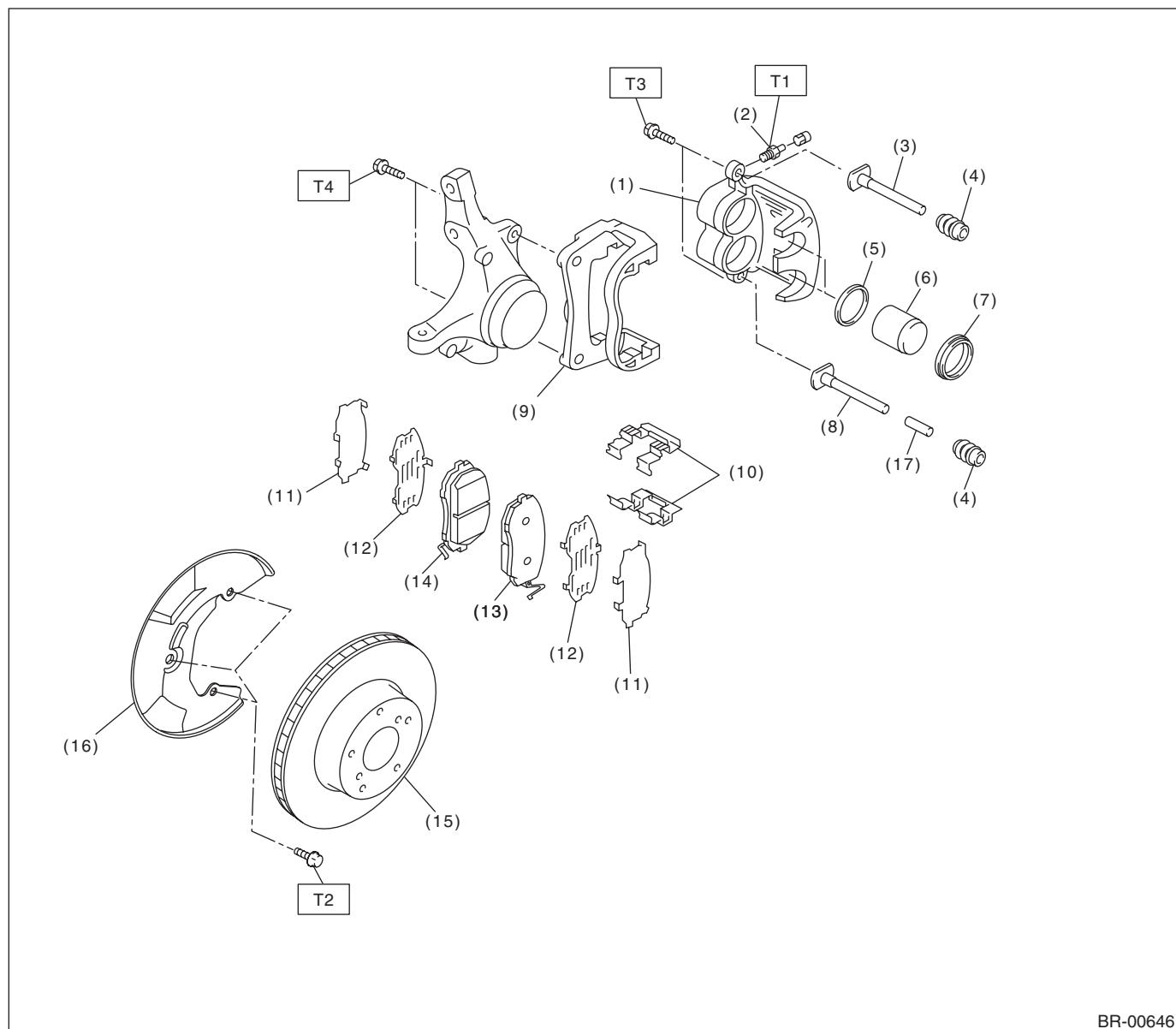
Item		Standard	Limit
Front brake	Pad thickness	mm (in)	11 (0.43)
	Disc thickness	mm (in)	30 (1.18)
	Disc runout	mm (in)	— 0.05 (0.0020)
Rear brake (disc type)	Pad thickness	mm (in)	11.0 (0.433)
	Disc thickness	mm (in)	18 (0.71)
	Disc runout	mm (in)	— 0.05 (0.0020)
Parking brake	Inside diameter	mm (in)	210 (8.27)
	Lining thickness	mm (in)	4.0 (0.157)
	Pedal stroke		5 to 6 notches/300 N (30 kgf, 67.5 lb)

		Brake pedal force N (kgf, lb)	Fluid pressure kPa (kgf/cm <sup>2</sup> , psi)
Brake booster	Brake fluid pressure with engine stopped	147 (15, 33)	590 (6, 86)
		294 (30, 66)	1,654 (17, 240)
	Brake fluid pressure with engine running and vacuum pressure at 66.7 kPa (500 mmHg, 19.69 inHg)	147 (15, 33)	8,539 (87, 1,238)
		294 (30, 66)	15,373 (157, 2,229)

Brake pedal	Free play	mm (in)	0.5 — 2 (0.02 — 0.08) [When pulling the brake pedal upward with a force of less than 10 N (1 kgf, 2 lb)]
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## B: COMPONENT

### 1. FRONT DISC BRAKE



BR-00646

- |                       |                    |                 |
|-----------------------|--------------------|-----------------|
| (1) Caliper body      | (9) Support        | (16) Disc cover |
| (2) Air bleeder screw | (10) Pad clip      | (17) Bushing    |
| (3) Guide pin (Gray)  | (11) Outer shim    |                 |
| (4) Pin boot          | (12) Inner shim    |                 |
| (5) Piston seal       | (13) Pad (Outside) |                 |
| (6) Piston            | (14) Pad (Inside)  |                 |
| (7) Piston boot       | (15) Disc rotor    |                 |
| (8) Lock pin (silver) |                    |                 |

#### Tightening torque:N·m (kgf·m, ft-lb)

T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.3)

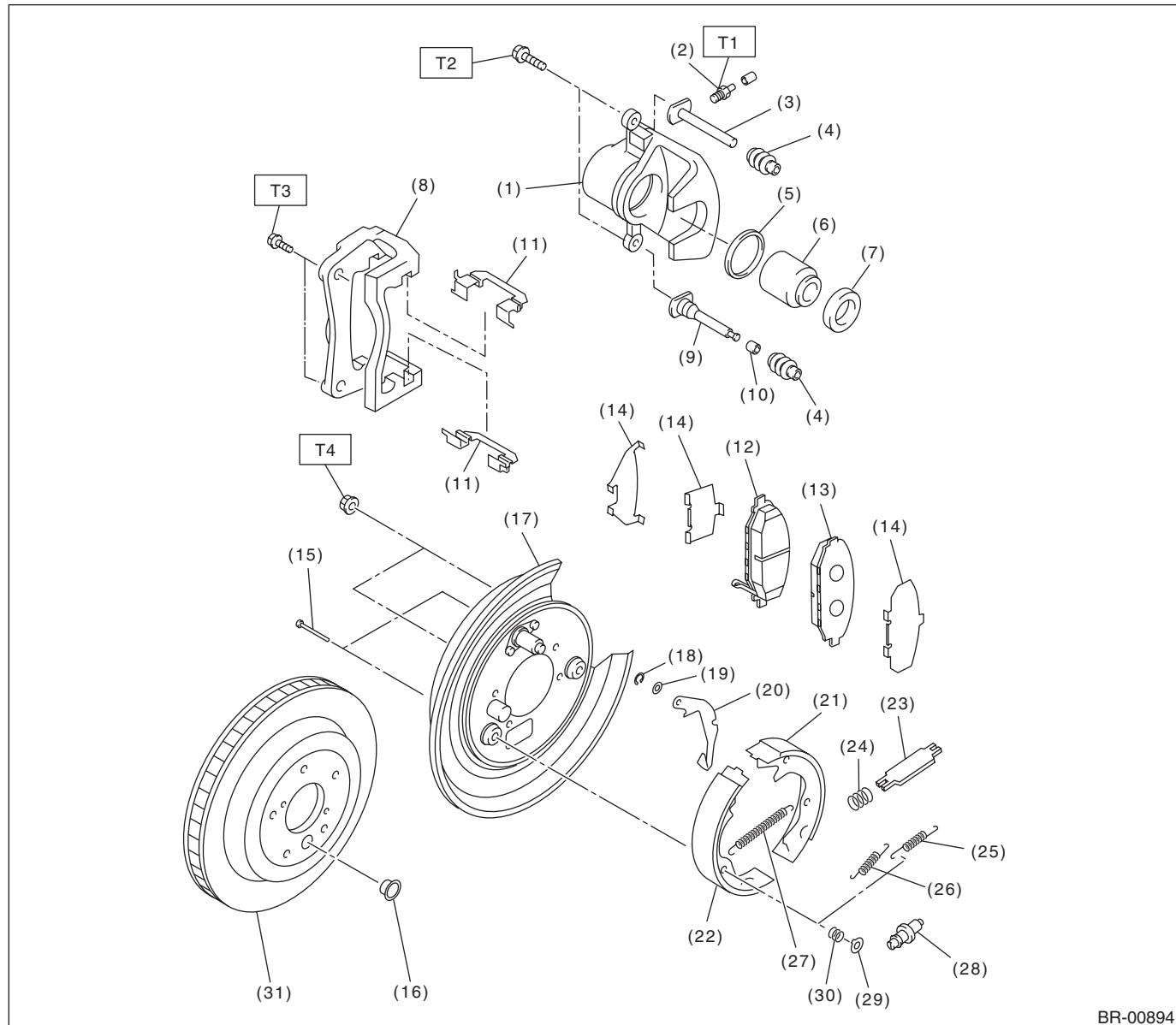
T3: 27 (2.8, 19.9)

T4: 120 (12.2, 88.5)

# General Description

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### 2. REAR DISC BRAKE



- |                       |                                     |                        |
|-----------------------|-------------------------------------|------------------------|
| (1) Caliper body      | (14) Shim                           | (27) Adjusting spring  |
| (2) Air bleeder screw | (15) Shoe hold pin                  | (28) Adjuster          |
| (3) Guide pin (Gray)  | (16) Cover                          | (29) Brake shoe cup    |
| (4) Pin boot          | (17) Back plate                     | (30) Brake shoe spring |
| (5) Piston seal       | (18) Retainer                       |                        |
| (6) Piston            | (19) Spring washer                  |                        |
| (7) Piston boot       | (20) Parking brake lever            |                        |
| (8) Support           | (21) Parking brake shoe (Secondary) |                        |
| (9) Lock pin (silver) | (22) Parking brake shoe (Primary)   |                        |
| (10) Bushing          | (23) Strut                          |                        |
| (11) Pad clip         | (24) Strut shoe spring              |                        |
| (12) Inner pad        | (25) Secondary shoe return spring   |                        |
| (13) Outer pad        | (26) Primary shoe return spring     |                        |

#### Tightening torque:N·m (kgf·m, ft·lb)

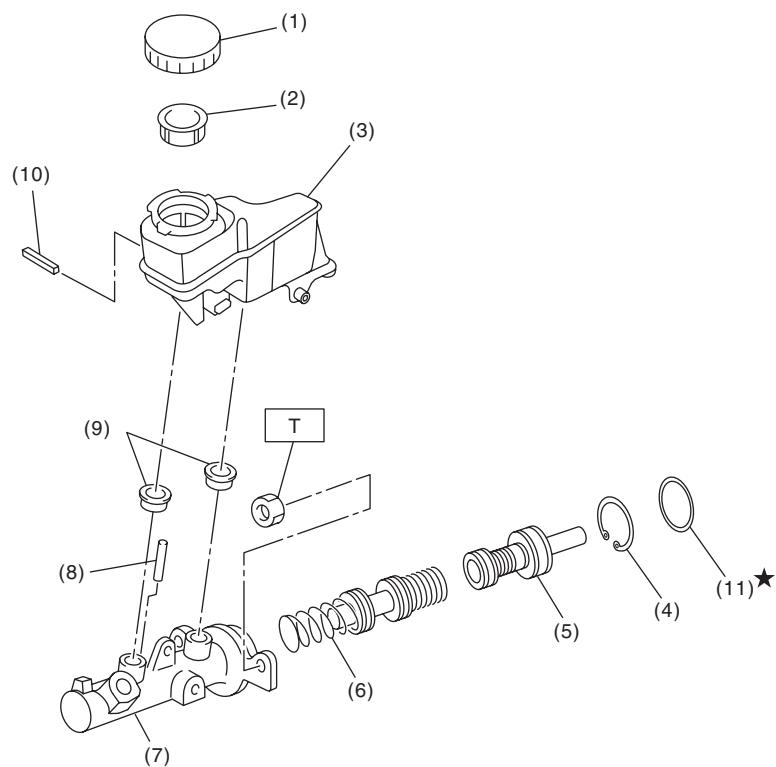
**T1: 8 (0.8, 5.8)**

**T2: 27 (2.8, 19.9)**

**T3: 66 (6.7, 48.7)**

**T4: 75 (7.6, 55.3)**

## 3. MASTER CYLINDER



BR-00492

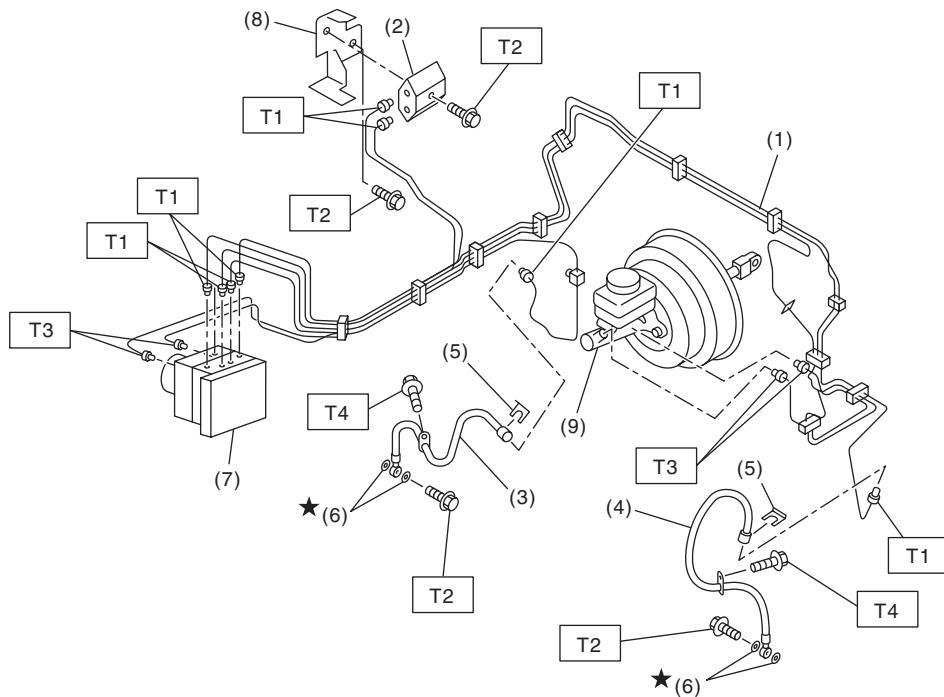
- |                    |                      |             |
|--------------------|----------------------|-------------|
| (1) Cap            | (6) Secondary piston | (11) O-ring |
| (2) Filter         | (7) Cylinder body    |             |
| (3) Reservoir tank | (8) Cylinder pin     |             |
| (4) C-ring         | (9) Seal             |             |
| (5) Primary piston | (10) Pin             |             |

**Tightening torque:N·m (kgf·m, ft-lb)**  
**T: 25 (2.5, 18.4)**

# General Description

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### 4. FRONT BRAKE PIPES AND HOSES



BR-00722

- |                           |                                                             |
|---------------------------|-------------------------------------------------------------|
| (1) Front brake pipe ASSY | (6) Gasket                                                  |
| (2) Two-way connector     | (7) VDC control module & hydraulic control unit (VDCCM&H/U) |
| (3) Front brake hose RH   | (8) Bracket                                                 |
| (4) Front brake hose LH   | (9) Master cylinder                                         |
| (5) Clamp                 |                                                             |

#### ***Tightening torque:N·m (kgf·m, ft-lb)***

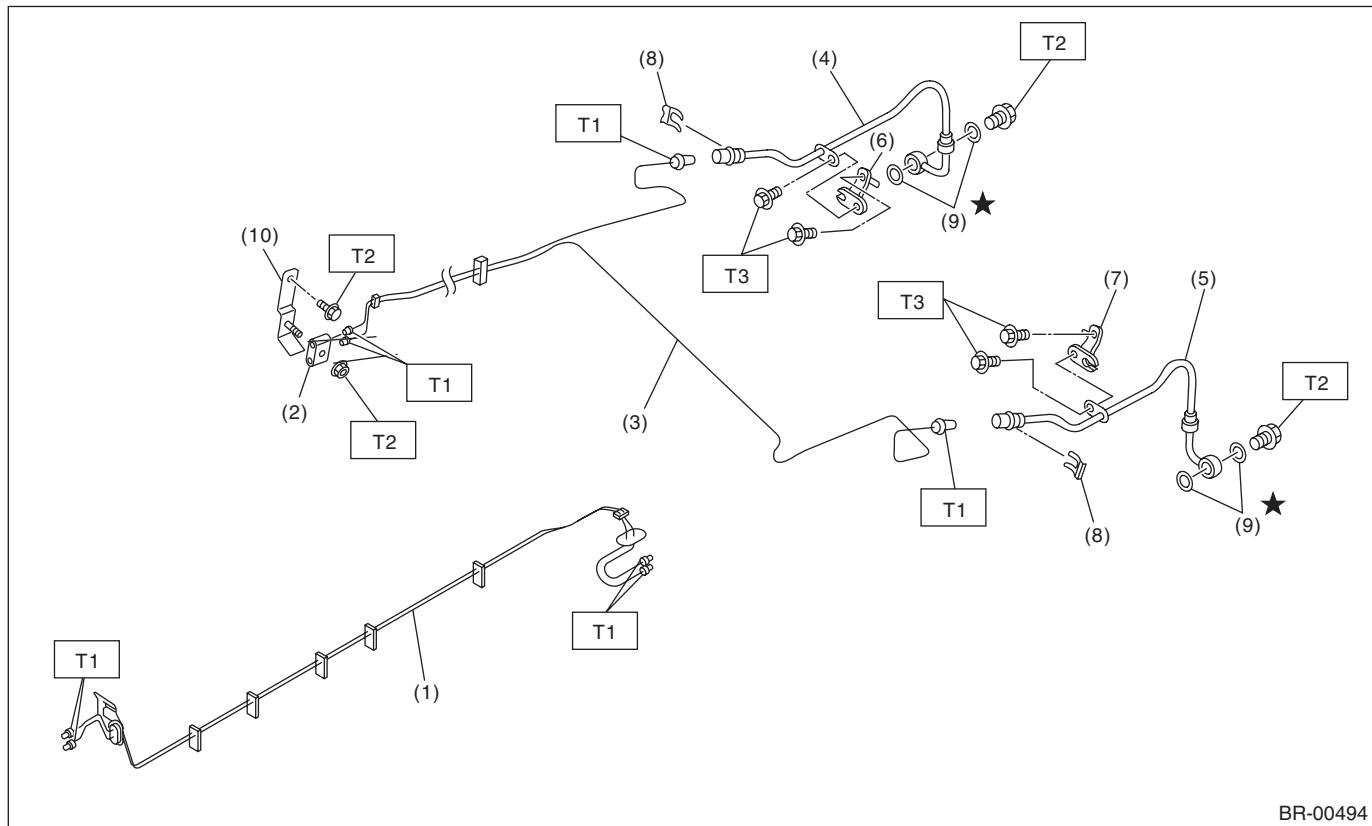
***T1: 15 (1.5, 10.8)***

***T2: 18 (1.8, 13.3)***

***T3: 19 (1.9, 14.0)***

***T4: 33 (3.4, 24.3)***

## 5. CENTER AND REAR BRAKE PIPES AND HOSES



BR-00494

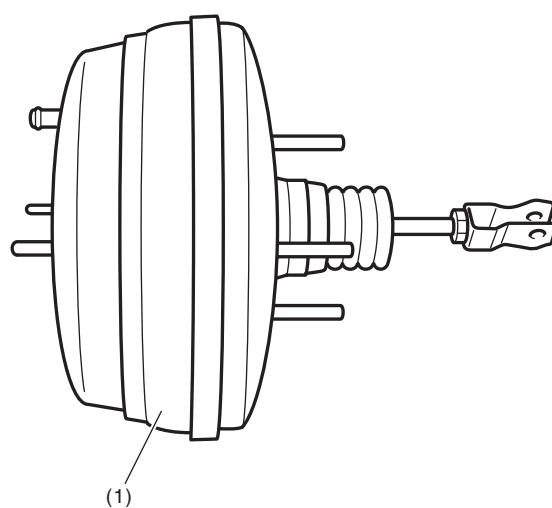
- (1) Center brake pipe ASSY
- (2) Two-way connector
- (3) Rear brake pipe ASSY
- (4) Rear brake hose RH
- (5) Rear brake hose LH

- (6) Rear brake hose bracket RH
- (7) Rear brake hose bracket LH
- (8) Clamp
- (9) Gasket
- (10) Bracket

**Tightening torque: N·m (kgf·m, ft·lb)**

**T1: 15 (1.5, 10.8)**  
**T2: 18 (1.8, 13.3)**  
**T3: 33 (3.4, 24.3)**

## 6. BRAKE BOOSTER



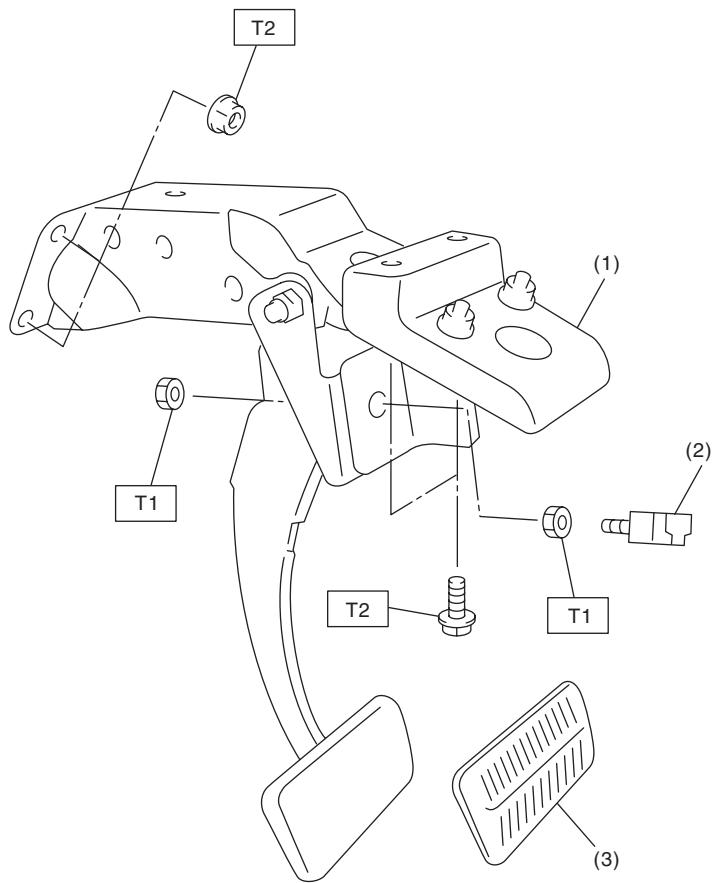
BR-00495

- (1) Brake booster

# General Description

## BRAKE

### 7. BRAKE PEDAL



BR-00338

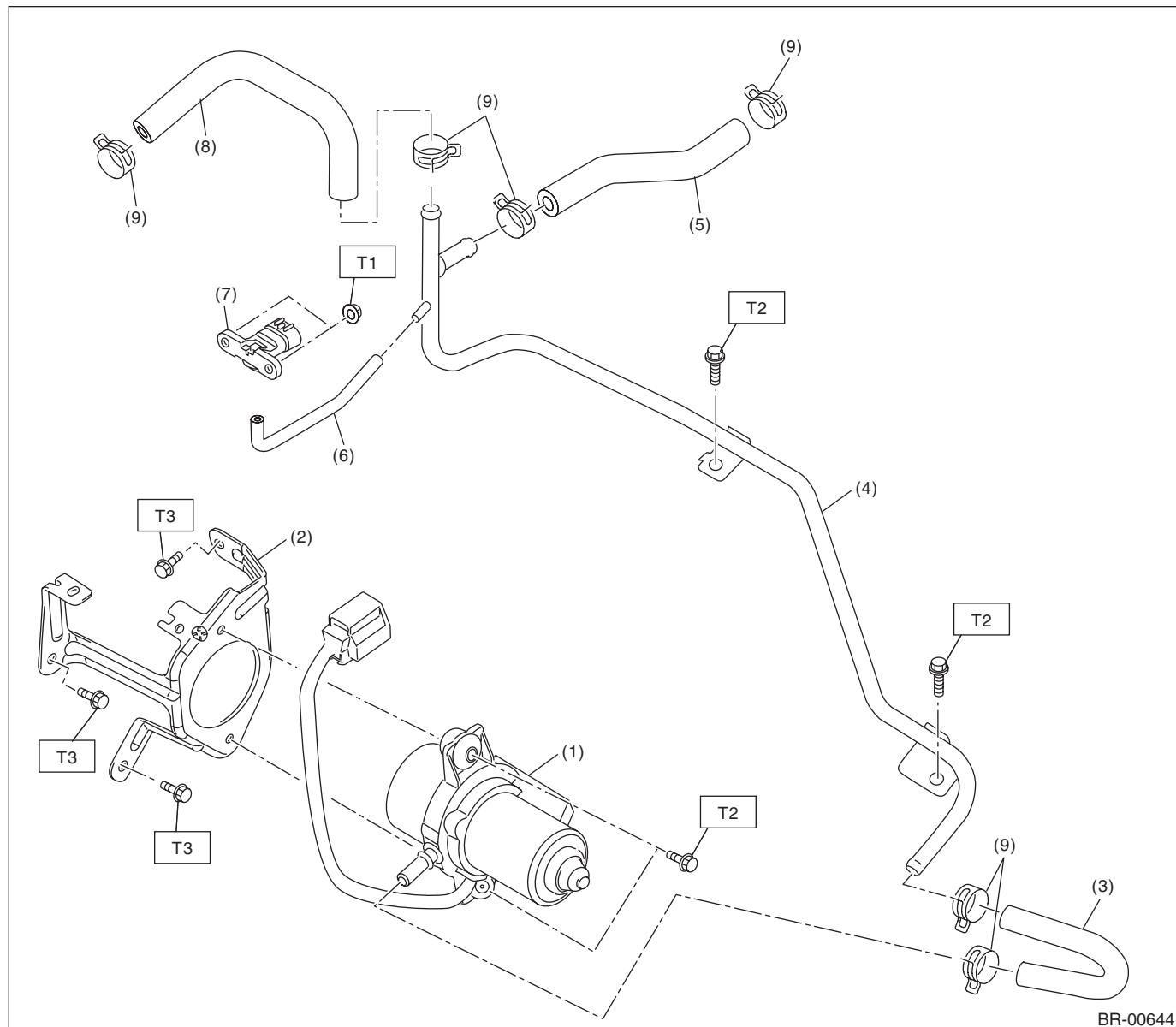
- (1) Brake pedal ASSY
- (2) Stop light switch
- (3) Brake pedal pad

**Tightening torque:N·m (kgf-m, ft-lb)**

**T1: 8 (0.8, 5.8)**

**T2: 18 (1.8, 13.3)**

## 8. BRAKE VACUUM PUMP



(1) Vacuum pump

(2) Vacuum pump bracket

(3) Vacuum hose (Vacuum pump)

(4) Vacuum pipe

(5) Vacuum hose (Engine)

(6) Vacuum hose (Vacuum sensor)

(7) Vacuum sensor

(8) Vacuum hose (Brake booster)

(9) Hose clamp

**Tightening torque:N·m (kgf·m, ft·lb)**

**T1: 5 (0.5, 3.7)**

**T2: 7.5 (0.76, 5.5)**

**T3: 25 (2.5, 18.4)**

# General Description

## BRAKE

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### C: CAUTION

Please understand and adhere to the following general precautions. They must be strictly followed to avoid any injury to the person performing the work or persons in the area.

#### 1. OPERATION

- Wear appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Use SUBARU genuine grease etc. or equivalent. Do not mix grease etc. of different grades or manufacturers.
- Before securing a part in a vise, place cushioning material such as wood blocks, aluminum plate or cloth between the part and the vise.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.

#### 2. OIL

When handling oil, follow the rules below to prevent unexpected accidents.

- Prepare container and waste cloths when performing work which oil could possibly spill. If oil spills, wipe it off immediately to prevent from penetrating into floor or flowing outside, for environmental protection.
- Follow all government and local regulations concerning waste disposal.

#### 3. BRAKE FLUID

If brake fluid gets in your eyes or on your skin, do the following:

- Wash out your eyes and seek immediate medical attention.
- Wash your skin with soap and then rinse thoroughly with water.

Follow all government and local regulations concerning waste disposal.

### D: PREPARATION TOOL

#### 1. GENERAL TOOL

TOOL NAME	REMARKS
Snap ring pliers	Used for removing and installing snap rings.