

# General Description

## BRAKE

### 1. General Description

#### A: SPECIFICATION

Front disc brake	Size		15-inch type	16-inch type
	Type		Disc (floating type, ventilated)	
	Effective disc diameter	mm (in)	228 (8.98)	244 (9.61)
	Disc thickness × Diameter	mm (in)	24 × 277 (0.94 × 10.91)	24 × 294 (0.94 × 11.57)
	Effective cylinder diameter	mm (in)	42.8 (1.685) × 2	42.8 (1.685) × 2
	Pad dimensions (Length × Width × Thickness)	mm (in)	117.8 × 50.5 × 11.0 (4.638 × 1.988 × 0.433)	117.8 × 50.5 × 11.0 *4 (4.638 × 1.988 × 0.433)
	Clearance adjustment		Automatic adjustment	
Rear disc brake	Size		15-inch type	
	Type		Disc (floating type, solid)	
	Effective disc diameter	mm (in)	238 (9.37)	
	Disc thickness × Diameter	mm (in)	10 × 274 (0.39 × 10.79)	
	Effective cylinder diameter	mm (in)	38.1 (1.500)	
	Pad dimensions (Length × Width × Thickness)	mm (in)	92.0 × 33.0 × 9.0 (3.622 × 1.299 × 0.354)	
	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)	240 (14.64)	
Brake booster	Type		Vacuum suspended	
	Effective diameter	mm (in)	208 + 229 (8.19 + 9.02)	
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>	

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## NOTE:

Refer to “PARKING BRAKE” for parking brake specifications. <Ref. to PB-2, SPECIFICATION, General Description.>

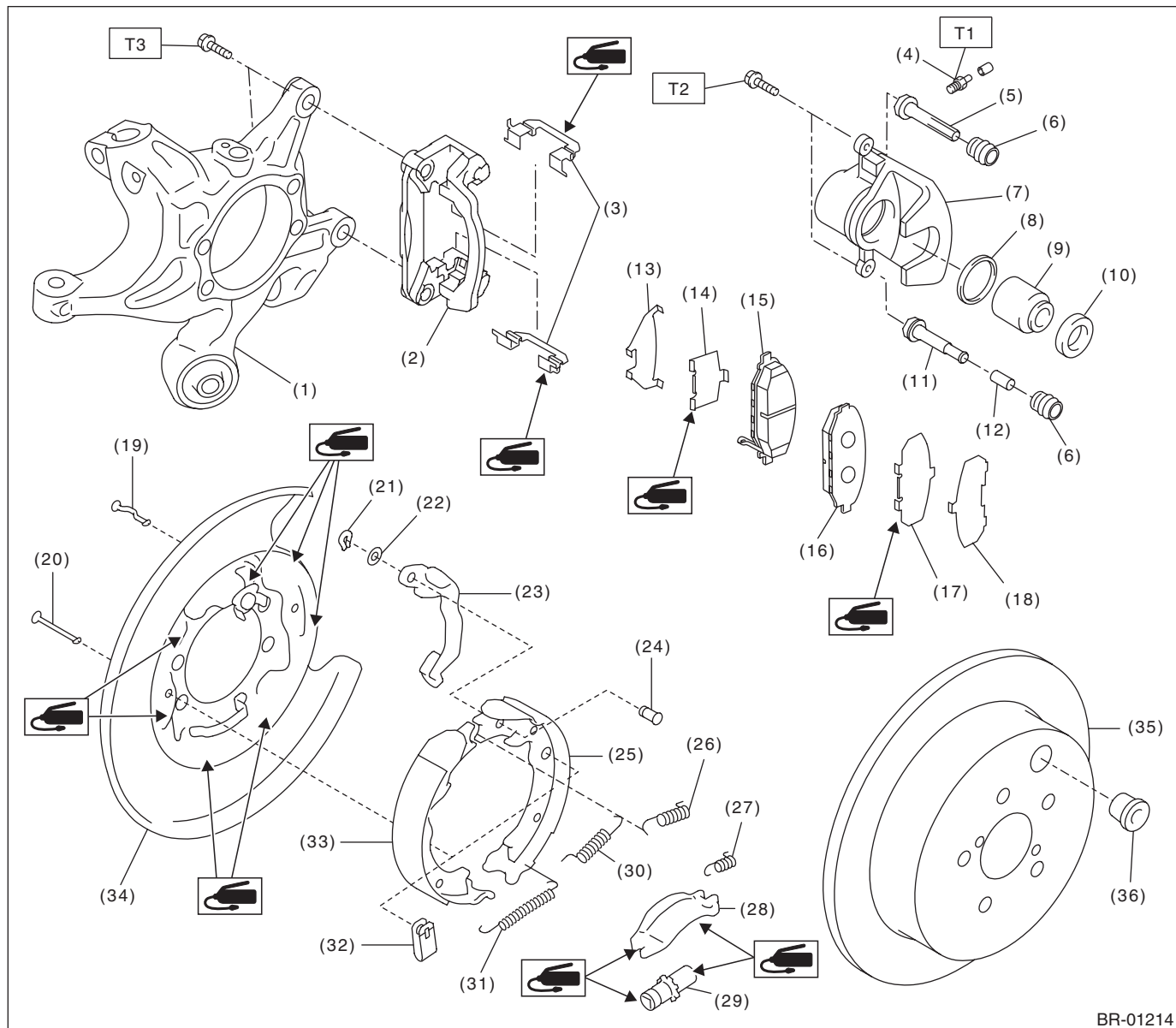
Item			Standard	Limit
Front brake	Pad thickness	All models mm (in)	11 (0.43)	1.5 (0.059)
	Disc thickness	All models mm (in)	24 (0.94)	22 (0.87)
	Disc runout	mm (in)	—	0.05 (0.0020)
Rear brake (disc type)	Pad thickness mm (in)	Solid disc	9.0 (0.354)	1.5 (0.059)
	Disc thickness mm (in)	Solid disc	10 (0.39)	8.5 (0.335)
	Disc runout	mm (in)	—	0.05 (0.0020)
Parking brake	Inside diameter	mm (in)	170 (6.69)	171 (6.73)
	Lining thickness	mm (in)	3.5 (0.14)	1.5 (0.059)

		Brake pedal force N (kgf, lbf)	Fluid pressure kPa (kgf/cm <sup>2</sup> , psi)
Brake booster	Brake fluid pressure with engine stopped	147 (15, 33)	533 (5, 77)
		294 (30, 66)	1,551 (16, 225)
	Brake fluid pressure with engine running and vacuum pressure at 66.7 kPa (500 mmHg, 19.69 inHg)	147 (15, 33)	6,177 (63, 896)
		294 (30, 66)	11,273 (115, 1,635)

Brake pedal	Free play mm (in)	0.5 — 2.7 (0.02 — 0.11) [When pulling the brake pedal upward with a force of less than 10 N (1 kgf, 2 lbf)]
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## 2. REAR DISC BRAKE



BR-01214

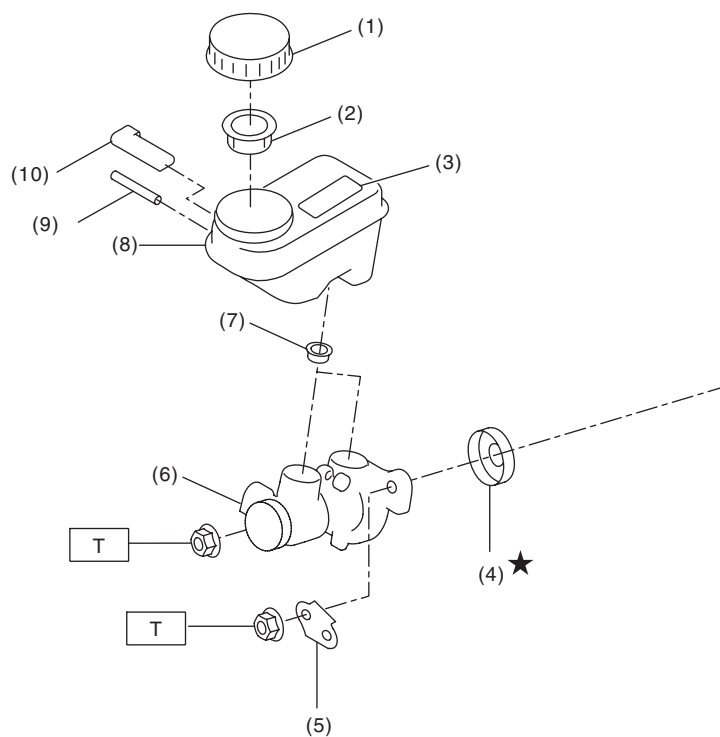
- |                                     |                                     |                                   |
|-------------------------------------|-------------------------------------|-----------------------------------|
| (1) Housing ASSY - rear axle        | (15) Pad - disc brake rear inner    | (29) Adjuster ASSY - rear brake   |
| (2) Support - rear disc brake       | (16) Pad - disc brake rear outer    | (30) Spring - primary shoe return |
| (3) Pad clip - rear brake           | (17) Shim - disc brake rear inner   | (31) Spring - adjuster            |
| (4) Bleeder - screw                 | (18) Shim - disc brake rear outer   | (32) Cup - shoe hold-down         |
| (5) Guide pin - rear brake (black)  | (19) Pin - secondary shoe hold-down | (33) Parking brake shoe (primary) |
| (6) Pin boot                        | (20) Pin - primary shoe hold-down   | (34) Back plate - rear brake      |
| (7) Caliper body                    | (21) Retainer - rear brake          | (35) Disc rotor (solid type)      |
| (8) Piston seal                     | (22) Spring washer - rear brake     | (36) Adjusting hole cover         |
| (9) Piston - disc brake             | (23) Parking lever - rear           |                                   |
| (10) Piston boot                    | (24) Pin - parking lever            |                                   |
| (11) Lock pin - rear brake (silver) | (25) Parking brake shoe (secondary) |                                   |
| (12) Lock pin - sleeve              | (26) Spring - secondary shoe return |                                   |
| (13) Shim - disc brake rear outer   | (27) Spring - strut                 |                                   |
| (14) Shim - disc brake rear inner   | (28) Strut - brake                  |                                   |
|                                     |                                     |                                   |

**Tightening torque: N·m (kgf-m, ft-lb)****T1: 8 (0.82, 5.9)****T2: 27 (2.75, 19.9)****T3: 66 (6.73, 48.7)**

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## BRAKE

### 3. MASTER CYLINDER



BR-01046

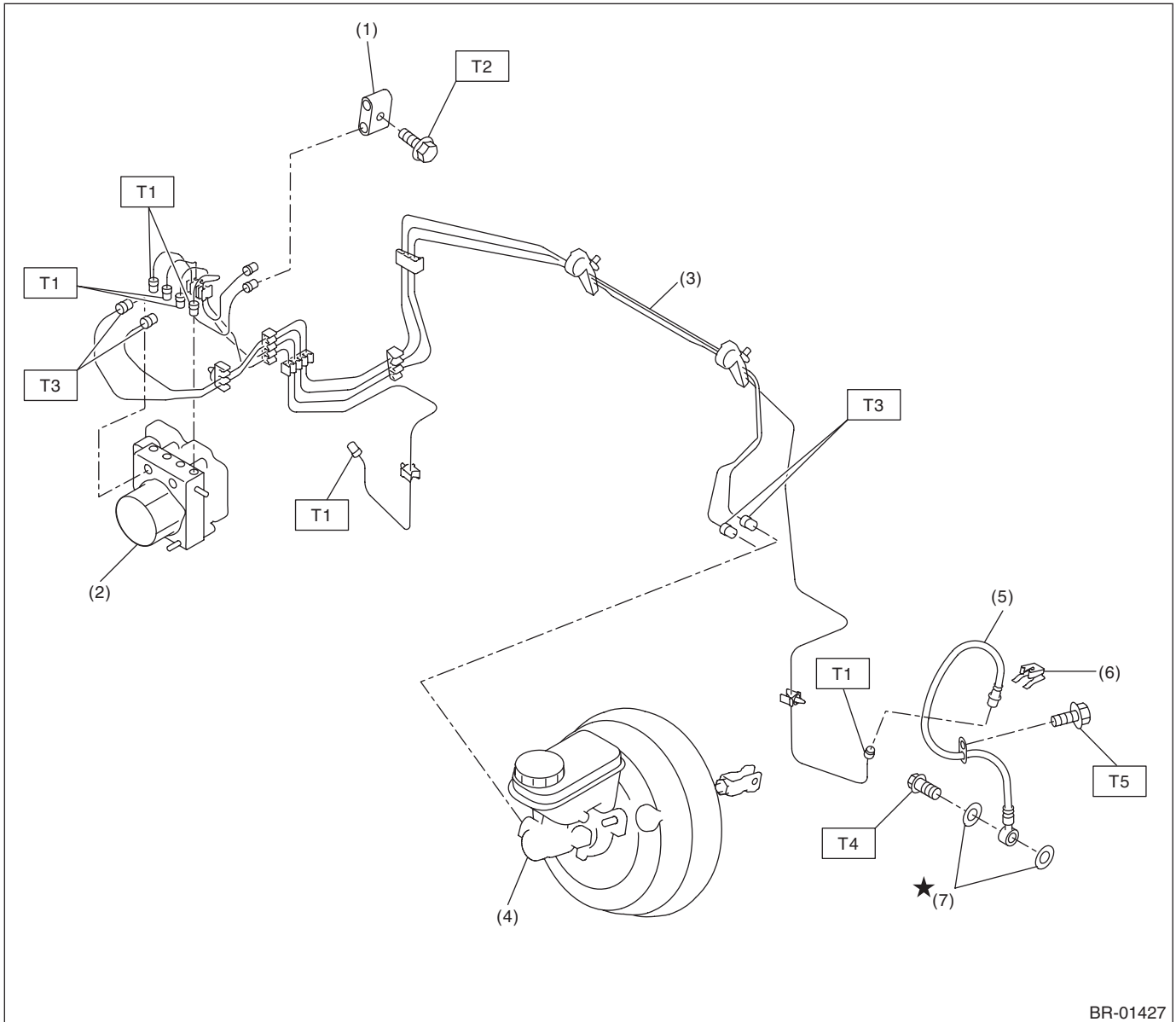
- |  |                        |
|--|------------------------|
| (1) Cap - reservoir tank                     | (6) Cylinder body ASSY |
| (2) Filter - master cylinder                 | (7) Seal               |
| (3) Caution label (model with caution label) | (8) Reservoir tank     |
| (4) Seal sub ASSY                            | (9) Pin                |
| (5) Bracket - master cylinder                | (10) Level - indicator |

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

***T: 13 (1.33, 9.6)***

## 4. FRONT BRAKE PIPES AND HOSES

- Models without EyeSight



BR-01427

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

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

**T1: 15 (1.53, 11.1)**

**T2: 18 (1.84, 13.3)**

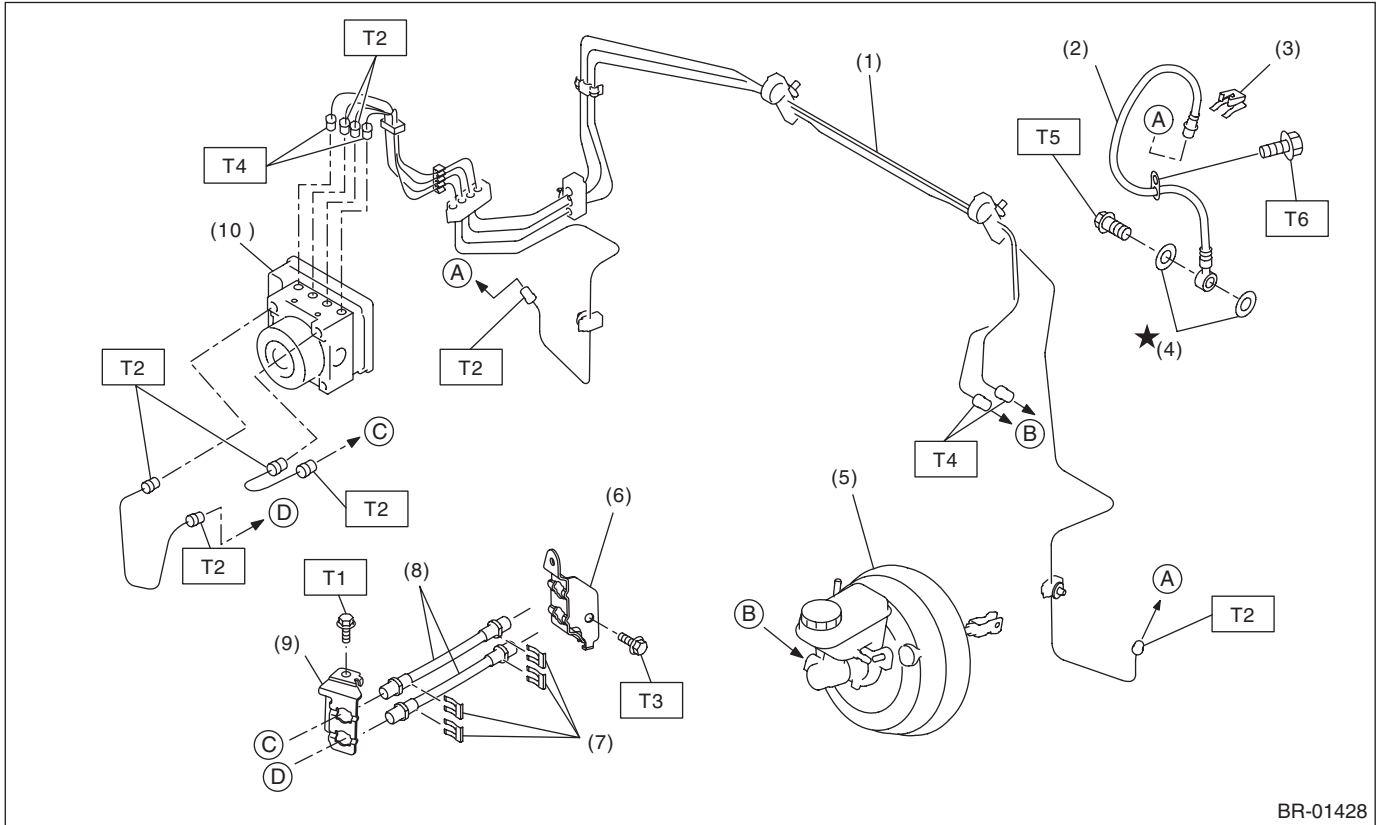
**T3: 19 (1.94, 14.0)**

**T4: 26 (2.65, 19.2)**

**T5: 33 (3.36, 24.3)**

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- Models with EyeSight



- |                            |  |
|----------------------------|--|
| (1) Front brake pipe ASSY  | (7) Clamp  |
| (2) Front brake hose RH/LH | (8) Brake hose ASSY  |
| (3) Clamp                  | (9) Bracket  |
| (4) Gasket                 | (10) VDC control module and hydraulic control unit (VDCCM&H/U) |
| (5) Master cylinder ASSY   |  |
| (6) Bracket                |  |

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

***T1: 7.5 (0.76, 5.5)***

***T2: 15 (1.53, 11.1)***

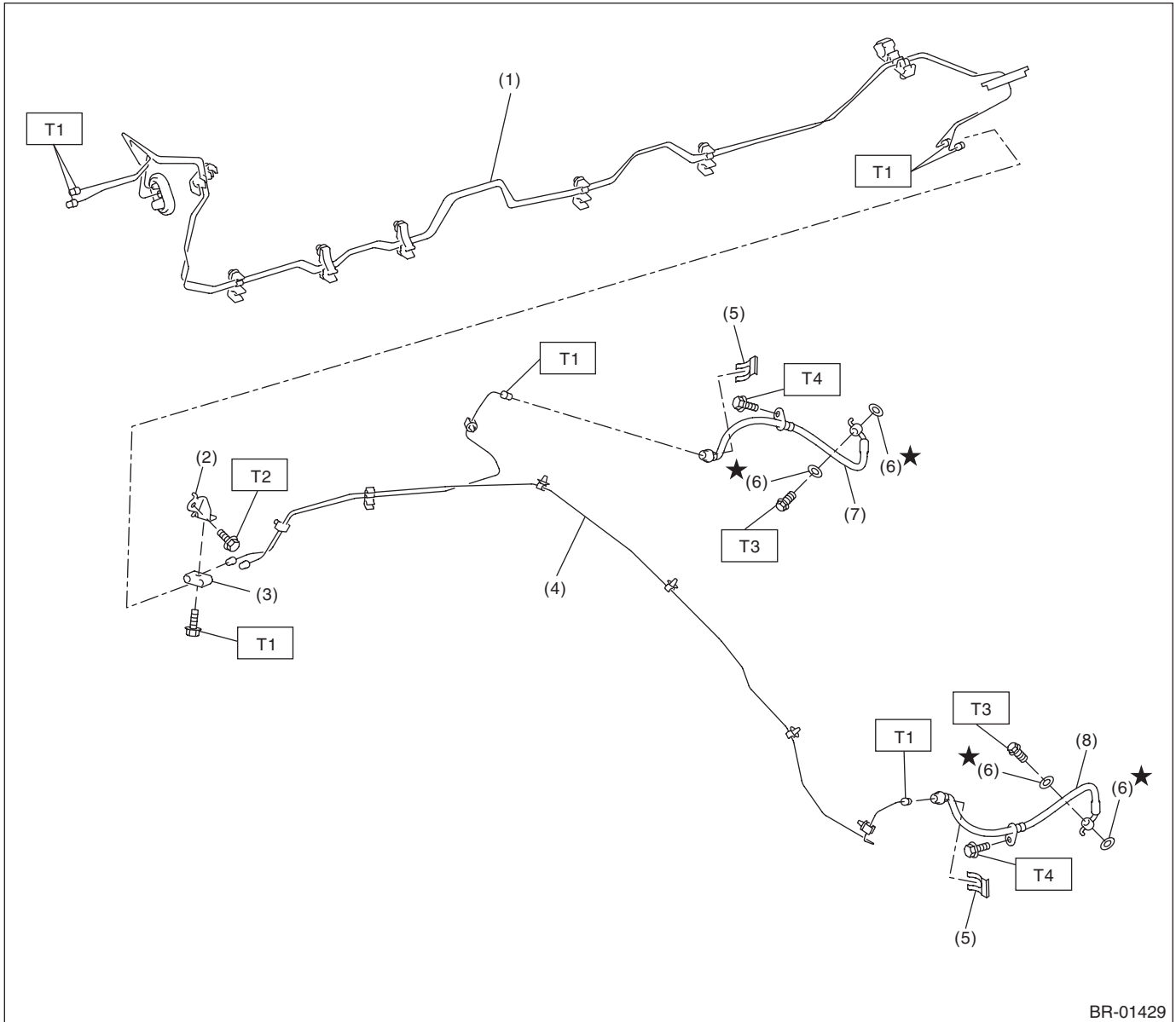
***T3: 18 (1.84, 13.3)***

**T4: 19 (1.94, 14.0)**

**T5: 26 (2.65, 19.2)**

**T6: 33 (3.36, 24.3)**

## 5. CENTER AND REAR BRAKE PIPES AND HOSES



BR-01429

- |                            |                        |
|----------------------------|------------------------|
| (1) Center brake pipe ASSY | (5) Clamp              |
| (2) Bracket                | (6) Gasket             |
| (3) Connector              | (7) Rear brake hose RH |
| (4) Rear brake pipe ASSY   | (8) Rear brake hose LH |

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

**T1: 15 (1.53, 11.1)**

**T2: 18 (1.84, 13.3)**

**T3: 26 (2.65, 19.2)**

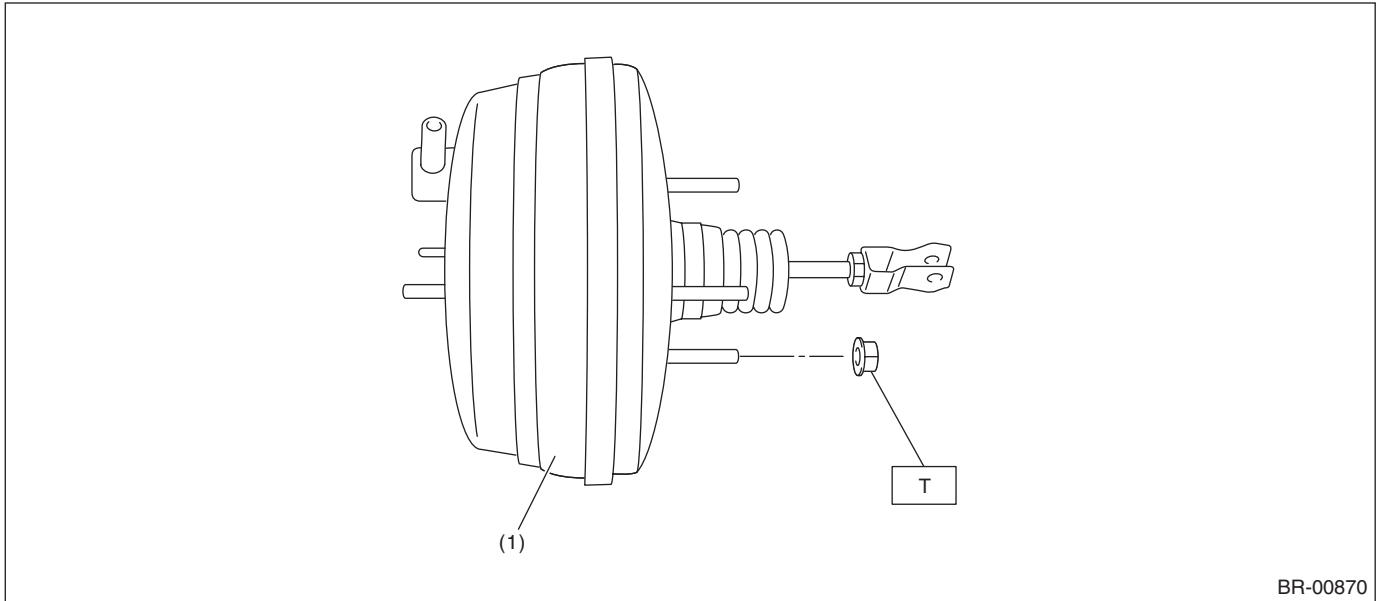
**T4: 33 (3.4, 24.3)**



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## 6. BRAKE BOOSTER



BR-00870

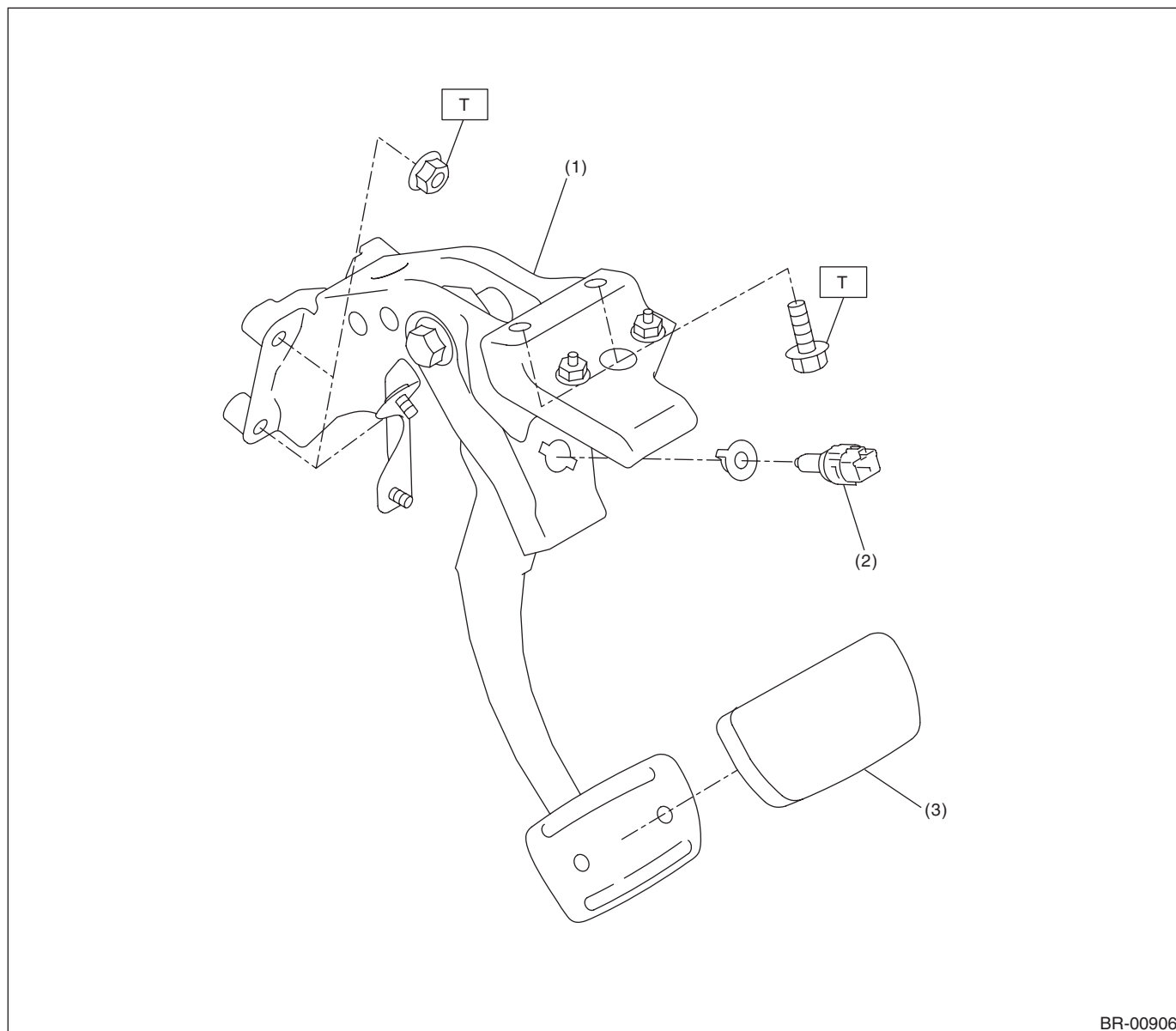
(1) Vacuum booster ASSY

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

***T: 18 (1.84, 13.3)***

## 7. BRAKE PEDAL

- CVT model



BR-00906

(1) Brake pedal ASSY

(3) Pad - brake pedal

(2) Switch - stop light

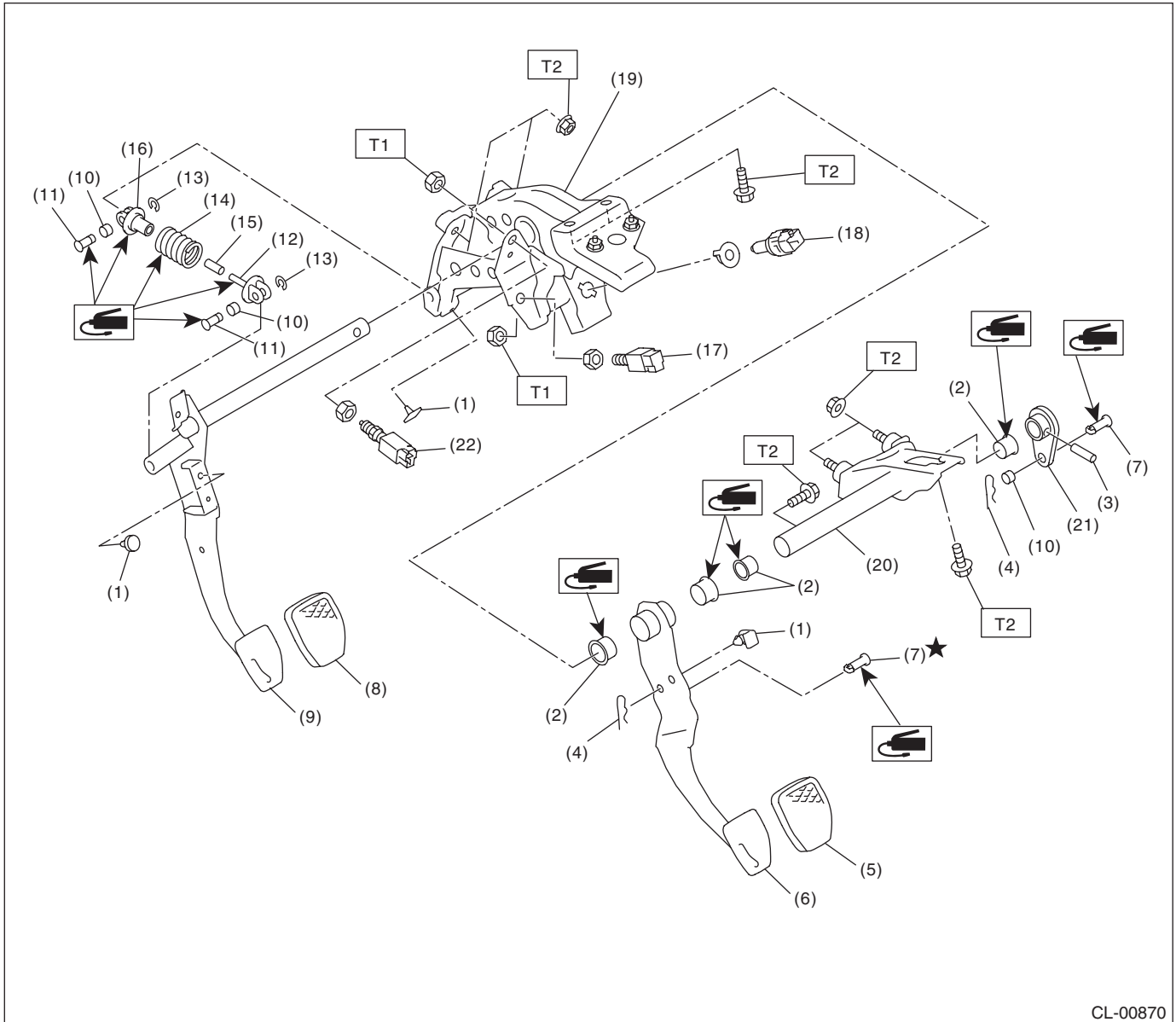
**Tightening torque: N·m (kgf-m, ft-lb)**

**T: 18 (1.84, 13.3)**

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### • MT model



CL-00870

- |                        |                          |
|------------------------|--------------------------|
| (1) Stopper            | (10) Bushing C           |
| (2) Bushing            | (11) Clutch clevis pin   |
| (3) Spring pin         | (12) Assist rod A        |
| (4) Snap pin           | (13) Clip                |
| (5) Pad - brake pedal  | (14) Assist spring       |
| (6) Brake pedal        | (15) Assist bushing      |
| (7) Clevis pin         | (16) Assist rod B        |
| (8) Pad - clutch pedal | (17) Clutch switch       |
| (9) Clutch pedal       | (18) Switch - stop light |

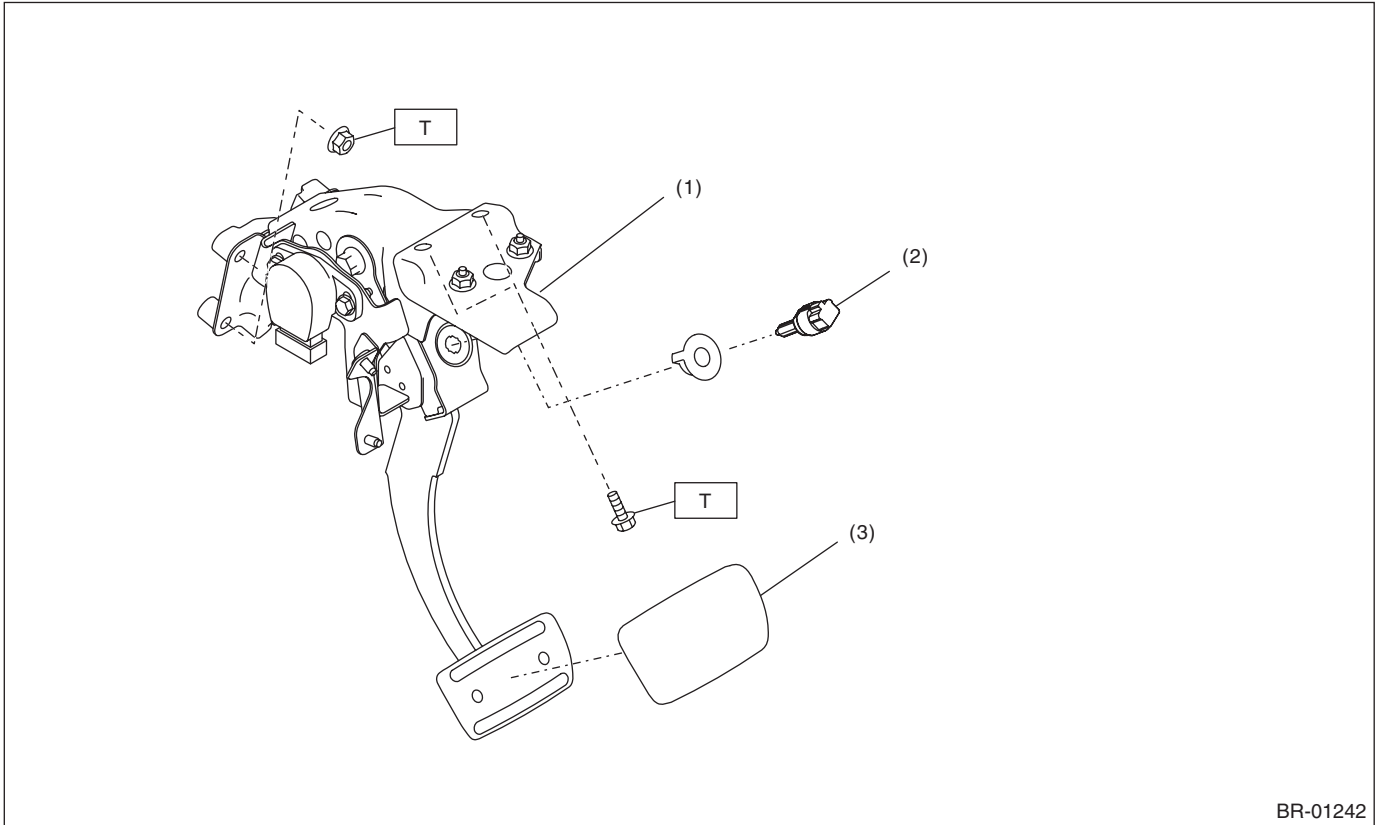
- |                                     |
|-------------------------------------|
| (19) Pedal bracket                  |
| (20) Clutch master cylinder bracket |
| (21) Lever                          |
| (22) Clutch start switch            |

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

**T1: 8 (0.82, 5.9)**

**T2: 18 (1.84, 13.3)**

- HEV model



- (1) Brake pedal ASSY  
(2) Switch - stop light

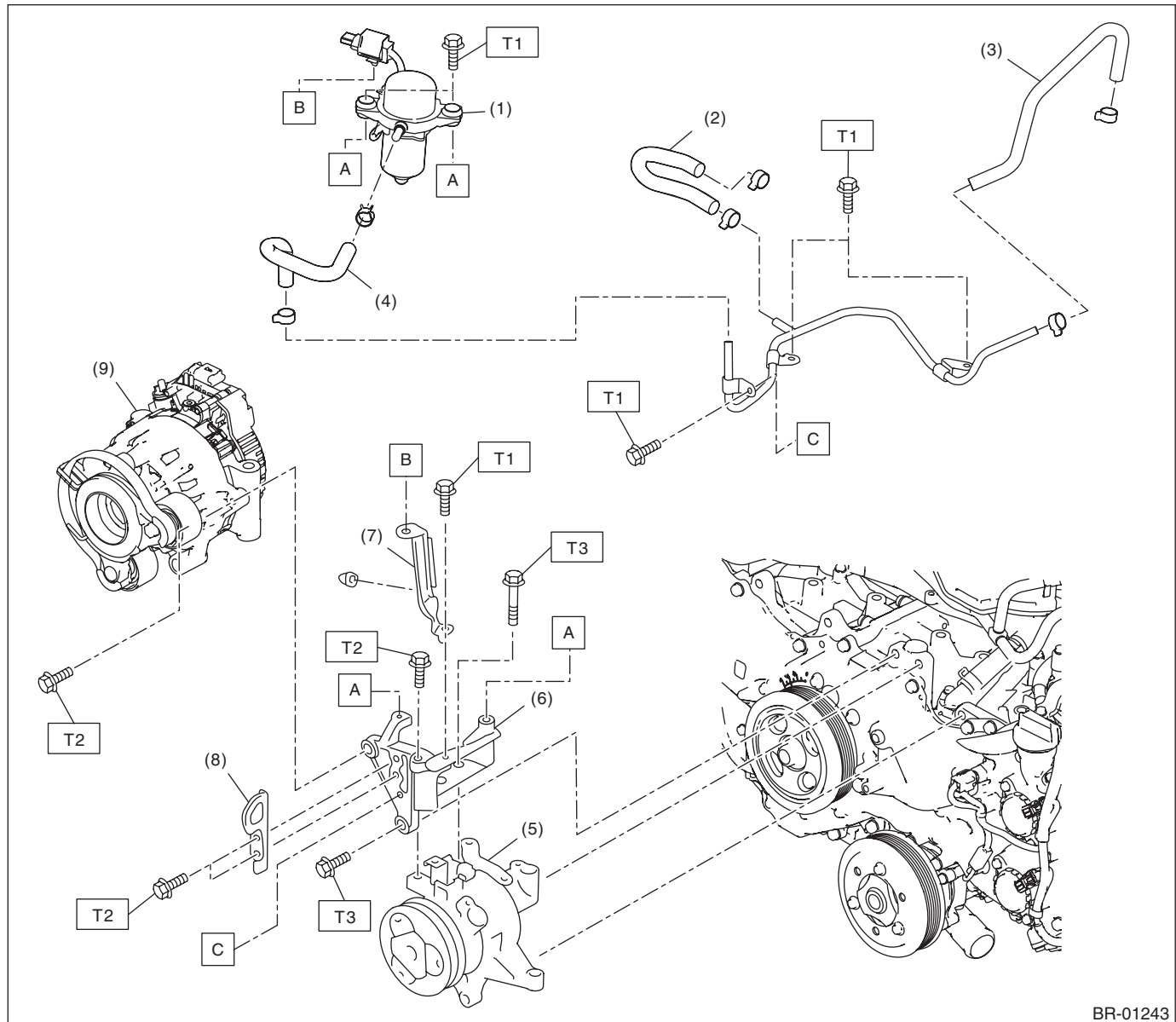
- (3) Pad - brake pedal

**Tightening torque: N·m (kgf-m, ft-lb)**  
**T: 18 (1.84, 13.3)**

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### 8. BRAKE VACUUM PUMP



BR-01243

- |                           |                                     |
|---------------------------|-------------------------------------|
| (1) Vacuum pump ASSY      | (6) Bracket COMPL - vacuum pump     |
| (2) Vacuum hose - COMPL A | (7) Bracket - vacuum pump connector |
| (3) Vacuum hose - COMPL B | (8) Hanger - engine front           |
| (4) Vacuum hose - COMPL C | (9) Integrated starter generator    |
| (5) Compressor ASSY       |                                     |

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

**T1: 6.4 (0.65, 4.7)**

**T2: 18 (1.84, 13.3)**

**T3: 36 (3.67, 26.6)**

### C: CAUTION

- Wear appropriate work clothing, including a helmet, 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 on 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.