

General Description

BRAKE

1. General Description

A: SPECIFICATION

Front disc brake	Size	16-inch type		17-inch type	
	Type	Disc (Floating type, ventilated)			
	Effective disc diameter	mm (in)	244 (4.61)	261 (10.28)	
	Disc thickness × Diameter	mm (in)	24 × 294 (0.94 × 11.57)		30 × 316 (1.18 × 12.44)
	Effective cylinder diameter	42.8 (1.685) × 2			
	Pad dimensions (Length × Width × Thickness)	mm (in)	117.8 × 50.5 × 11.0 (4.638 × 1.988 × 0.433)	130.0 × 53.5 × 11.0 (5.118 × 2.106 × 0.433)	
	Clearance adjustment	Automatic adjustment			
Rear disc brake	Size	16-inch type			
	Type	Disc (Floating type, solid)		Disc (Floating type, ventilated)	
	Effective disc diameter	mm (in)	250 (9.84)	255 (10.0)	
	Disc thickness × Diameter	mm (in)	10 × 286 (0.39 × 11.26)	18 × 290 (0.71 × 11.42)	
	Effective cylinder diameter	mm (in)	38.1 (1.500)	40.4 (1.591)	
	Pad dimensions (Length × Width × Thickness)	mm (in)	92.0 × 33.0 × 9.0 (3.622 × 1.299 × 0.354)	95.5 × 34.8 × 11.0 (3.759 × 1.370 × 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 ³ (cu in)	205 (12.51)		
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 CAUTION: • Avoid mixing brake fluid of different brands to prevent fluid performance from degrading. • When filling with brake fluid, be careful not to allow any dust to enter the reservoir. • Use new SUBARU genuine brake fluid when replacing or refilling the fluid.			

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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)	16-inch type	11 (0.43)	1.5 (0.059)
		17-inch type	11 (0.43)	1.5 (0.059)
	Disc thickness mm (in)	16-inch type	24 (0.94)	22 (0.87)
		17-inch type	30 (1.18)	28 (1.10)
	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)
		Ventilated disc	11 (0.43)	1.5 (0.059)
	Disc thickness mm (in)	Solid disc	10 (0.39)	8.5 (0.335)
		Ventilated disc	18 (0.71)	16 (0.63)
	Disc runout mm (in)		—	0.05 (0.0020)
Parking brake	Inside diameter mm (in)		190 (7.48)	191 (7.52)
	Lining thickness mm (in)		2.8 (0.11)	1.5 (0.059)

		Brake pedal force N (kgf, lbf)	Fluid pressure kPa (kgf/cm ² , psi)
Brake booster	Brake fluid pressure with engine stopped	147 (15, 33)	553 (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)

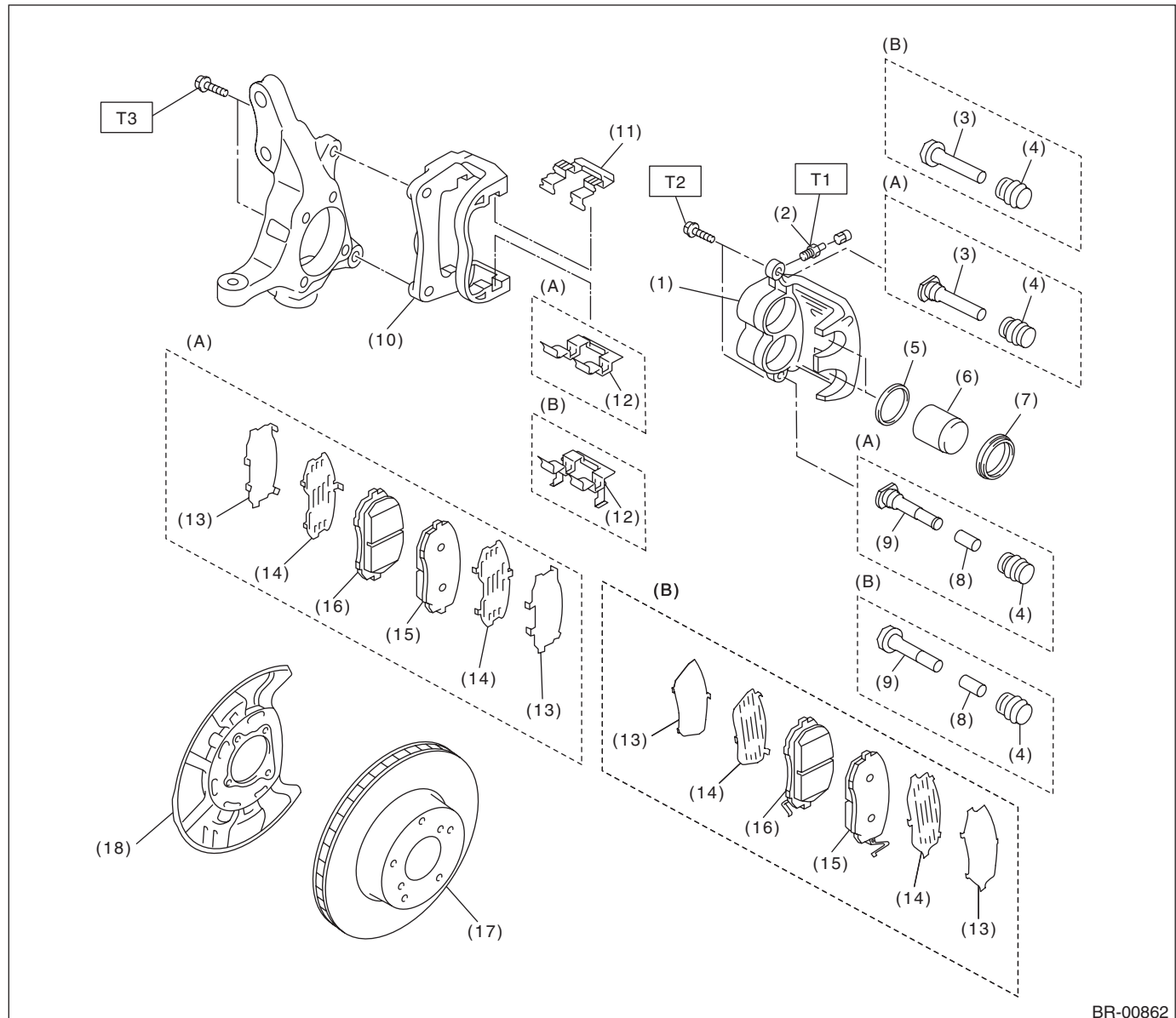
Brake pedal	Free play mm (in)	2 — 5 (0.079 — 0.197) [When pulling the brake pedal upward with a force of less than 10 N (1 kgf, 2 lbf)]
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B: COMPONENT

1. FRONT DISC BRAKE



BR-00862

(A) 16-inch type

(B) 17-inch type

- (1) Caliper body
- (2) Air bleeder screw
- (3) Guide pin (black)
- (4) Pin boot
- (5) Piston seal
- (6) Piston
- (7) Piston boot
- (8) Bushing

- (9) Lock pin (Silver)
- (10) Support
- (11) Pad clip upper
- (12) Pad clip lower
- (13) Outer shim
- (14) Inner shim
- (15) Pad (Outside)
- (16) Pad (Inside)

- (17) Disc rotor
- (18) Disc cover

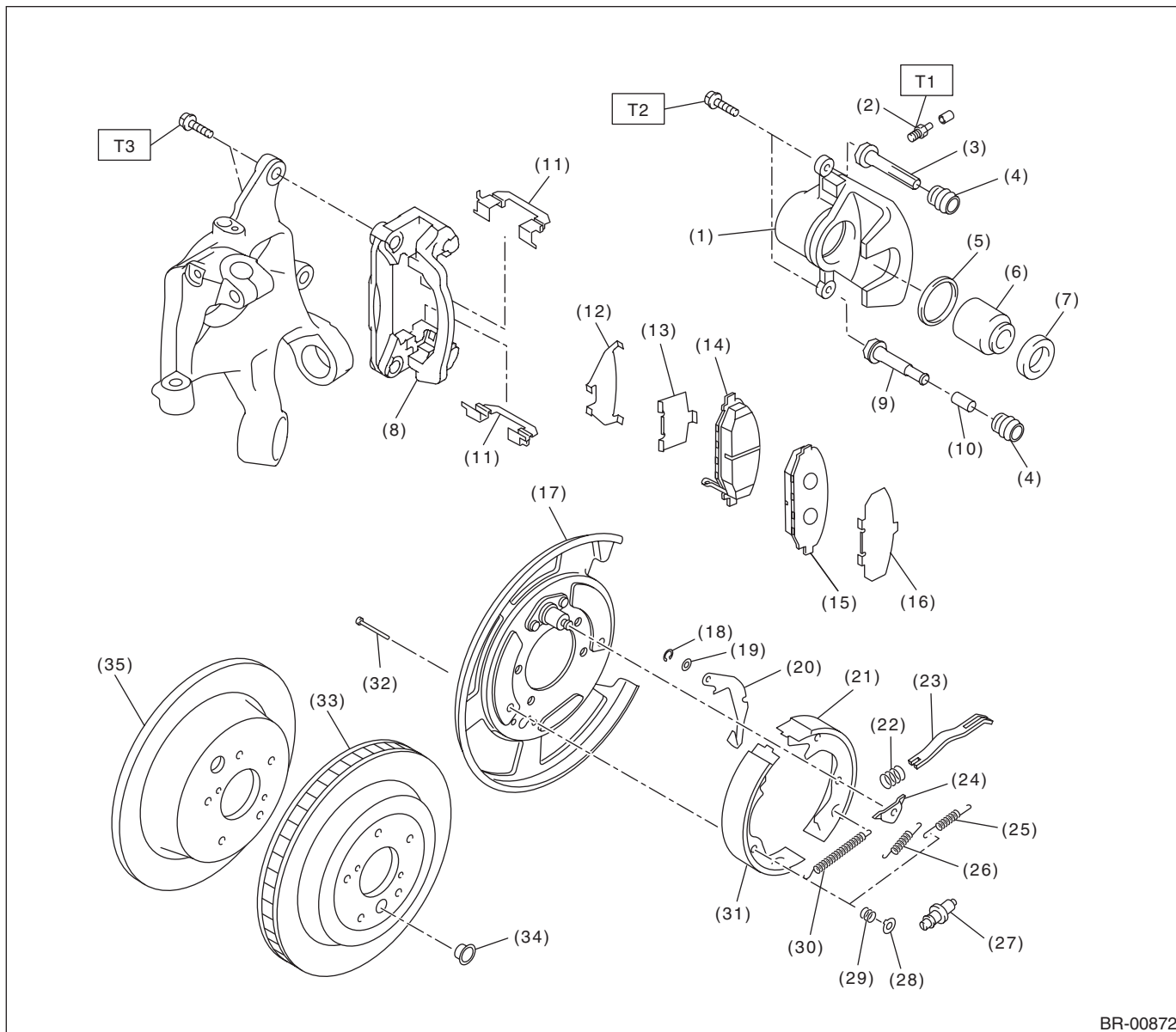
Tightening torque: N·m (kgf-m, ft-lb)

T1: 8 (0.82, 5.9)

T2: 27 (2.75, 19.9)

T3: 120 (12.24, 88.5)

2. REAR DISC BRAKE



BR-00872

- | | | |
|-----------------------|-------------------------------------|-----------------------------------|
| (1) Caliper body | (15) Outer pad | (29) Shoe hold-down spring |
| (2) Air bleeder screw | (16) Shim | (30) Adjusting spring |
| (3) Guide pin (black) | (17) Back plate | (31) Parking brake shoe (Primary) |
| (4) Pin boot | (18) Retainer | (32) Shoe hold-down pin |
| (5) Piston seal | (19) Wave washer | (33) Disc rotor (Ventilated type) |
| (6) Piston | (20) Lever | (34) Adjusting hole cover |
| (7) Piston boot | (21) Parking brake shoe (Secondary) | (35) Disc rotor (Solid type) |
| (8) Support | (22) Strut spring | |
| (9) Lock pin (Silver) | (23) Strut | |
| (10) Bushing | (24) Shoe guide plate | |
| (11) Pad clip | (25) Secondary shoe return spring | |
| (12) Outer shim | (26) Primary shoe return spring | |
| (13) Inner shim | (27) Adjusting screw | |
| (14) Inner pad | (28) Shoe hold-down cup | |

Tightening torque: N·m (kgf-m, ft-lb)

T1: 8 (0.82, 5.9)

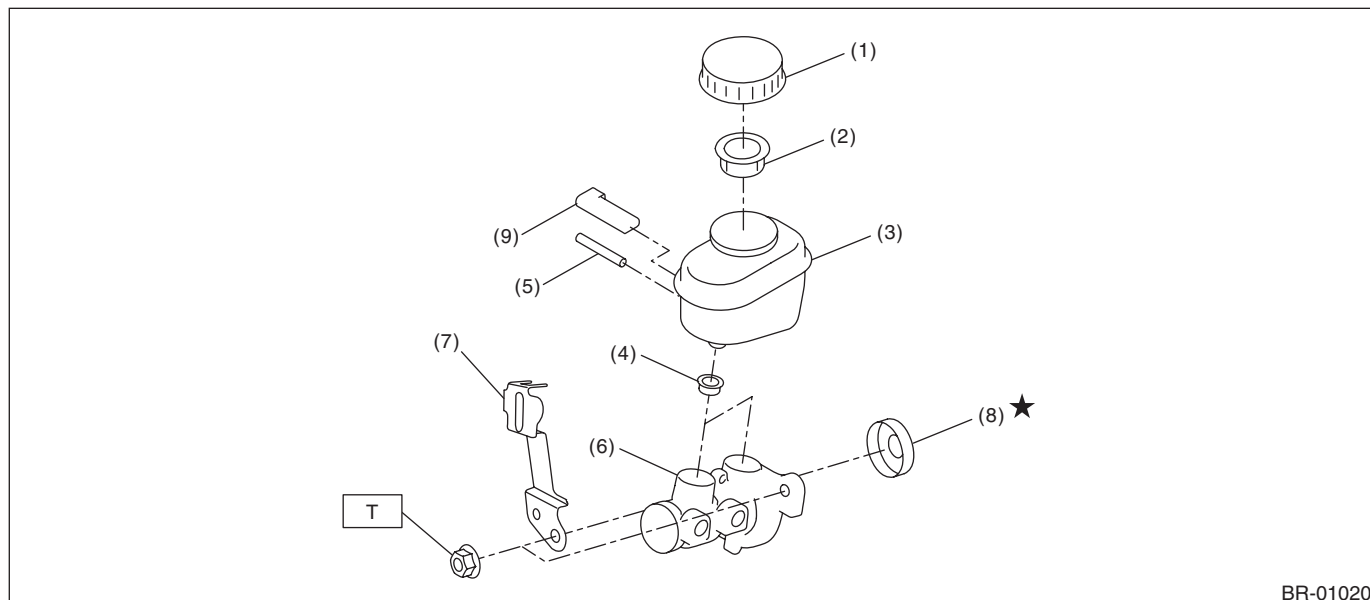
T2: 27 (2.75, 19.9)

T3: 66 (6.73, 48.7)

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3. MASTER CYLINDER



BR-01020

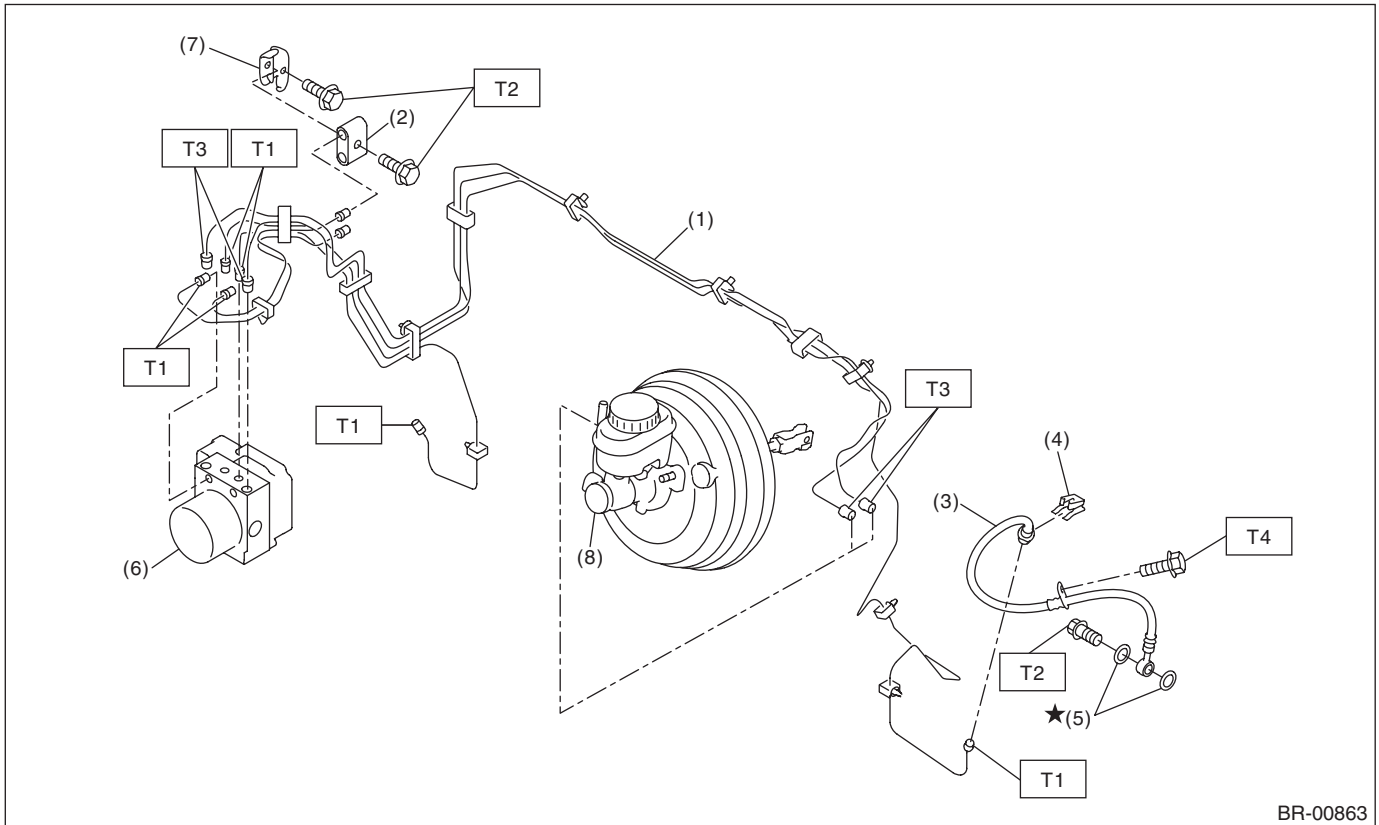
- (1) Cap
- (2) Filter
- (3) Reservoir tank
- (4) Seal

- (5) Pin
- (6) Cylinder body ASSY
- (7) Bracket
- (8) Seal sub ASSY

- (9) Level sensor

Tightening torque: N·m (kgf-m, ft-lb)
T: 13 (1.33, 9.6)

4. FRONT BRAKE PIPES AND HOSES



BR-00863

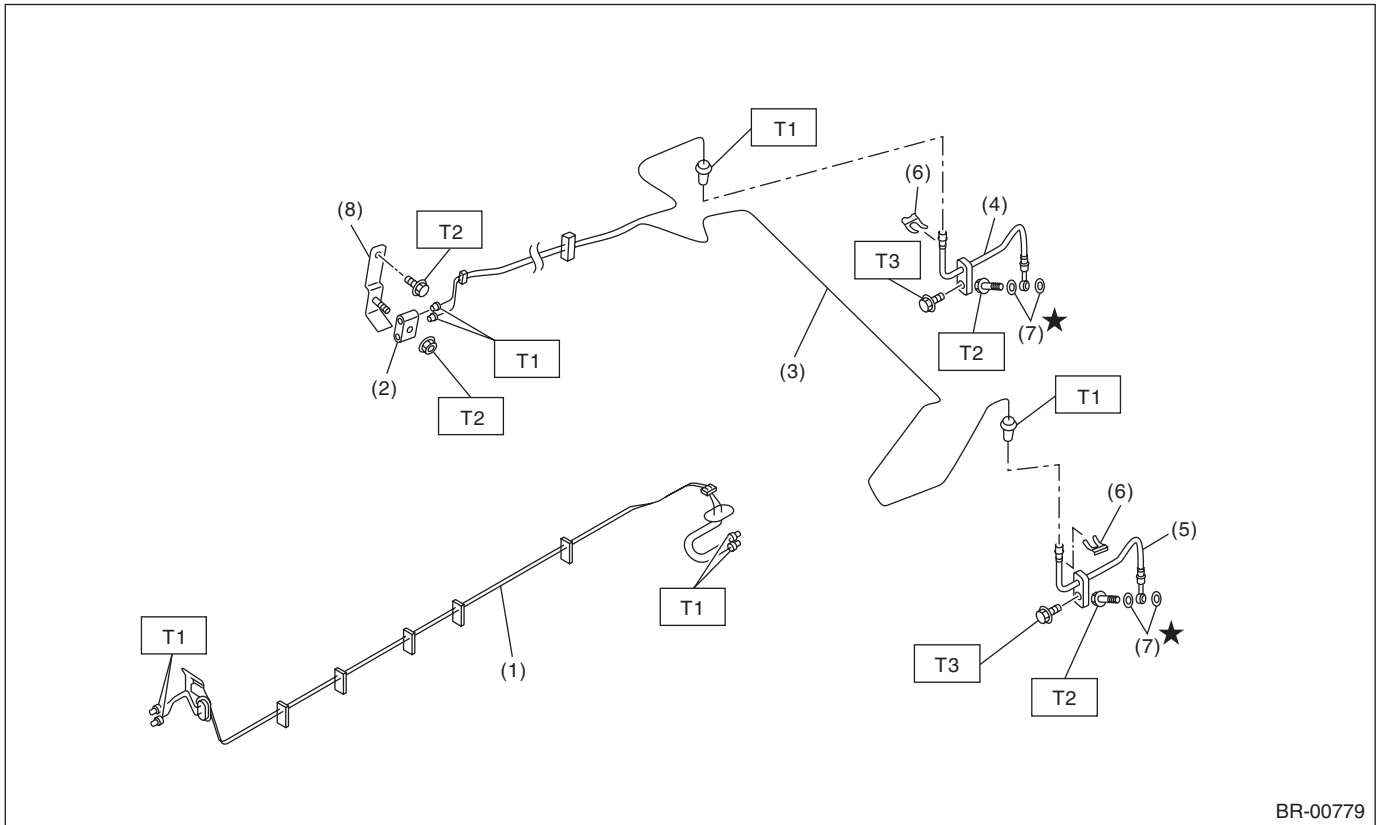
- | | |
|----------------------------|---|
| (1) Front brake pipe ASSY | (5) Gasket |
| (2) Two-way connector | (6) VDC control module and hydraulic control unit (VDCCM&H/U) |
| (3) Front brake hose RH/LH | (7) Bracket |
| (4) Clamp | (8) Master cylinder |

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: 33 (3.36, 24.3)**

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5. CENTER AND REAR BRAKE PIPES AND HOSES



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

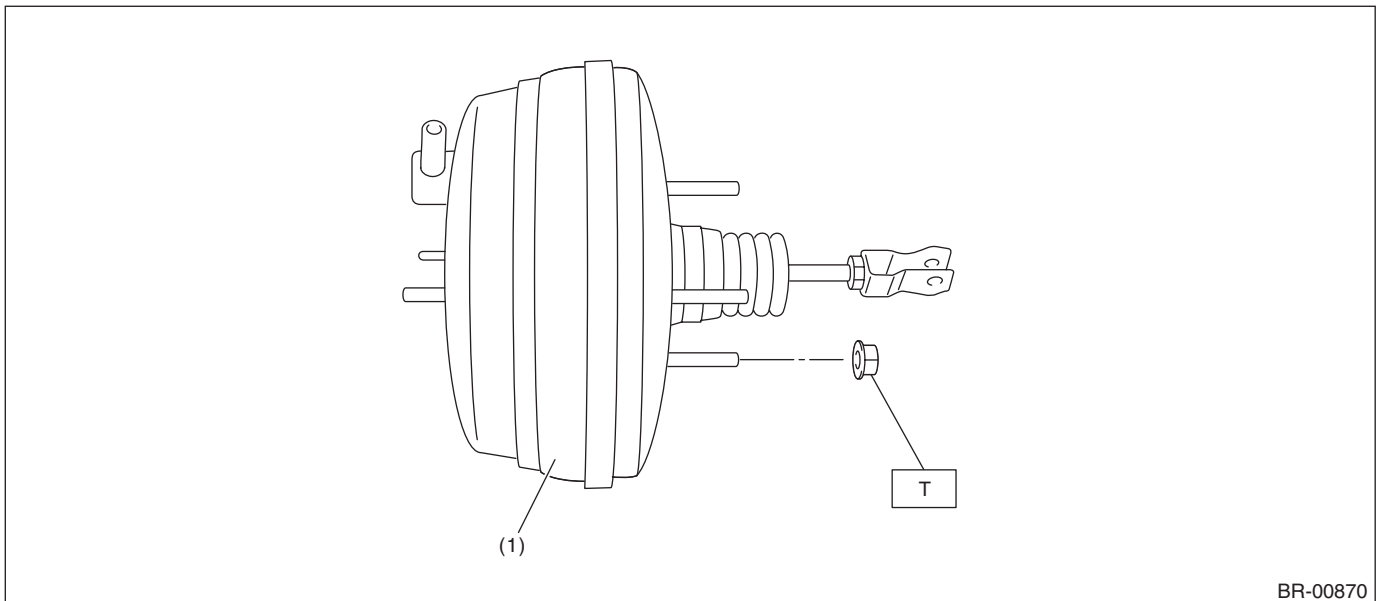
Tightening torque:N·m (kgf-m, ft-lb)

T1: 15 (1.53, 11.1)

T2: 18 (1.84, 13.3)

T3: 33 (3.36, 24.3)

6. BRAKE BOOSTER



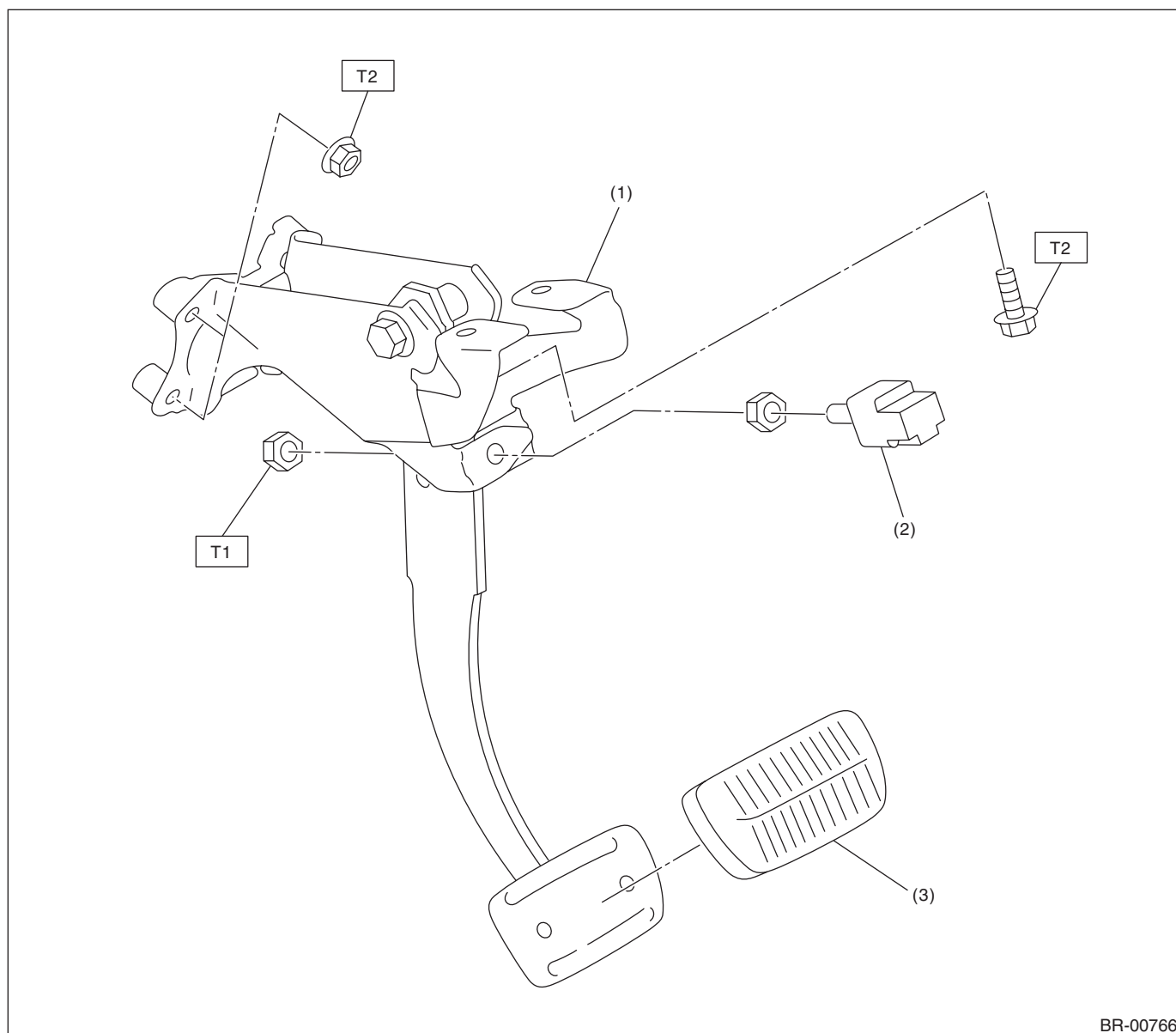
- | |
|-------------------|
| (1) Brake booster |
|-------------------|

Tightening torque:N·m (kgf-m, ft-lb)

T: 18 (1.84, 13.3)

7. BRAKE PEDAL

- AT model



(1) Brake pedal ASSY

(2) Stop light switch

(3) Brake pedal pad

Tightening torque: N·m (kgf-m, ft-lb)

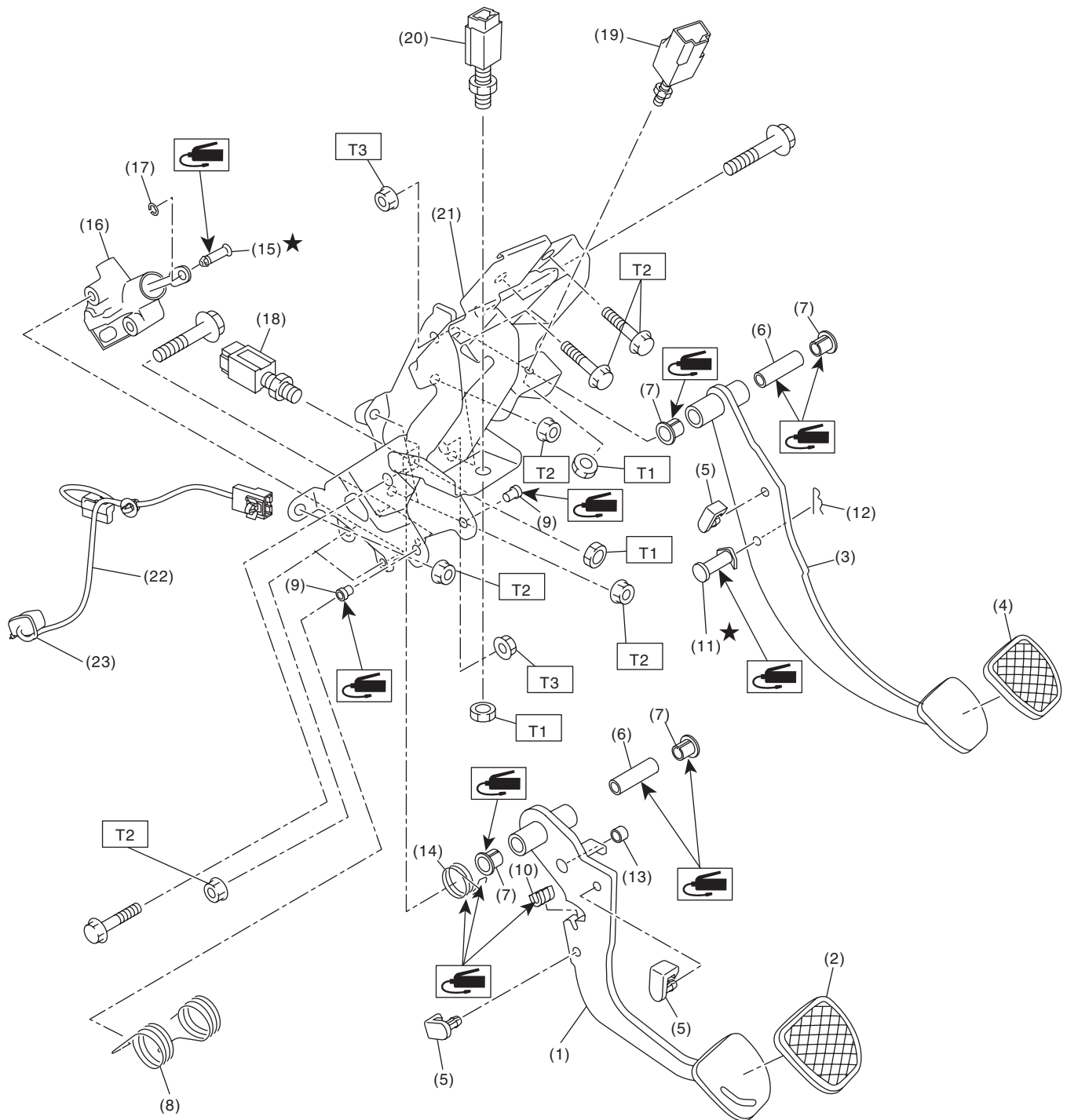
T1: 8 (0.82, 5.9)

T2: 18 (1.84, 13.3)

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- MT model



CL-00760

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(1) Clutch pedal	(11) Clevis pin	(21) Pedal bracket
(2) Clutch pedal pad	(12) Snap pin	(22) Sensor harness
(3) Brake pedal	(13) Bushing A	(23) Band
(4) Brake pedal pad	(14) Assist spring	
(5) Stopper	(15) Clevis pin	<i>Tightening torque:N·m (kgf-m, ft-lb)</i>
(6) Spacer	(16) Master cylinder ASSY	<i>T1: 8 (0.82, 5.9)</i>
(7) Bushing	(17) Clip	<i>T2: 18 (1.84, 13.3)</i>
(8) Torsion spring	(18) Clutch switch (clutch start)	<i>T3: 30 (3.06, 22.1)</i>
(9) Assist bushing	(19) Stop & brake switch	
(10) Torsion spring bushing	(20) Clutch switch (cruise control)	

C: CAUTION

- 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 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.