

GENERAL DESCRIPTION

BRAKE

1. General Description

A: SPECIFICATIONS

Model		Other models	WRX	STi
Front disc brake	Size	15 inch type	16 inch type	17 inch type
	Type	Disc (Floating type, ventilated)	Disc (Fixed type, ventilated)	
	Effective disc diameter	228 mm (8.98 in)	255 mm (10.04 in)	268 mm (10.55 in)
	Disc thickness × Outer diameter	24 × 277 mm (0.94 × 10.91 in)	24 × 294 mm (0.94 × 11.57 in)	30 × 326 mm (1.18 × 12.83 in)
	Effective cylinder diameter	42.8 mm (1.685 in) × 2	40.4 mm (1.591 in) × 4	40.0 mm × 2, 46.0 mm × 2 (1.575 in × 2, 1.811 in × 2)
	Pad dimensions (length × width × thickness)	117.8 × 50.5 × 11.0 mm (4.638 × 1.988 × 0.433 in)	116.0 × 47.7 × 10.0 mm (4.567 × 1.878 × 0.394 in)	129.8 × 60.5 × 9.2 mm (5.110 × 2.382 × 0.362 in)
	Clearance adjustment	Automatic adjustment		
Rear disc brake	Size	14 inch type		17 inch type
	Type	Disc (Floating type)		Disc (Fixed type, ventilated)
	Effective disc diameter	230 mm (9.06 in)		268 mm (10.55 in)
	Disc thickness × Outer diameter	10 × 266 mm (0.39 × 10.47 in)		20 × 316 mm (0.79 × 12.44 in)
	Effective cylinder diameter	38.1 mm (1.500 in)		36.0 mm (1.417 in)
	Pad dimensions (length × width × thickness)	89.4 × 33.7 × 9.0 mm (3.520 × 1.327 × 0.354 in)		74.8 × 45.0 × 9.0 mm (2.945 × 1.772 × 0.354 in)
	Clearance adjustment	Automatic adjustment		
Master cylinder	Type	Tandem		
	Effective diameter	26.99 mm (1-1/16 in)		
	Reservoir type	Sealed type		
	Brake fluid reservoir capacity	205 cm ³ (12.51 cu in)		
Brake booster	Type	Vacuum suspended		
	Effective diameter	205 + 230 mm (8.07 + 9.06 in)		
Brake line		Dual circuit system		
Brake fluid CAUTION: • Avoid mixing brake fluid of different brands to prevent the fluid performance from degrading. • When brake fluid is supplemented, be careful not to allow any dust into the reservoir. • Use fresh DOT3 brake fluid when replacing or refilling the fluid.		FMVSS No. 116, DOT3		

NOTE:

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

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ITEM		STANDARD	SERVICE LIMIT
Front brake	Pad thickness	15"	11 mm (0.43 in)
		16"	11 mm (0.43 in)
		17"	9.2 mm (0.362 in)
	Disc thickness	Except 17"	24 mm (0.94 in)
		17"	30 mm (1.18 in)
Disc runout		—	0.075 mm (0.0030 in)
Rear brake (Disc type)	Pad thickness	14"	9.0 mm (0.354 in)
		17"	9.0 mm (0.354 in)
	Disc thickness	14"	10 mm (0.39 in)
		17"	20 mm (0.79 in)
	Disc runout		—
Rear brake (Disc type parking)	Inside diameter	170 mm (6.69 in)	171 mm (6.73 in)
	Lining thickness	3.2 mm (0.126 in)	1.5 mm (0.059 in)
Parking brake	Lever stroke	7 to 8 notches/196 N (20 kgf, 44 lb)	

		Brake pedal force	Fluid pressure		
			Other models	WRX	STi
Brake booster	Brake fluid pressure without engine running	147 N (15 kgf, 33 lb)	588 kPa (6 kg/cm ² , 85 psi)		
		294 N (30 kgf, 66 lb)	1,471 kPa (15 kg/cm ² , 213 psi)		
	Brake fluid pressure with engine running and vacuum at 66.7 kPa (500 mmHg, 19.69 inHg)	147 N (15 kgf, 33 lb)	5,296 kPa (54 kg/cm ² , 768 psi)	4,707 kPa (48 kg/cm ² , 683 psi)	4,021 kPa (41 kg/cm ² , 583 psi)
		294 N (30 kgf, 66 lb)	9,120 kPa (93 kg/cm ² , 1,323 psi)		8,336 kPa (85 kg/cm ² , 1,209 psi)

Brake pedal	Free play	1 — 3 mm (0.04 — 0.12 in) [Depress brake pedal pad with a force of less than 10 N (1 kgf, 2 lb).]
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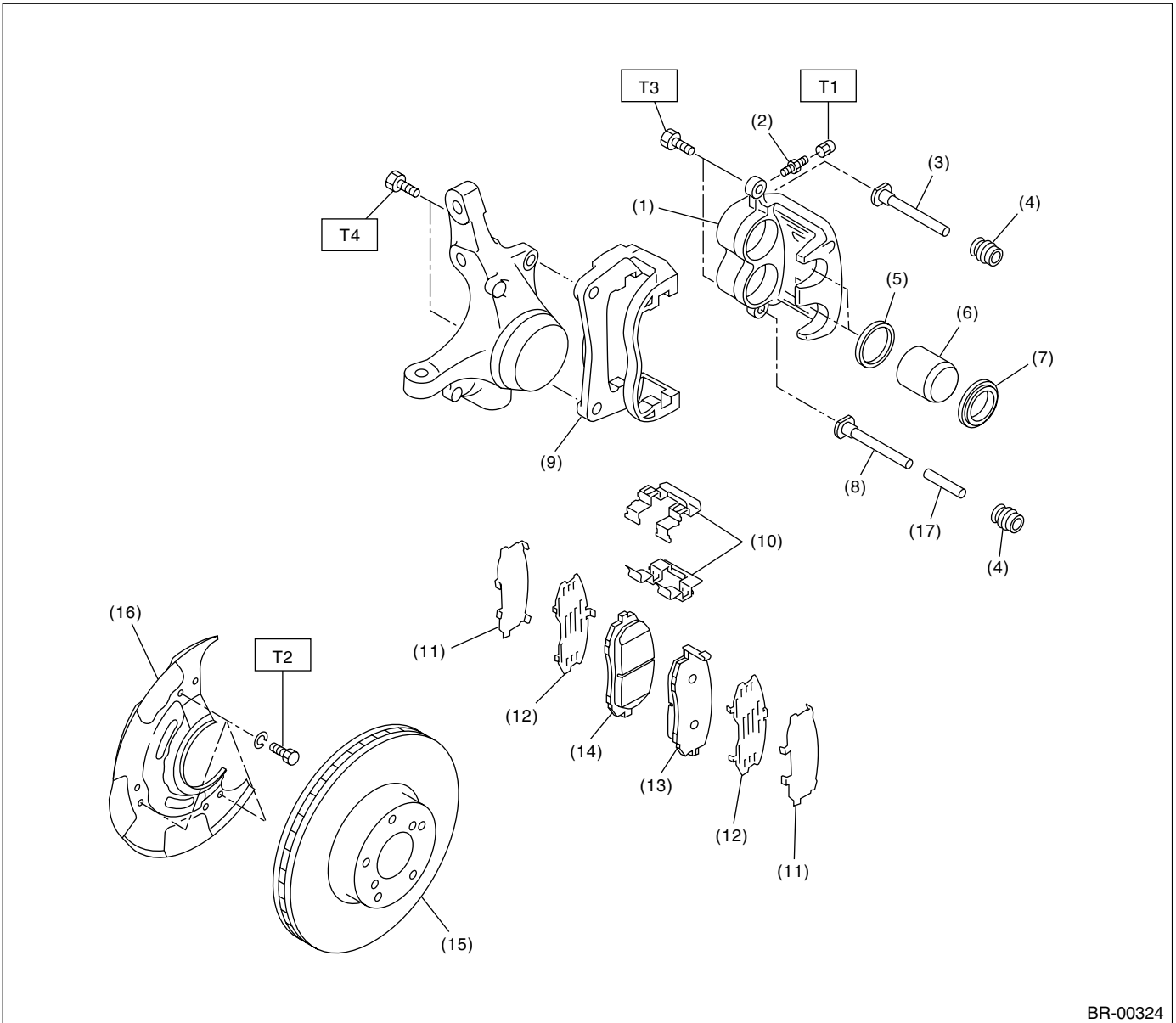
GENERAL DESCRIPTION

BRAKE

B: COMPONENT

1. FRONT DISC BRAKE

• 15 INCH TYPE



BR-00324

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

- (9) Support
- (10) Pad clip
- (11) Outer shim
- (12) Inner shim
- (13) Pad (Outside)
- (14) Pad (Inside)
- (15) Disc rotor
- (16) Disc cover

- (17) Bushing

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

T1: 8 (0.8, 5.8)

T2: 27 (2.8, 19.9)

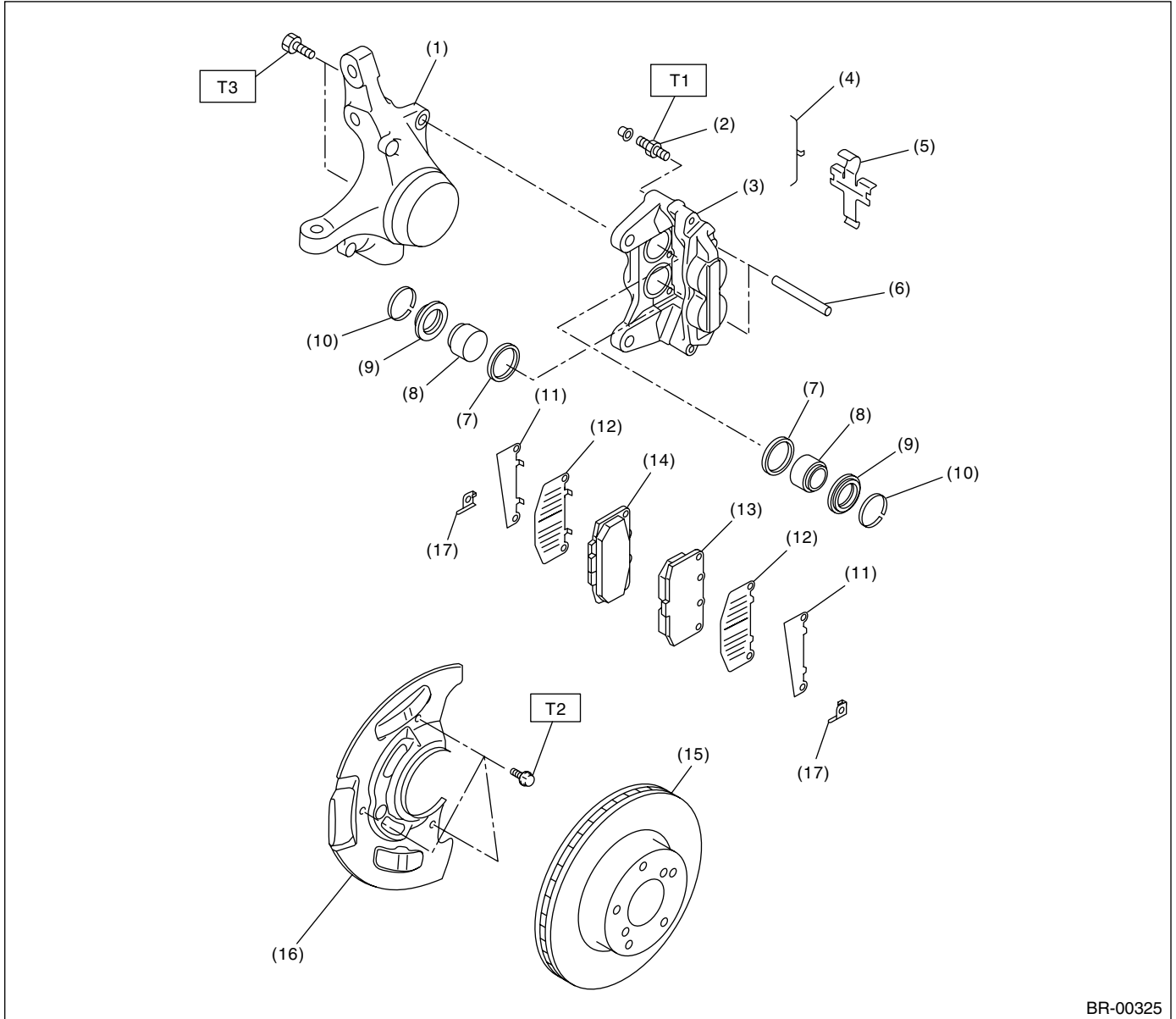
T3: 37 (3.8, 27.5)

T4: 80 (8.2, 59)

GENERAL DESCRIPTION

BRAKE

• 16 INCH TYPE



- | | | |
|-----------------------|--------------------|-------------|
| (1) Housing | (9) Piston boot | (17) Spacer |
| (2) Air bleeder screw | (10) Boot ring | |
| (3) Caliper body | (11) Outer shim | |
| (4) M clip | (12) Inner shim | |
| (5) Cross spring | (13) Pad (Outside) | |
| (6) Pad pin | (14) Pad (Inside) | |
| (7) Piston seal | (15) Disc rotor | |
| (8) Piston | (16) Disc cover | |

Tightening torque: N·m (kgf·m, ft·lb)

T1: 8 (0.8, 5.8)

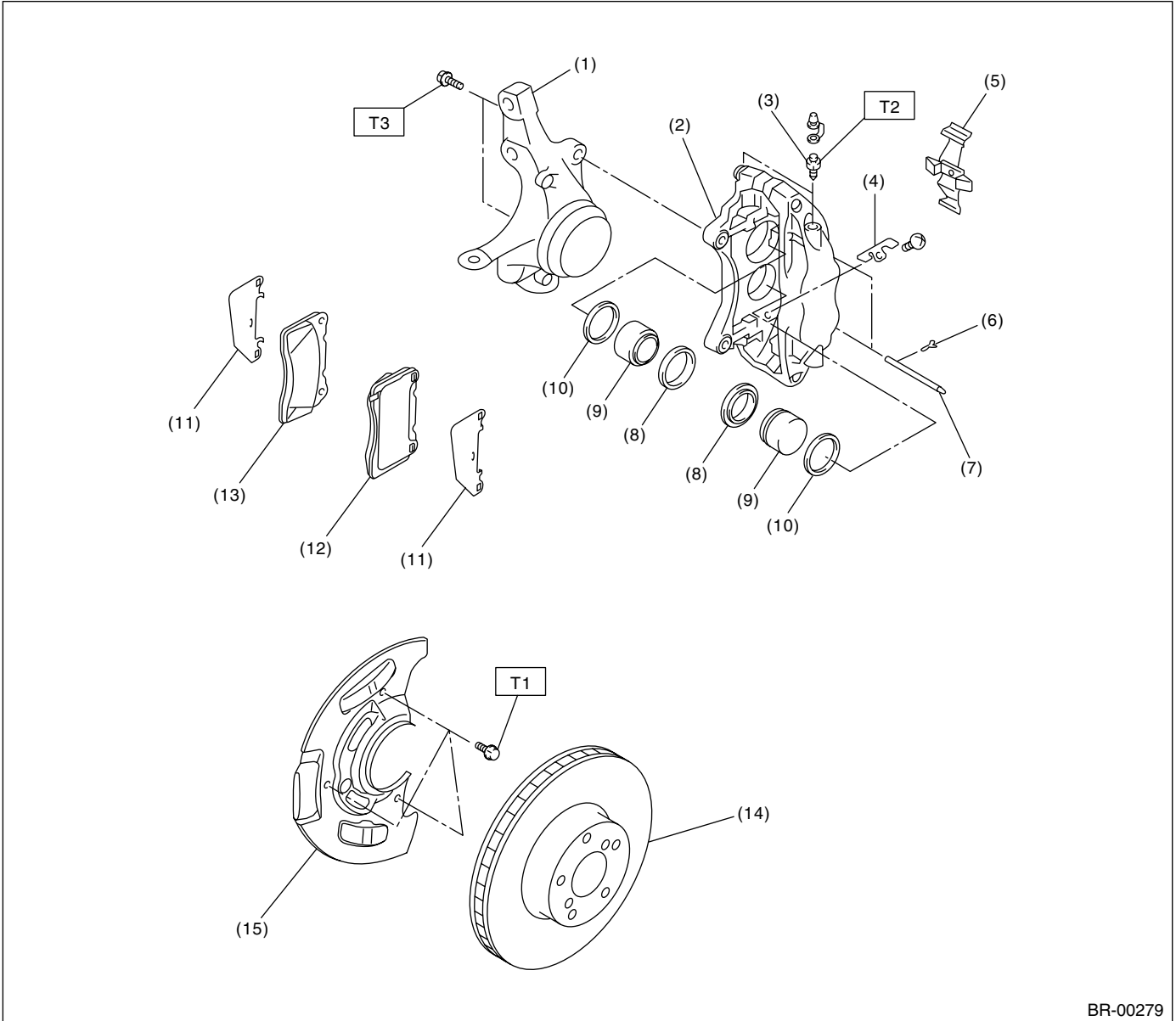
T2: 18 (1.8, 13.0)

T3: 80 (8.2, 59)

GENERAL DESCRIPTION

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• 17 INCH TYPE



BR-00279

- (1) Housing
- (2) Caliper body
- (3) Air bleeder screw
- (4) Guide plate
- (5) Cross spring
- (6) Clip
- (7) Pad pin

- (8) Piston boot
- (9) Piston
- (10) Piston seal
- (11) Pad shim
- (12) Pad (Outside)
- (13) Pad (Inside)
- (14) Disc rotor

- (15) Disc cover

Tightening torque: N·m (kgf·m, ft·lb)

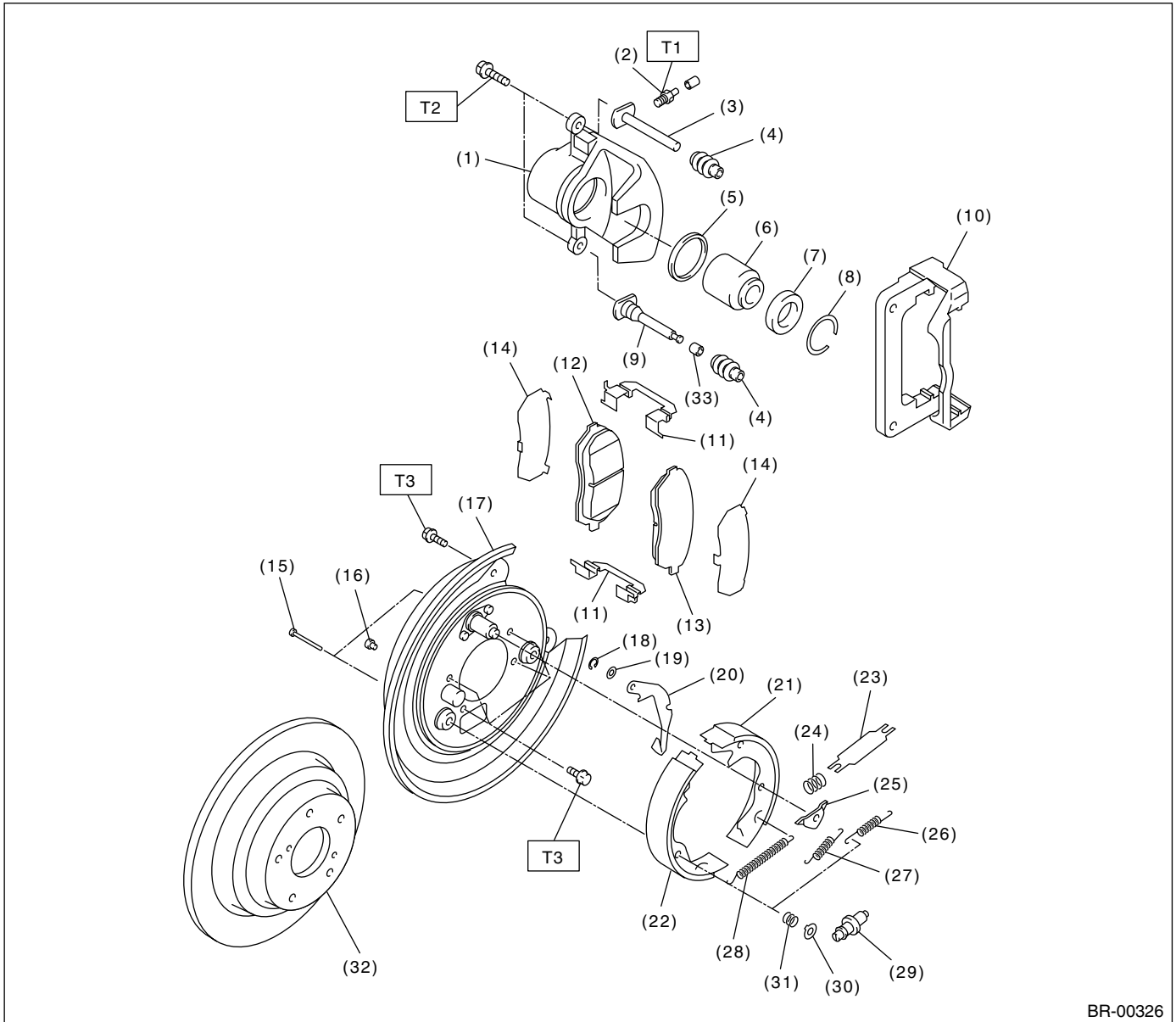
T1: 18 (1.8, 13.0)

T2: 20 (2.0, 14.5)

T3: 155 (15.8, 114.3)

2. REAR DISC BRAKE

• 14 INCH TYPE



BR-00326

- | | | |
|-----------------------|-------------------------------------|---------------------------------|
| (1) Caliper body | (14) Shim | (27) Primary shoe return spring |
| (2) Air bleeder screw | (15) Shoe hold-down pin | (28) Adjusting spring |
| (3) Guide pin (Green) | (16) Cover | (29) Adjuster |
| (4) Pin boot | (17) Back plate | (30) Shoe hold-down cup |
| (5) Piston seal | (18) Retainer | (31) Shoe hold-down spring |
| (6) Piston | (19) Spring washer | (32) Disc rotor |
| (7) Piston boot | (20) Parking brake lever | (33) Bushing |
| (8) Boot ring | (21) Parking brake shoe (Secondary) | |
| (9) Lock pin (Yellow) | (22) Parking brake shoe (Primary) | |
| (10) Support | (23) Strut | |
| (11) Pad clip | (24) Strut shoe spring | |
| (12) Inner pad | (25) Shoe guide plate | |
| (13) Outer pad | (26) Secondary shoe return spring | |

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

T1: 8 (0.8, 5.8)

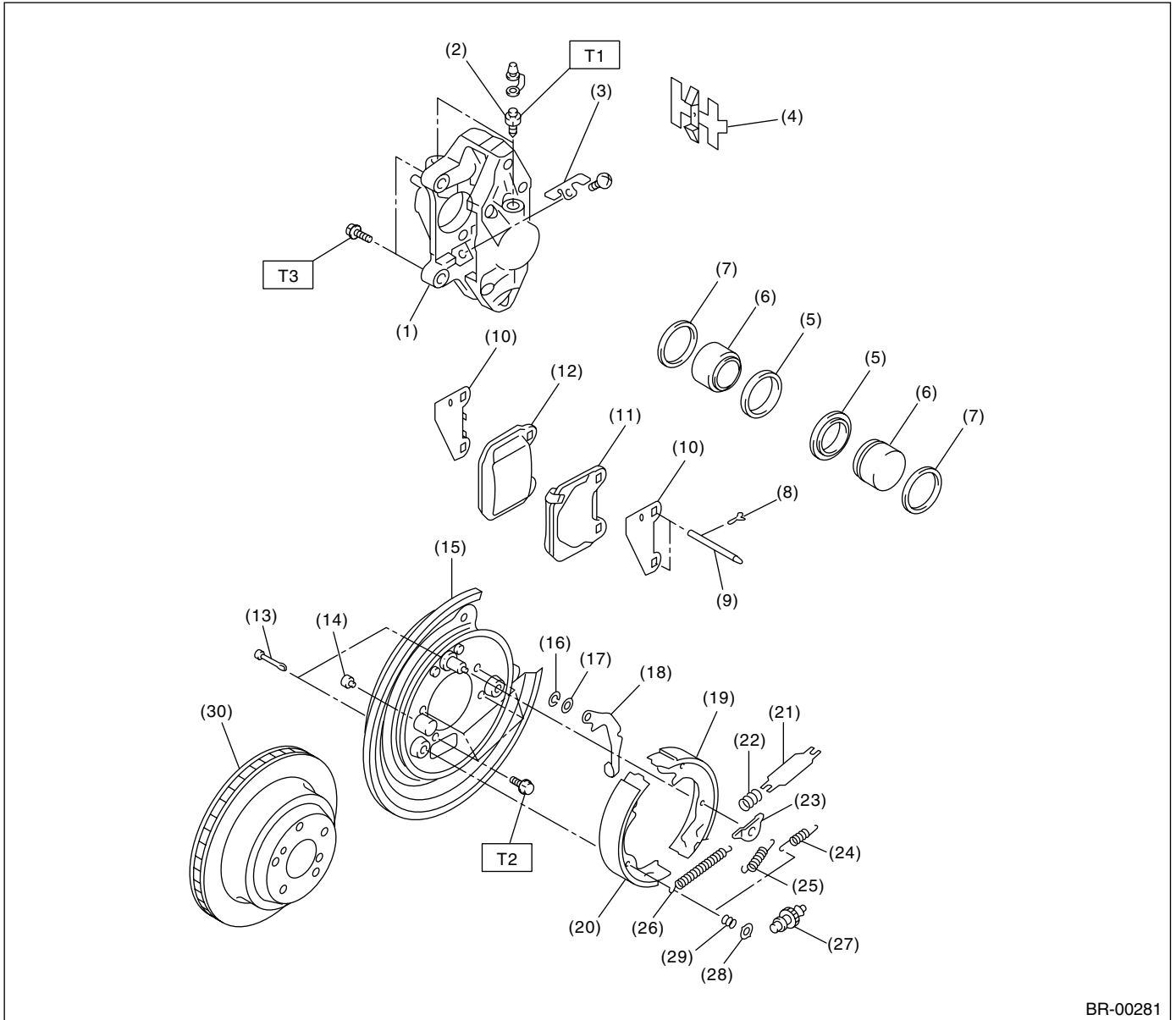
T2: 37 (3.8, 27.5)

T3: 52 (5.3, 38.3)

GENERAL DESCRIPTION

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• 17 INCH TYPE



- | | | |
|-----------------------|-------------------------------------|---------------------------------|
| (1) Caliper body | (13) Shoe hold-down pin | (25) Primary shoe return spring |
| (2) Air bleeder screw | (14) Cover | (26) Adjusting spring |
| (3) Guide plate | (15) Back plate | (27) Adjuster |
| (4) Cross spring | (16) Retainer | (28) Shoe hold-down cup |
| (5) Piston boot | (17) Spring washer | (29) Shoe hold-down spring |
| (6) Piston | (18) Parking brake lever | (30) Disc rotor |
| (7) Piston seal | (19) Parking brake shoe (Secondary) | |
| (8) Clip | (20) Parking brake shoe (Primary) | |
| (9) Pad pin | (21) Strut | |
| (10) Pad shim | (22) Strut shoe spring | |
| (11) Pad (Outside) | (23) Shoe guide plate | |
| (12) Pad (Inside) | (24) Secondary shoe return spring | |

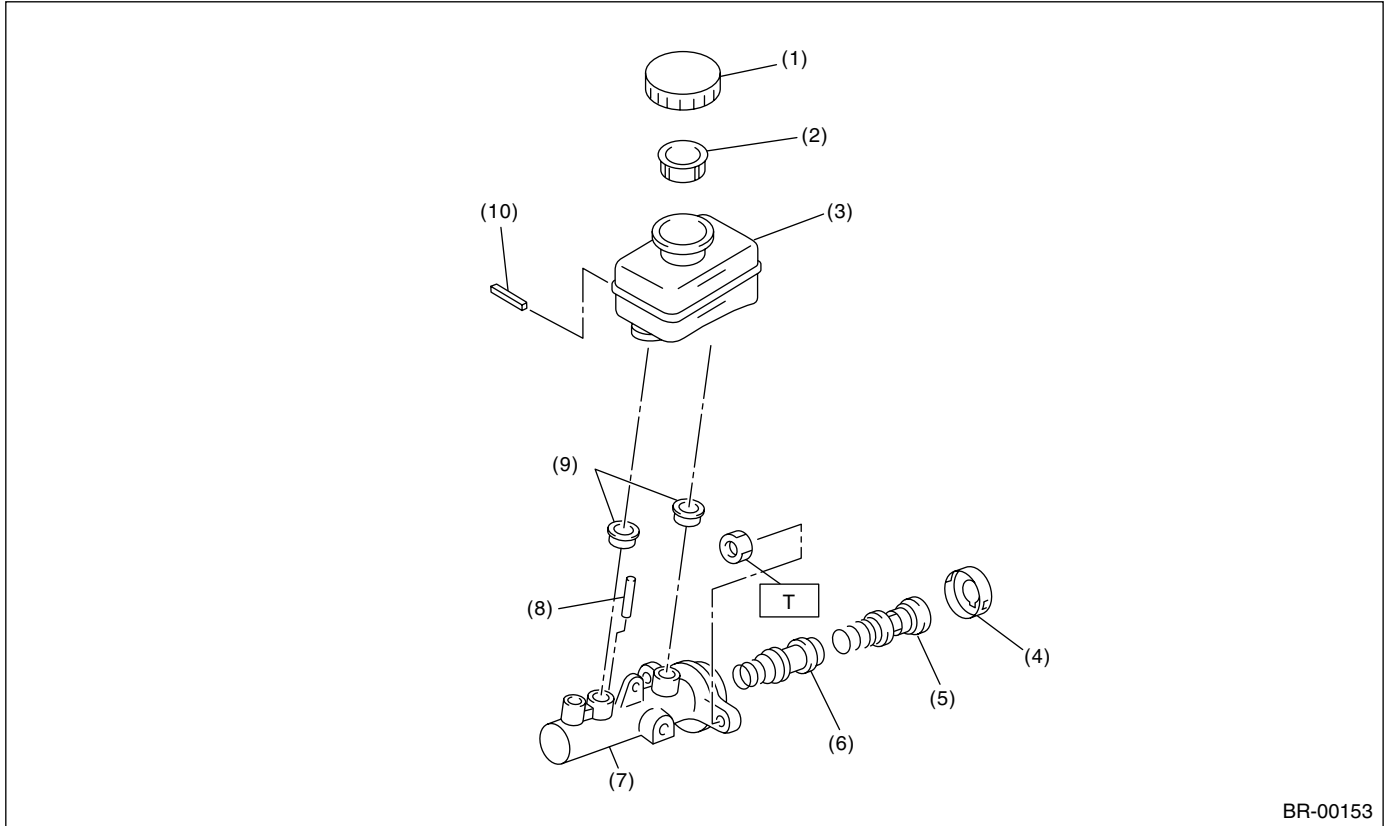
Tightening torque: N·m (kgf·m, ft·lb)

T1: 20 (2.0, 14.5)

T2: 52 (5.3, 38.3)

T3: 65 (6.6, 47.9)

3. MASTER CYLINDER



BR-00153

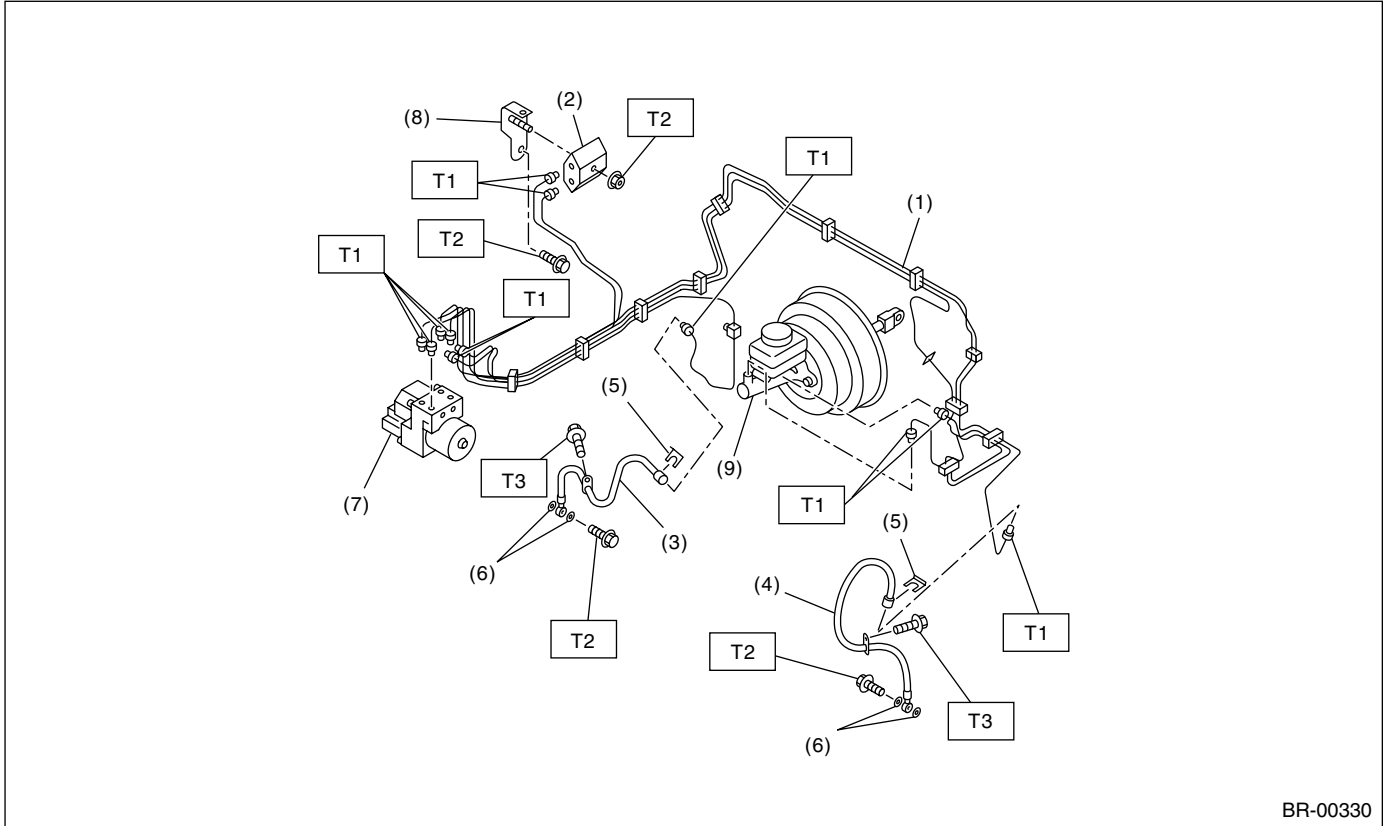
- | | |
|---------------------|----------------------|
| (1) Cap | (6) Secondary piston |
| (2) Filter | (7) Cylinder body |
| (3) Reservoir tank | (8) Cylinder pin |
| (4) Piston retainer | (9) Seal |
| (5) Primary piston | (10) Pin |

Tightening torque: N·m (kgf·m, ft·lb)
T1: 15 (1.5, 10.8)

GENERAL DESCRIPTION

BRAKE

4. FRONT BRAKE PIPES AND HOSE



BR-00330

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

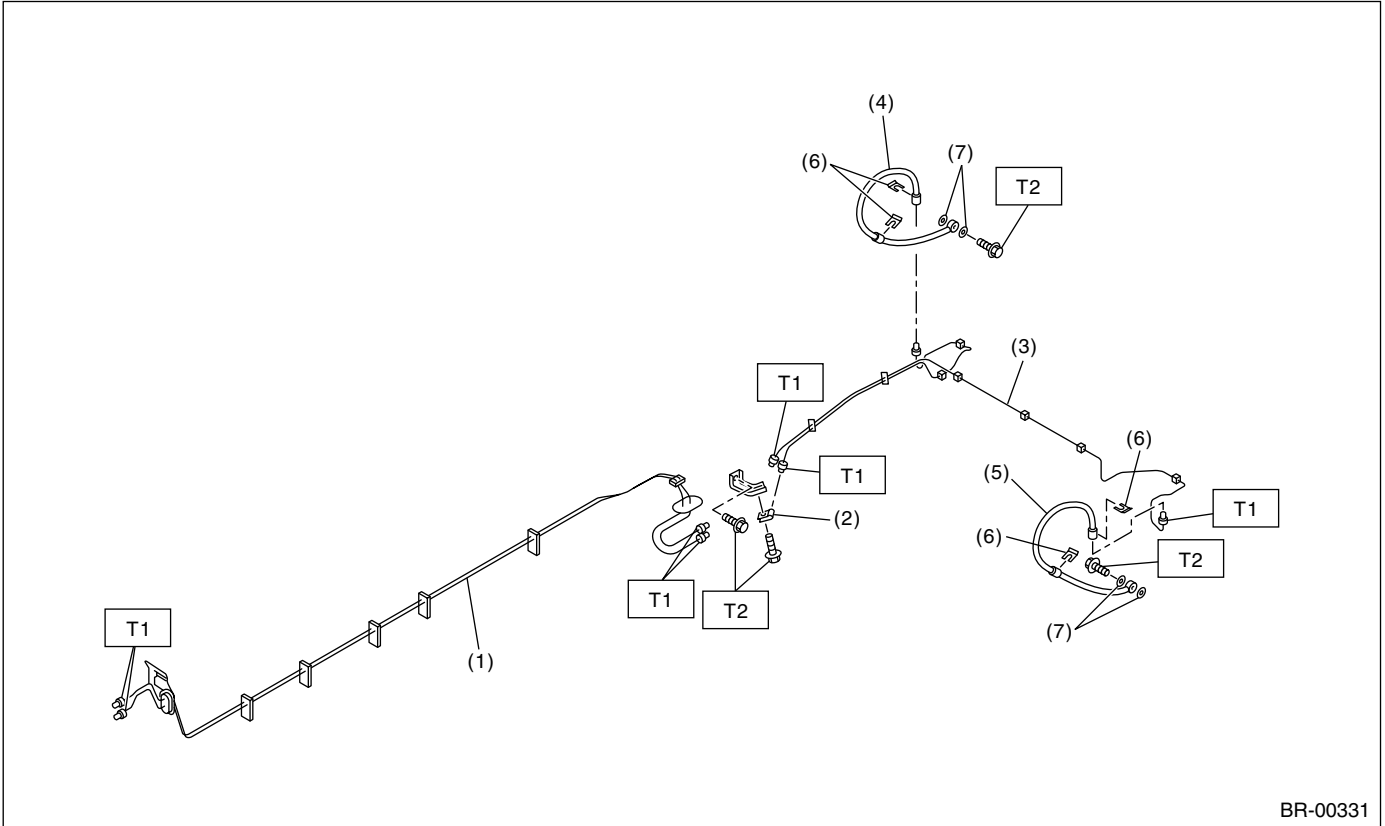
Tightening torque: N·m (kgf·m, ft·lb)

T1: 15 (1.5, 10.8)

T2: 18 (1.8, 13.0)

T3: 32 (3.3, 23.6)

5. CENTER AND REAR BRAKE PIPES AND HOSES



BR-00331

- | | |
|--------------------------------|------------------------|
| (1) Center brake pipe assembly | (4) Rear brake hose RH |
| (2) Two-way connector | (5) Rear brake hose LH |
| (3) Rear brake pipe assembly | (6) Clamp |
| | (7) Gasket |

Tightening torque: N·m (kgf·m, ft·lb)

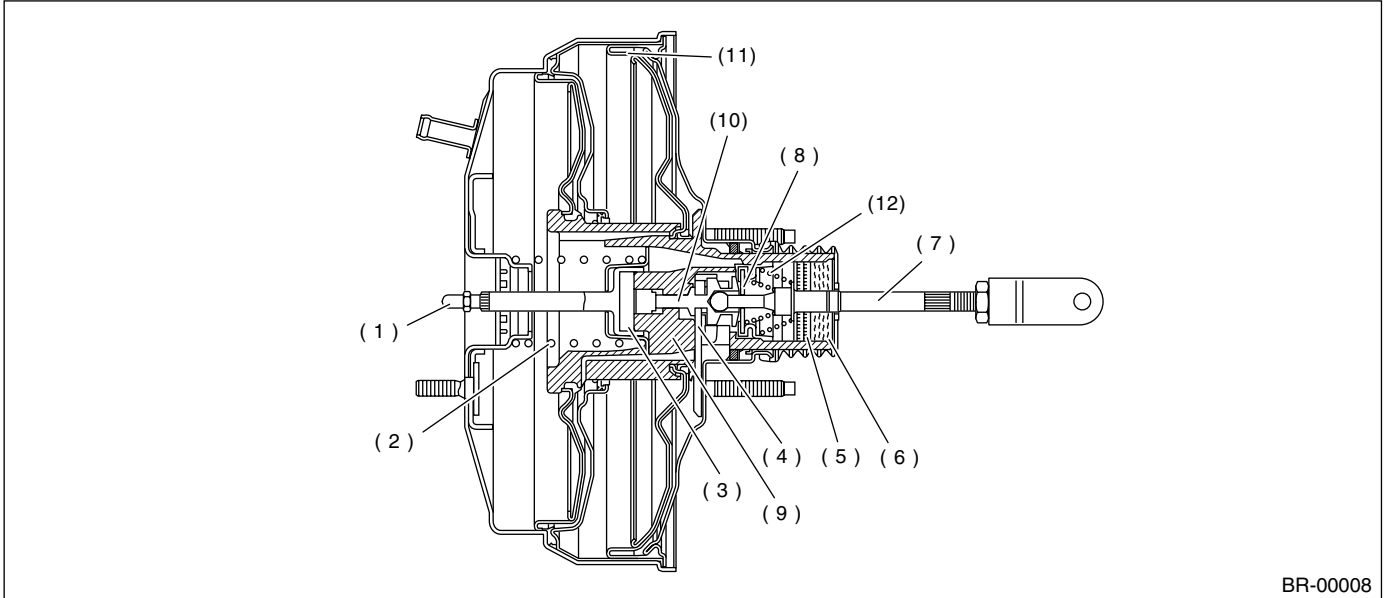
T1: 15 (1.5, 10.8)

T2: 18 (1.8, 13.0)

GENERAL DESCRIPTION

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6. BRAKE BOOSTER

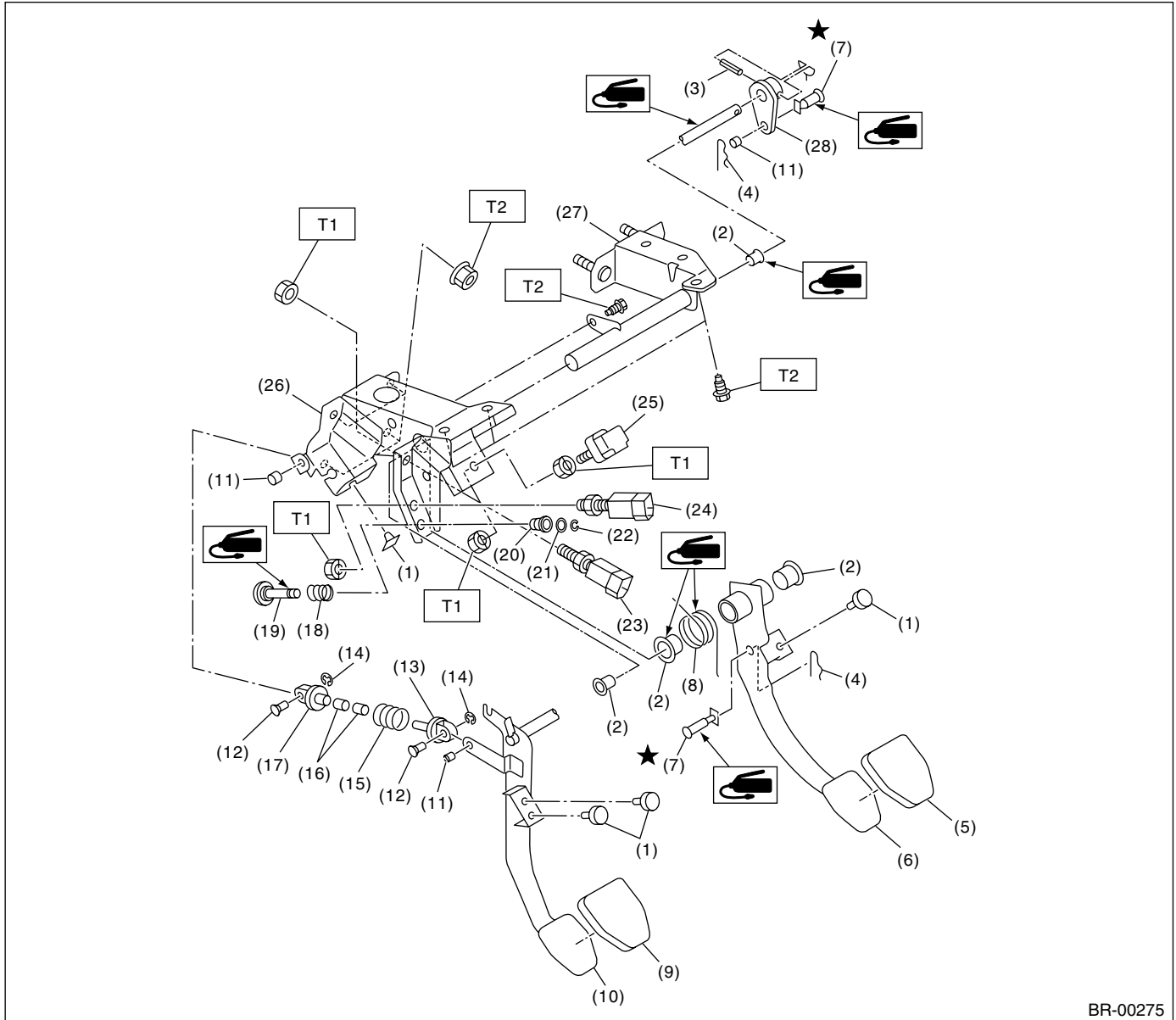


BR-00008

- | | | |
|-------------------|-------------------|--------------------------|
| (1) Push rod | (5) Filter | (9) Valve body |
| (2) Return spring | (6) Silencer | (10) Plunger valve |
| (3) Reaction disc | (7) Operating rod | (11) Diaphragm plate |
| (4) Key | (8) Poppet valve | (12) Valve return spring |

7. BRAKE PEDAL

• MT MODEL



BR-00275

- | | | |
|------------------------|------------------------|--|
| (1) Stopper | (12) Clutch clevis pin | (23) Clutch switch (Starter interlock) |
| (2) Bushing | (13) Assist rod A | (24) Clutch switch (With cruise control) |
| (3) Spring pin | (14) Clip | (25) Stop light switch |
| (4) Snap pin | (15) Assist spring | (26) Pedal bracket |
| (5) Brake pedal pad | (16) Assist bushing | (27) Clutch master cylinder bracket |
| (6) Brake pedal | (17) Assist rod B | (28) Lever |
| (7) Clevis pin | (18) Spring S | |
| (8) Brake pedal spring | (19) Rod S | |
| (9) Clutch pedal pad | (20) Bushing S | |
| (10) Clutch pedal | (21) O-ring | |
| (11) Bushing C | (22) Clip | |

Tightening torque: N·m (kgf·m, ft·lb)

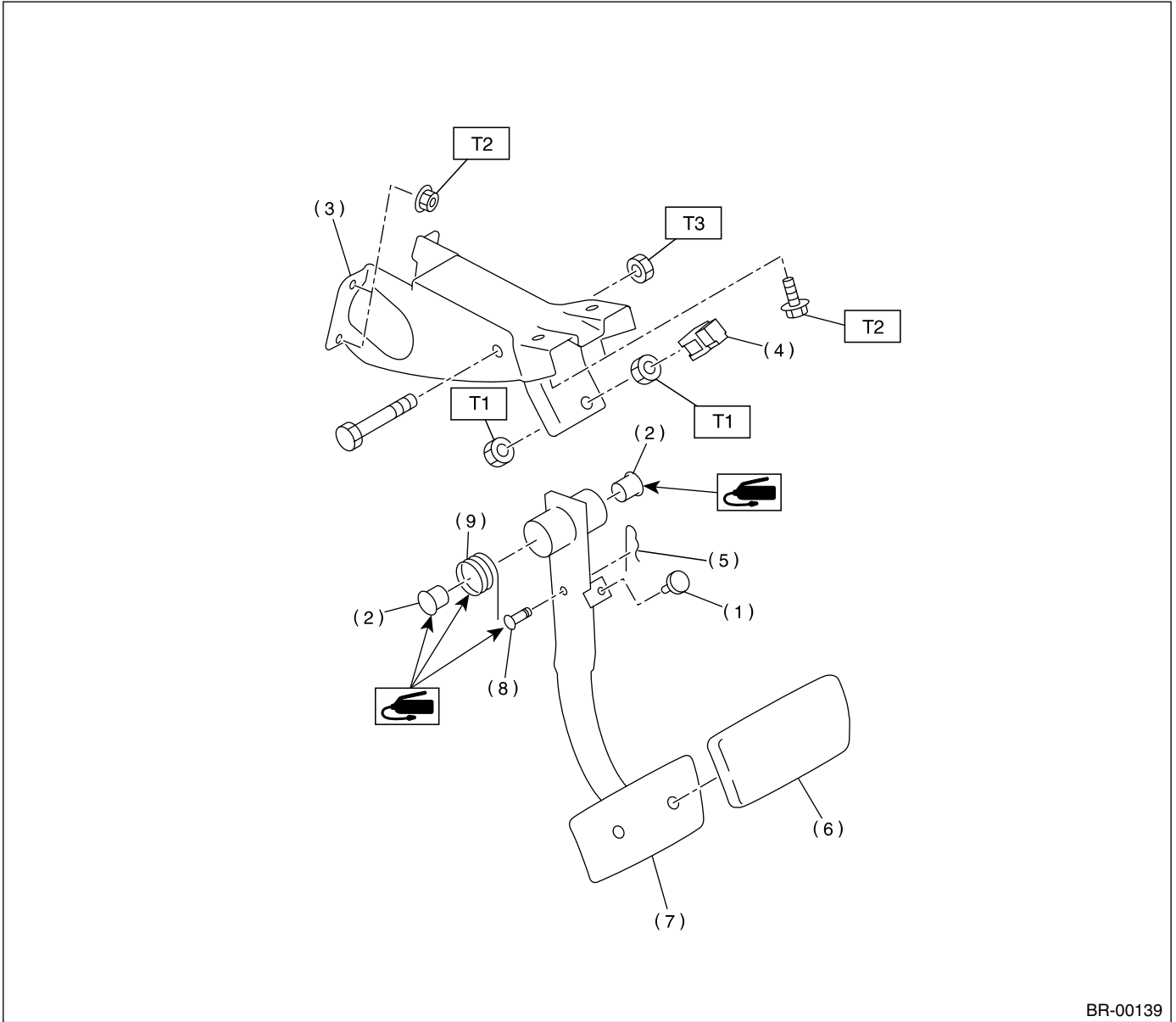
T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

GENERAL DESCRIPTION

BRAKE

• AT MODEL



BR-00139

- | | |
|-----------------------|------------------------|
| (1) Stopper | (6) Brake pedal pad |
| (2) Bushing | (7) Brake pedal |
| (3) Pedal bracket | (8) Clevis pin |
| (4) Stop light switch | (9) Brake pedal spring |
| (5) Snap pin | |

Tightening torque: N·m (kgf·m, ft·lb)

T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

T3: 29 (3.0, 21.7)

C: CAUTION

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Use SUBARU genuine grease etc. or the equivalent. Do not mix grease etc. with that of another grade or from other manufacturers.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before securing a part on a vise, place cushioning material such as wood blocks, aluminum plate, or shop cloth between the part and the vise.

D: PREPARATION TOOL

1. GENERAL PURPOSE TOOLS

TOOL NAME	REMARKS
SNAP RING PLIERS	Used for removing and installing snap ring.