

GENERAL DESCRIPTION

BRAKE

1. General Description

A: SPECIFICATIONS

		Non-turbo		Turbo
		Other	Sedan	
Front disc brake	Size	15 inch		16 inch
	Type	Disc (Floating type, ventilated)		
	Effective disc diameter	228 mm (8.98 in)		244 mm (9.6 in)
	Disc thickness × Outer diameter	24 × 277 mm (0.94 × 10.91 in)		24 × 294 mm (0.94 × 11.57 in)
	Effective cylinder diameter	42.8 mm (1.685 in) × 2		
	Pad dimensions (length × width × thickness)	105.0 × 50.5 × 11.0 mm (4.134 × 1.989 × 0.433 in)		
	Clearance adjustment	Automatic adjustment		
Rear disc brake	Type	—	Disc (Floating type)	
	Effective disc diameter	—	230 mm (9.06 in)	
	Disc thickness × Outer diameter	—	10 × 266 mm (0.39 × 10.47 in)	
	Effective cylinder diameter	—	38.1 mm (1.500 in)	
	Pad dimensions (length × width × thickness)	—	82.4 × 33.7 × 9.0 mm (3.244 × 1.327 × 0.354 in)	
	Clearance adjustment	—	Automatic adjustment	
Rear drum brake	Type	Drum (Leading-Trailing type)	—	
	Effective drum diameter	228.6 mm (9 in)	—	
	Effective cylinder diameter	19.0 mm (0.689 in)	—	
	Lining dimensions (length × width × thickness)	219.4 × 35.0 × 4.1 mm (8.64 × 1.378 × 0.161 in)	—	
	Clearance adjustment	Automatic adjustment	—	
Master cylinder	Type	Tandem		
	Effective diameter	26.99 mm (1-1/16 in)	26.99 mm (1-1/16 in) <MT> 25.4 mm (1 in) <AT>	
	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)		
Proportioning valve	Split point	1,961 kPa (20 kg/cm ² , 285 psi)		
	Reducing ratio	0.3		
Brake line		Dual circuit system		
Brake fluid		FMVSS No. 116, DOT3 or DOT4		

NOTE:

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

GENERAL DESCRIPTION

BRAKE

ITEM		STANDARD	SERVICE LIMIT
Front brake	Pad thickness (including back metal)	17 mm (0.67 in)	7.5 mm (0.295 in)
	Disc thickness	24 mm (0.94 in)	22 mm (0.87 in)
	Disc runout	—	0.075 mm (0.0029 in)
Rear brake (Disc type)	Pad thickness (including back metal)	14 mm (0.55 in)	6.5 mm (0.256 in)
	Disc thickness	10 mm (0.39 in)	8.5 mm (0.335 in)
	Disc runout	—	0.07 mm (0.0028 in)
Rear brake (Drum type)	Inside diameter	228.6 mm (9 in)	230.6 mm (9.08 in)
	Lining thickness	4.1 mm (0.161 in)	1.5 mm (0.059 in)
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		
			Non-turbo	Turbo MT	Turbo AT
Brake booster	Brake fluid pressure without engine running	147 N (15 kgf, 33 lb)	588 kPa (6 kg/cm ² , 85 psi)		686 kPa (7 kg/cm ² , 100 psi)
		294 N (30 kgf, 66 lb)	1,471 kPa (15 kg/cm ² , 213 psi)		1,667 kPa (17 kg/cm ² , 242 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)	5,688 kPa (58 kg/cm ² , 825 psi)	6,374 kPa (65 kg/cm ² , 925 psi)
		294 N (30 kgf, 66 lb)	9,120 kPa (93 kg/cm ² , 1,323 psi)		10 MPa (104 kg/cm ² , 1,479 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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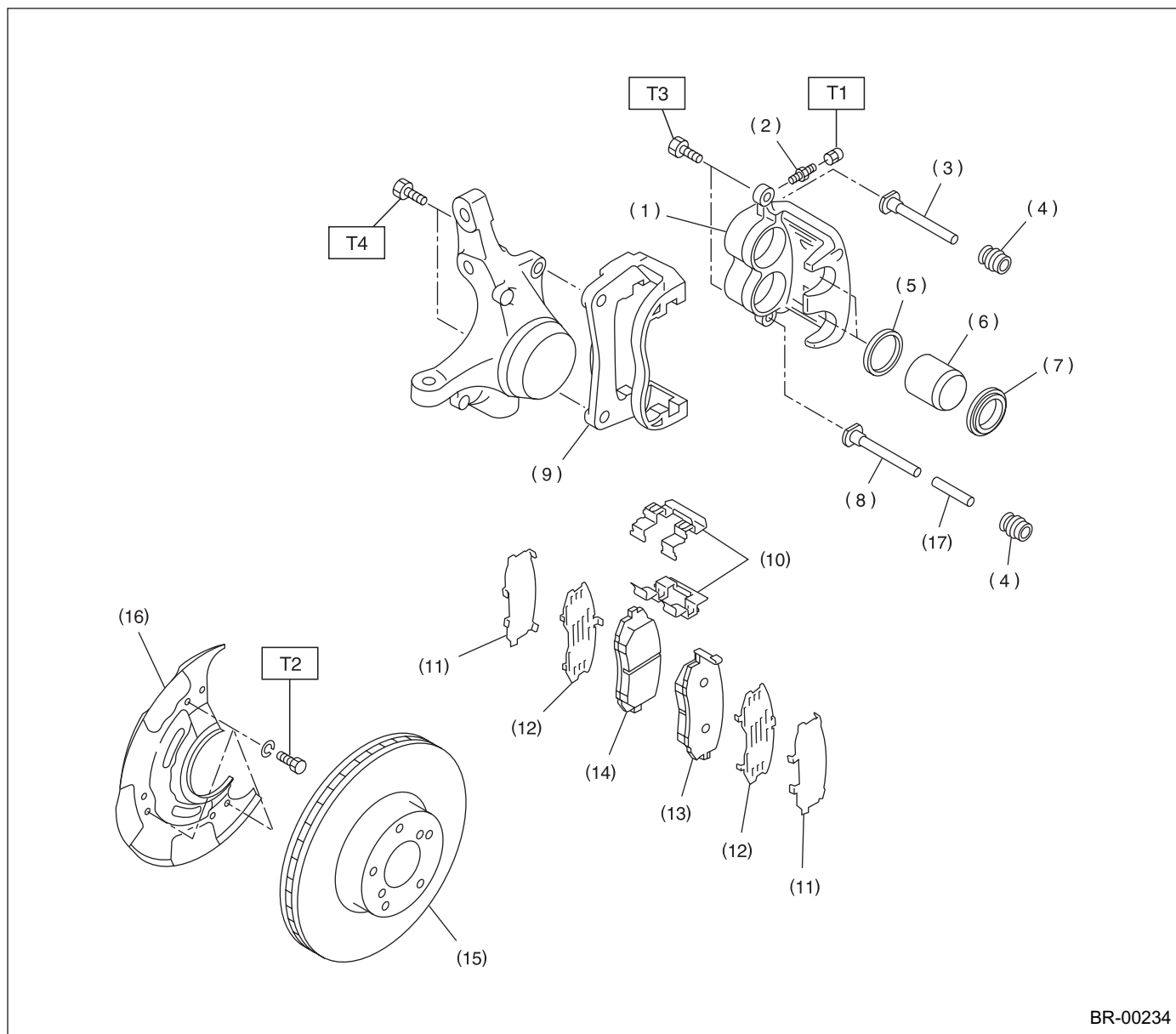
GENERAL DESCRIPTION

BRAKE

B: COMPONENT

1. FRONT DISK BRAKE

• NON-TURBO MODEL



BR-00234

- (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) Lock pin sleeve

Tightening torque: N·m (kgf-m, ft-lb)

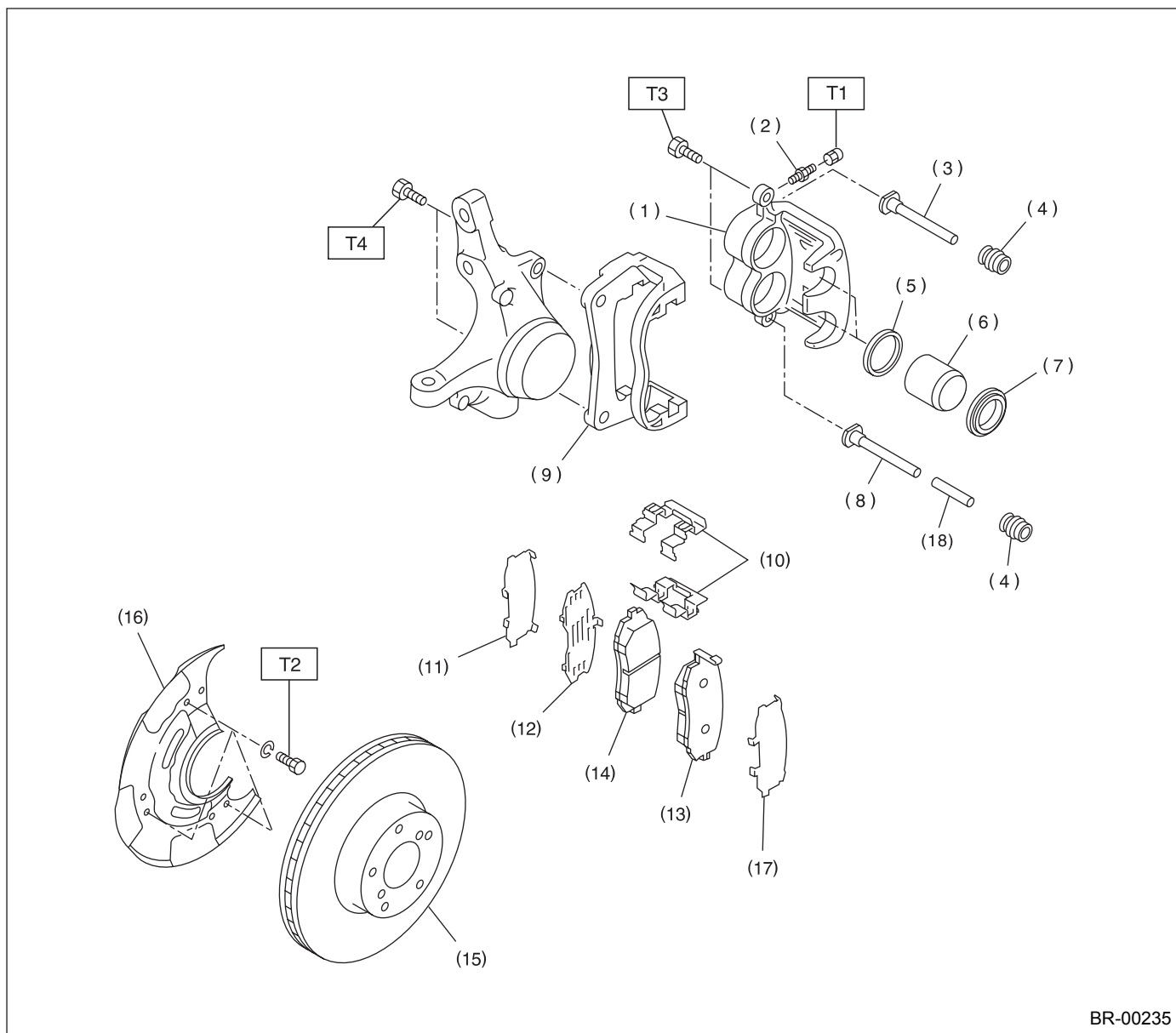
T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

T3: 26.5 (2.70, 19.5)

T4: 80 (8.2, 59)

• TURBO MODEL



BR-00235

- (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) Cover shim
- (12) Rubber coat shim
- (13) Pad (Outside)
- (14) Pad (Inside)
- (15) Disc rotor
- (16) Disc cover

- (17) Outer shim
- (18) Lock pin sleeve

Tightening torque: N·m (kgf-m, ft-lb)

T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

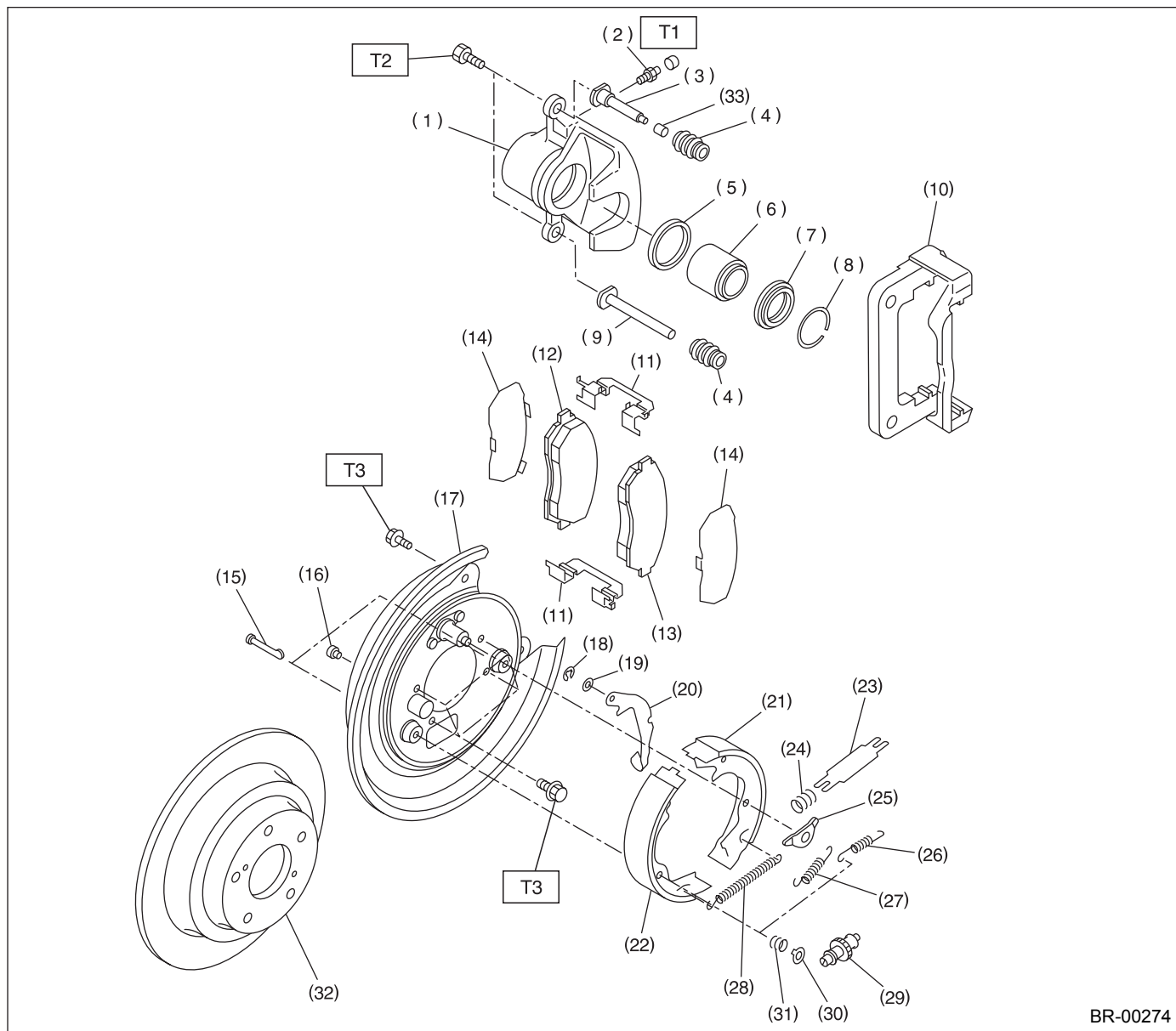
T3: 26.5 (2.70, 19.5)

T4: 80 (8.2, 59)

GENERAL DESCRIPTION

BRAKE

2. REAR DISC BRAKE



BR-00274

- | | | |
|-----------------------|-------------------------------------|---------------------------------|
| (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) Bush |
| (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 | |

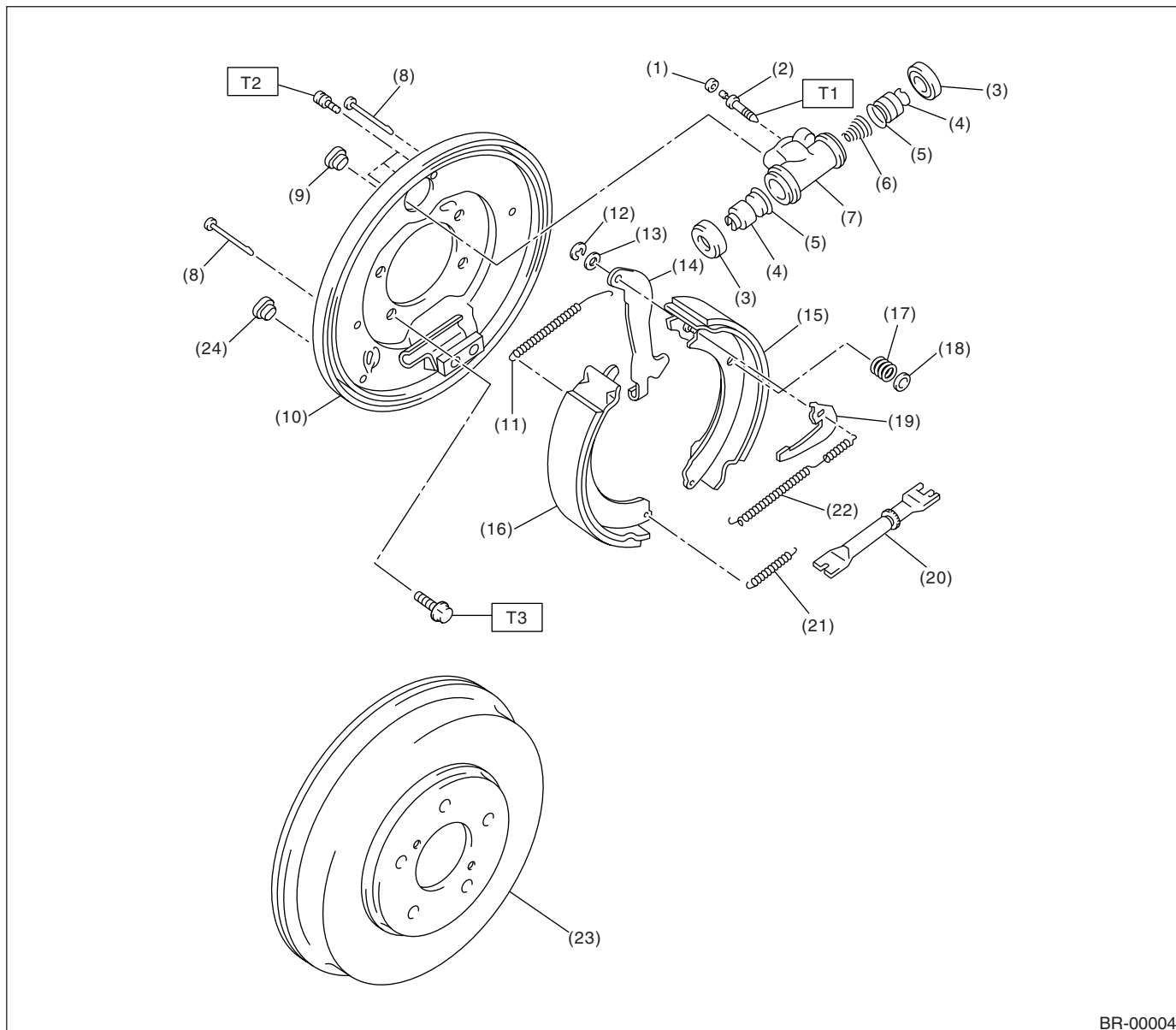
Tightening torque: N·m (kgf-m, ft-lb)

T1: 8 (0.8, 5.8)

T2: 37 (3.8, 27.5)

T3: 53 (5.4, 39.1)

3. REAR DRUM BRAKE



BR-00004

- | | | |
|-------------------------|-------------------------------|-------------------------------|
| (1) Air bleeder cap | (11) Upper shoe return spring | (21) Lower shoe return spring |
| (2) Air bleeder screw | (12) Retainer | (22) Adjusting spring |
| (3) Boot | (13) Washer | (23) Drum |
| (4) Piston | (14) Parking brake lever | |
| (5) Cup | (15) Brake shoe (Trailing) | |
| (6) Spring | (16) Brake shoe (Leading) | |
| (7) Wheel cylinder body | (17) Shoe hold-down spring | |
| (8) Pin | (18) Cup | |
| (9) Plug | (19) Adjusting lever | |
| (10) Back plate | (20) Adjuster | |

Tightening torque: N·m (kgf-m, ft-lb)

T1: 8 (0.8, 5.8)

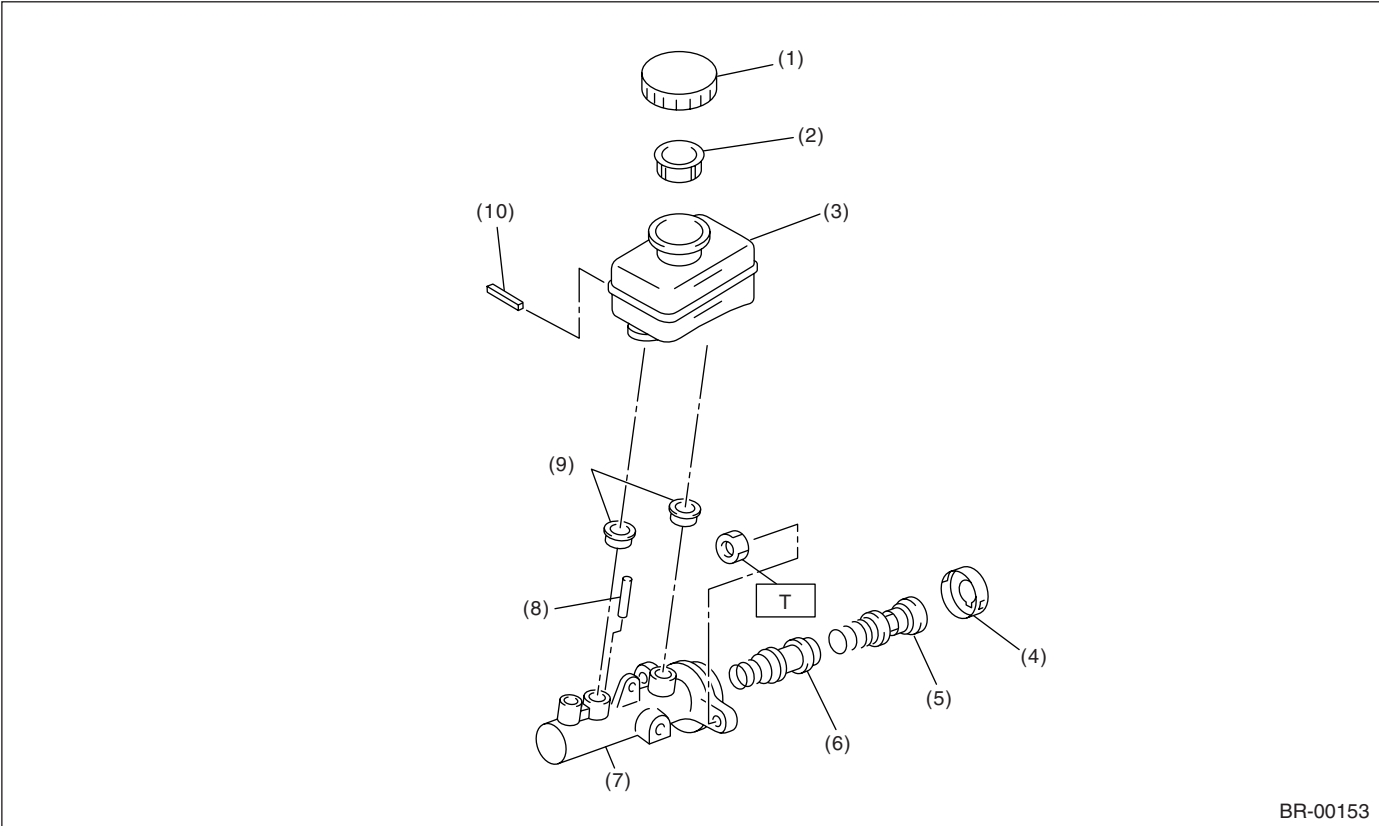
T2: 10 (1.0, 7.2)

T3: 53 (5.4, 39.1)

GENERAL DESCRIPTION

BRAKE

4. MASTER CYLINDER

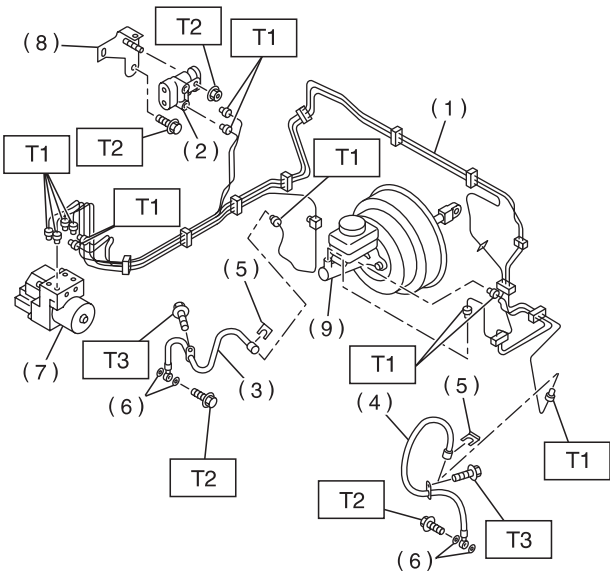


BR-00153

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

Tightening torque: N·m (kgf-m, ft-lb)
T1: 14 (1.4, 10.1)

5. FRONT BRAKE PIPES AND HOSE



BR-00236

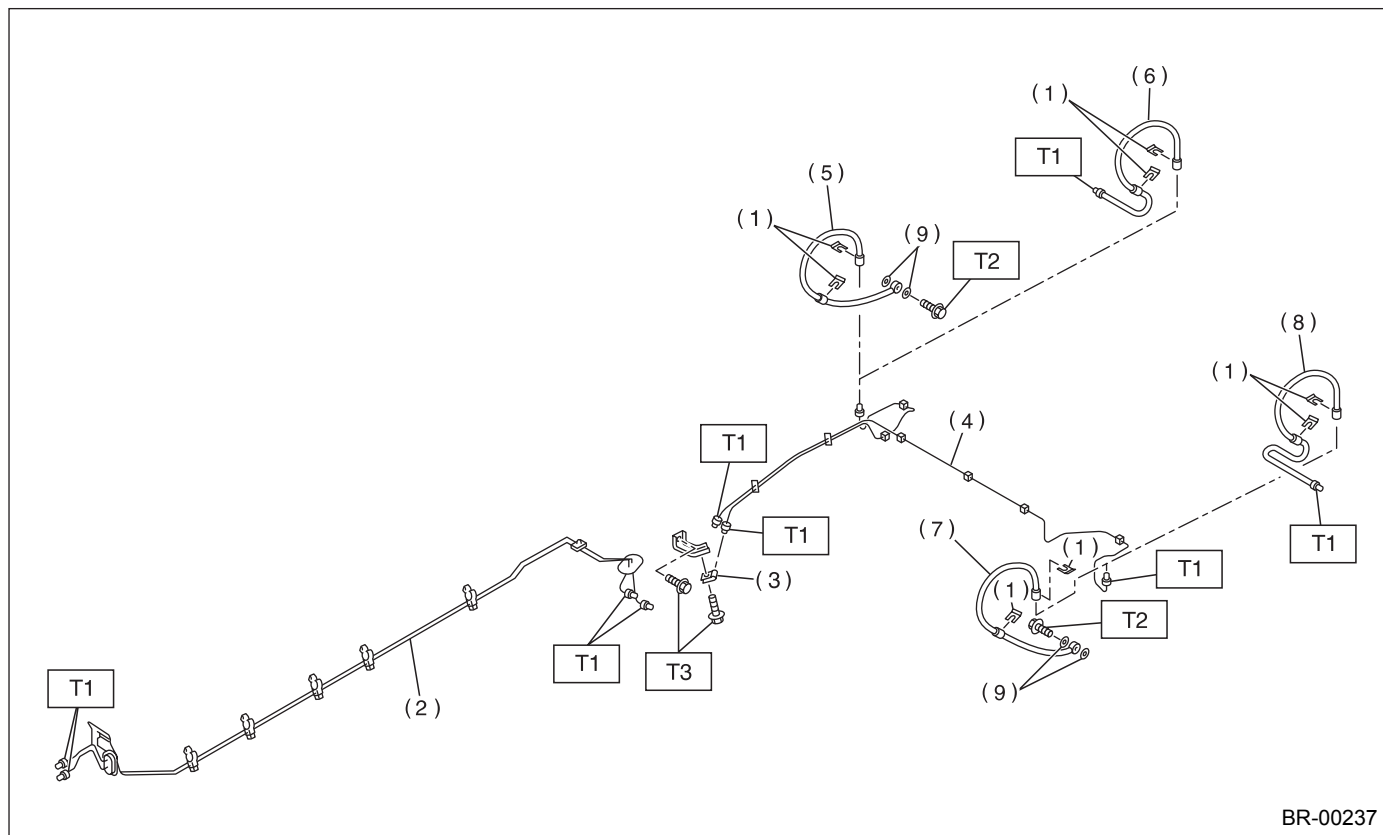
- | | |
|-------------------------------|---------------------------------------------------|
| (1) Front brake pipe assembly | (6) Gasket |
| (2) Proportioning valve | (7) ABS control module and hydraulic control unit |
| (3) Front brake hose RH | (8) Bracket |
| (4) Front brake hose LH | (9) Master Cylinder |
| (5) Clamp | |

Tightening torque: N·m (kgf-m, ft-lb)	
T1:	15 (1.5, 10.8)
T2:	18 (1.8, 13.0)
T3:	32 (3.3, 23.6)

GENERAL DESCRIPTION

BRAKE

6. CENTER AND REAR BRAKE PIPES AND HOSE



- (1) Clamp
- (2) Center brake pipe assembly
- (3) Two-way connector
- (4) Rear brake pipe assembly
- (5) Rear brake hose RH (Disc brake model)

- (6) Rear brake hose RH (Drum brake model)
- (7) Rear brake hose LH (Disc brake model)
- (8) Rear brake hose LH (Drum brake model)

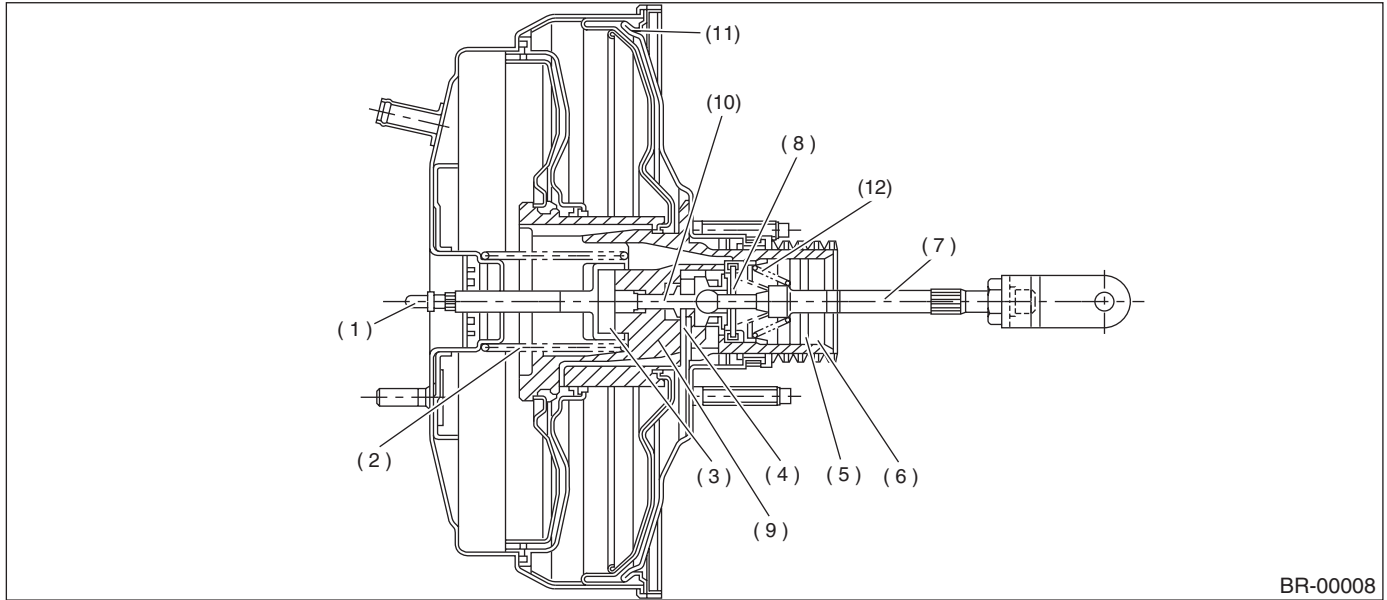
- (9) Gasket

Tightening torque: N·m (kgf-m, ft-lb)

T1: 15 (1.5, 10.8)

T2: 18 (1.8, 13.0)

7. BRAKE BOOSTER



BR-00008

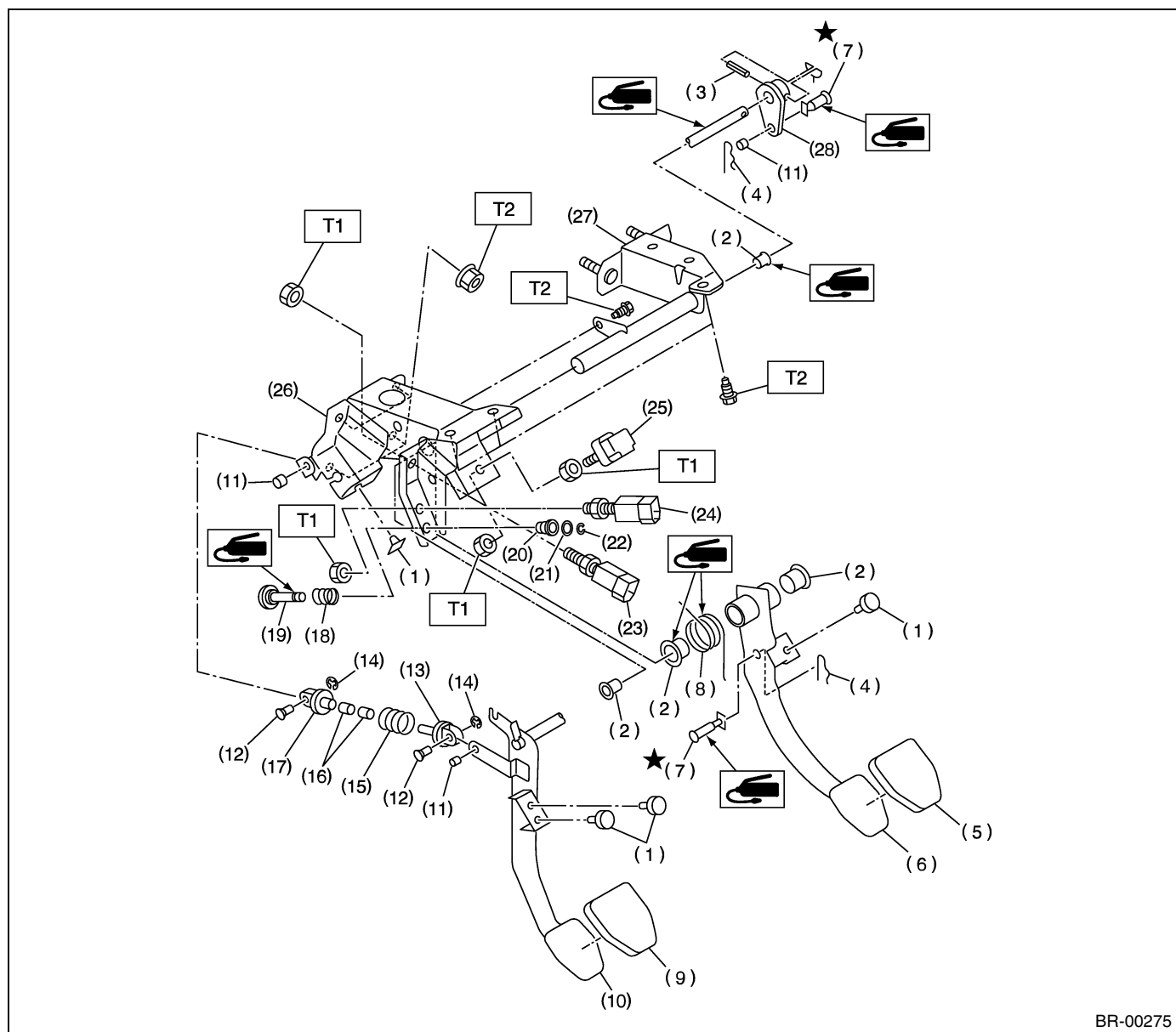
- | | | |
|-------------------|-------------------|--------------------------|
| (1) Push rod | (5) Filter | (9) Valve body |
| (2) Return spring | (6) Silencer | (10) Plunger valve |
| (3) Reaction disc | (7) Operating rod | (11) Diaphragm plate |
| (4) Key | (8) Poppet valve | (12) Valve return spring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

GENERAL DESCRIPTION

BRAKE

8. BRAKE PEDAL

• MT Model



BR-00275

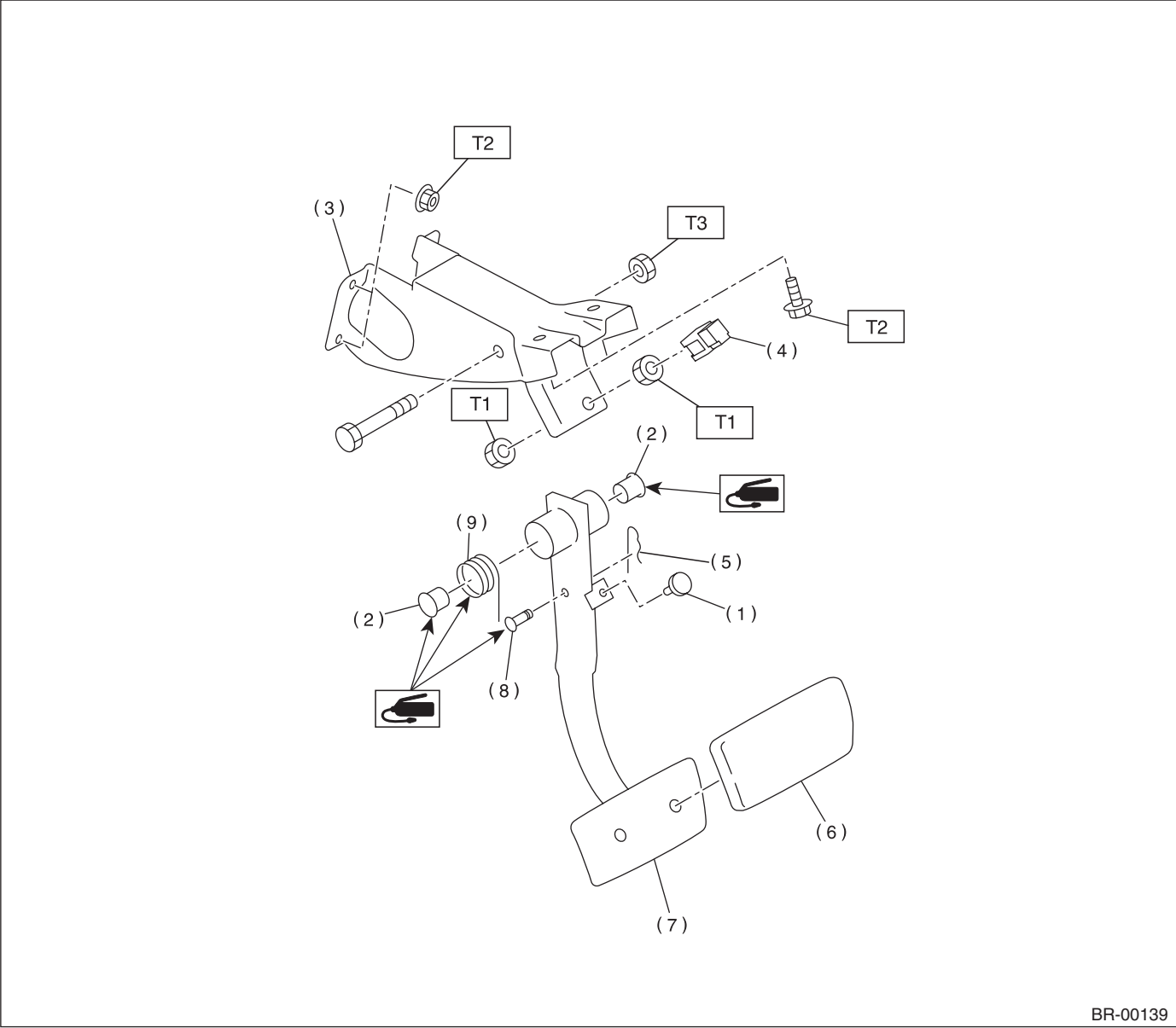
(1) Stopper	(12) Clutch clevis pin	(23) Clutch switch (Starter interlock)
(2) Bushing	(13) Assist rod A	(24) Clutch switch (With cruise control)
(3) Spring pin	(14) Clip	(25) Stop light switch
(4) Snap pin	(15) Assist spring	(26) Pedal bracket
(5) Brake pedal pad	(16) Assist bushing	(27) Clutch master 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)

• AT Model



- (1) Stopper
- (2) Bushing
- (3) Pedal bracket
- (4) Stop light switch
- (5) Snap pin

- (6) Brake pedal pad
- (7) Brake pedal
- (8) Clevis pin
- (9) Brake pedal spring

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

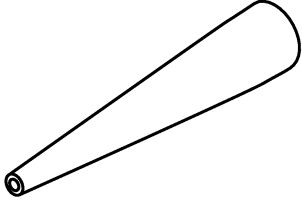
- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Be careful not to burn your hands, because each part in the vehicle is hot after running.
- 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.
- Apply grease onto sliding or revolution surfaces before installation.
- Before installing O-rings or snap rings, apply sufficient amount of grease to avoid damage and deformation.
- 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.
- Do not put fluid on body. If the body is tainted, wash away with water.

GENERAL DESCRIPTION

BRAKE

D: PREPARATION TOOL

1. SPECIAL TOOLS

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-926460000	926460000	WHEEL CYLINDER 3/4" ADAPTER	Used for installing cup onto wheel cylinder piston (Size 11/16 in).

2. GENERAL PURPOSE TOOLS

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