

GENERAL DESCRIPTION

Brake

1. General Description S405001

A: SPECIFICATIONS S405001E49

Front disc brake	Size	15 inch type	16 inch type
	Type	Disc (Floating type, ventilated)	
	Effective disc diameter	228 mm (8.98 in)	248 mm (9.76 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)	112.3 × 50.0 × 11.0 mm (4.421 × 1.969 × 0.433 in)	
	Clearance adjustment	Automatic adjustment	
Rear disc brake	Type	Disc (Floating type)	
	Effective disc diameter	254 mm (10.0 in)	
	Disc thickness × Outer diameter	10 × 290 mm (0.39 × 11.42 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		
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)	
Proportioning valve	Split point	2,942 kPa (30 kg/cm ² , 427 psi)	3,678 kPa (37.5 kg/cm ² , 533 psi)
	Reducing ratio	0.3	
Brake line	Dual circuit system		
Brake fluid	CAUTION: <ul style="list-style-type: none"> ● 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 or 4 brake fluid when replacing or refilling the fluid. 		

NOTE:

Refer to "PB section" for parking brake SPECIFICATIONS.

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 (0.0030 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	—	0.075 mm (0.0030 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)	

GENERAL DESCRIPTION

Brake

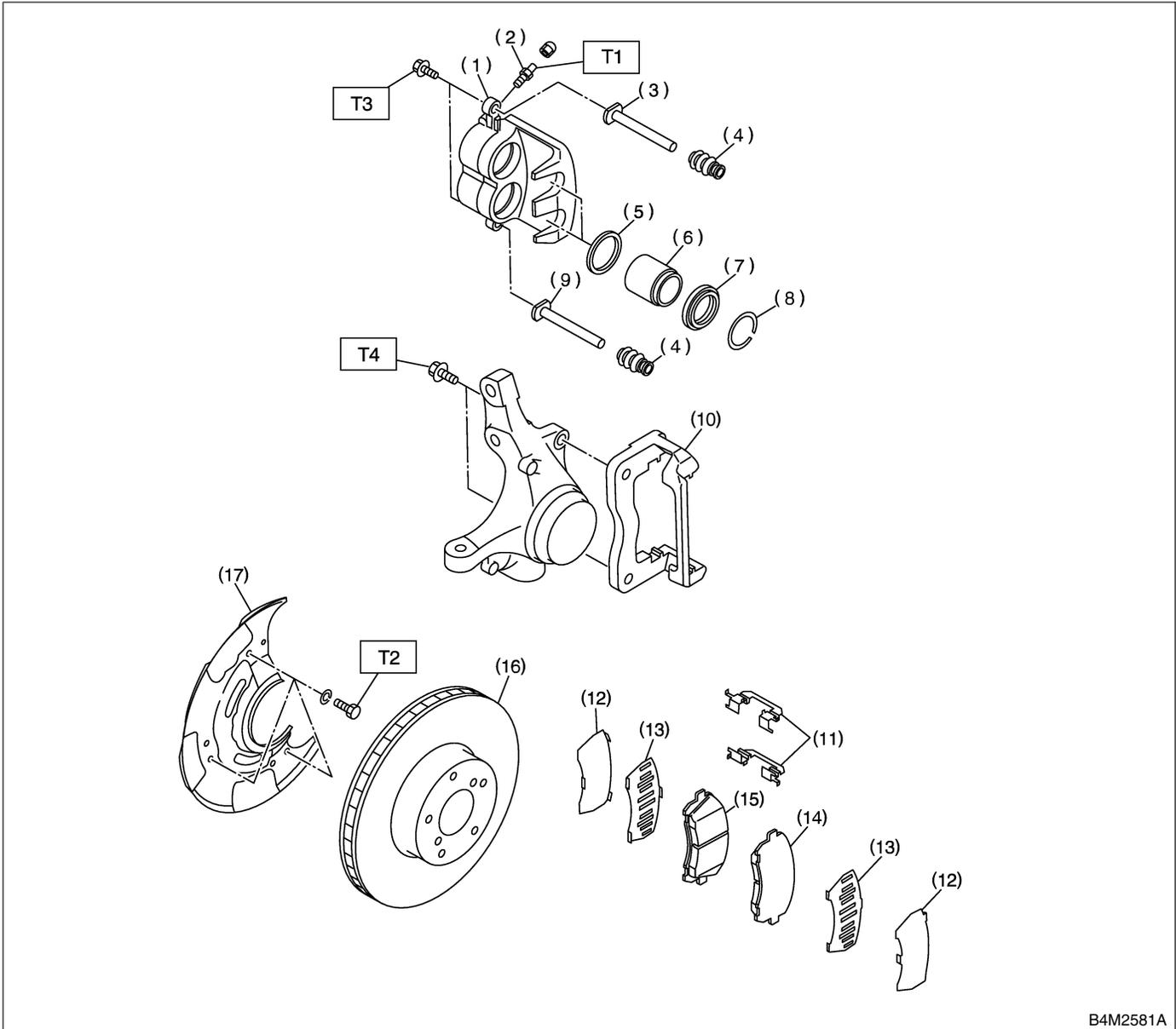
		Brake pedal force	Fluid pressure	
			15 inch type	16 inch type
Brake booster	Brake fluid pressure without engine running	147 N (15 kgf, 33 lb)	588 kPa (6 kg/cm ² , 85 psi)	
		294 N (30 kgf, 66 lb)	1,569 kPa (16 kg/cm ² , 228 psi)	
	Brake fluid pressure with engine running and vacuum at 66.7 kPa (500 mmHg, 19.69 inHg)	147 N (15 kgf, 33 lb)	6,178 kPa (63 kg/cm ² , 896 psi)	
		294 N (30 kgf, 66 lb)	9,709 kPa (99 kg/cm ² , 1,408 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).]		

GENERAL DESCRIPTION

Brake

B: COMPONENT S405001A05

1. FRONT DISC BRAKE S405001A0511



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

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

- (17) Disc cover

Tightening torque: N·m (kgf·m, ft·lb)

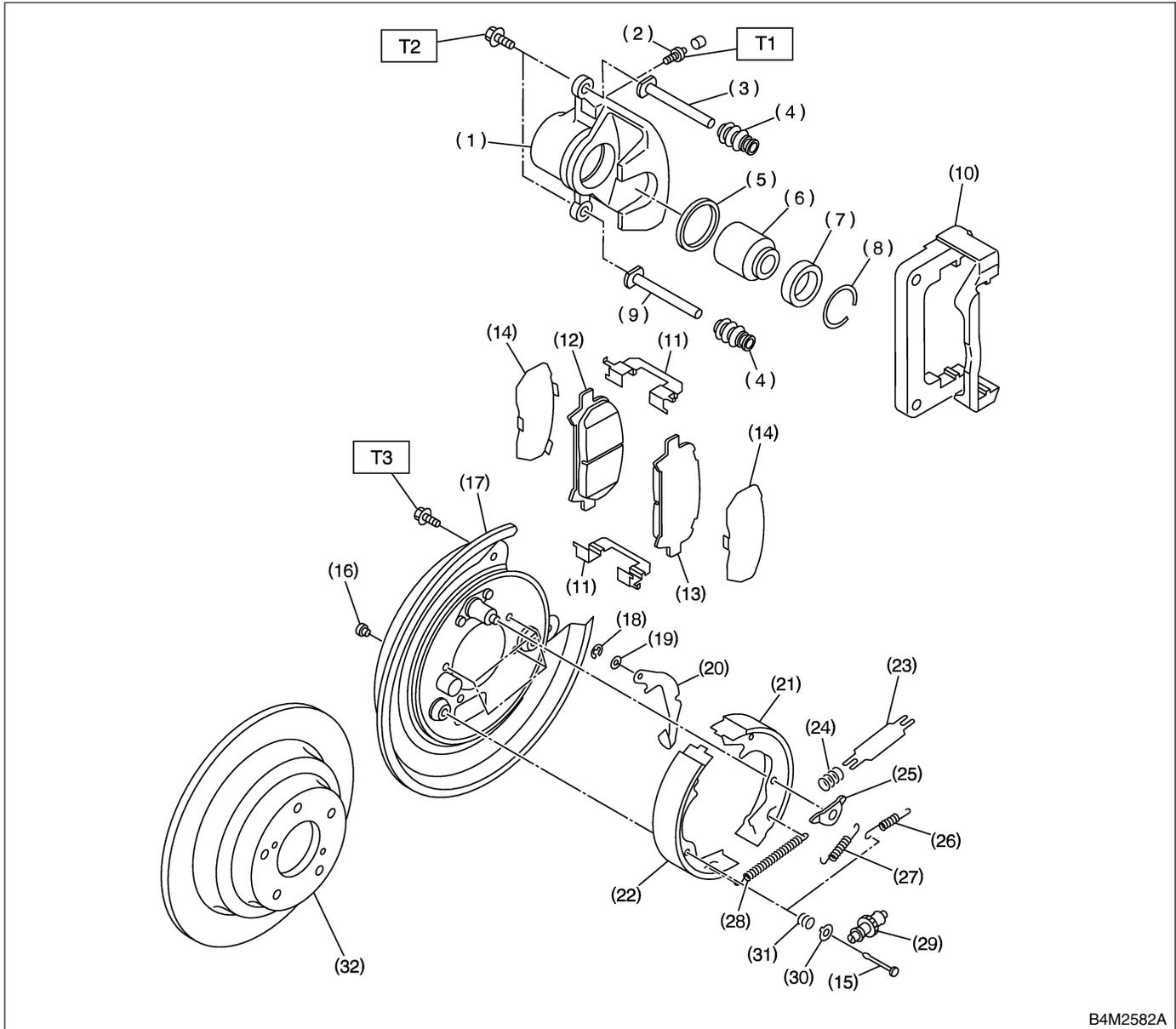
T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

T3: 39 (4.0, 28.9)

T4: 78 (8.0, 58)

2. REAR DISC BRAKE S405001A0503



- | | | |
|-----------------------|-------------------------------------|---------------------------------|
| (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 | |
| (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: 39 (4.0, 28.9)

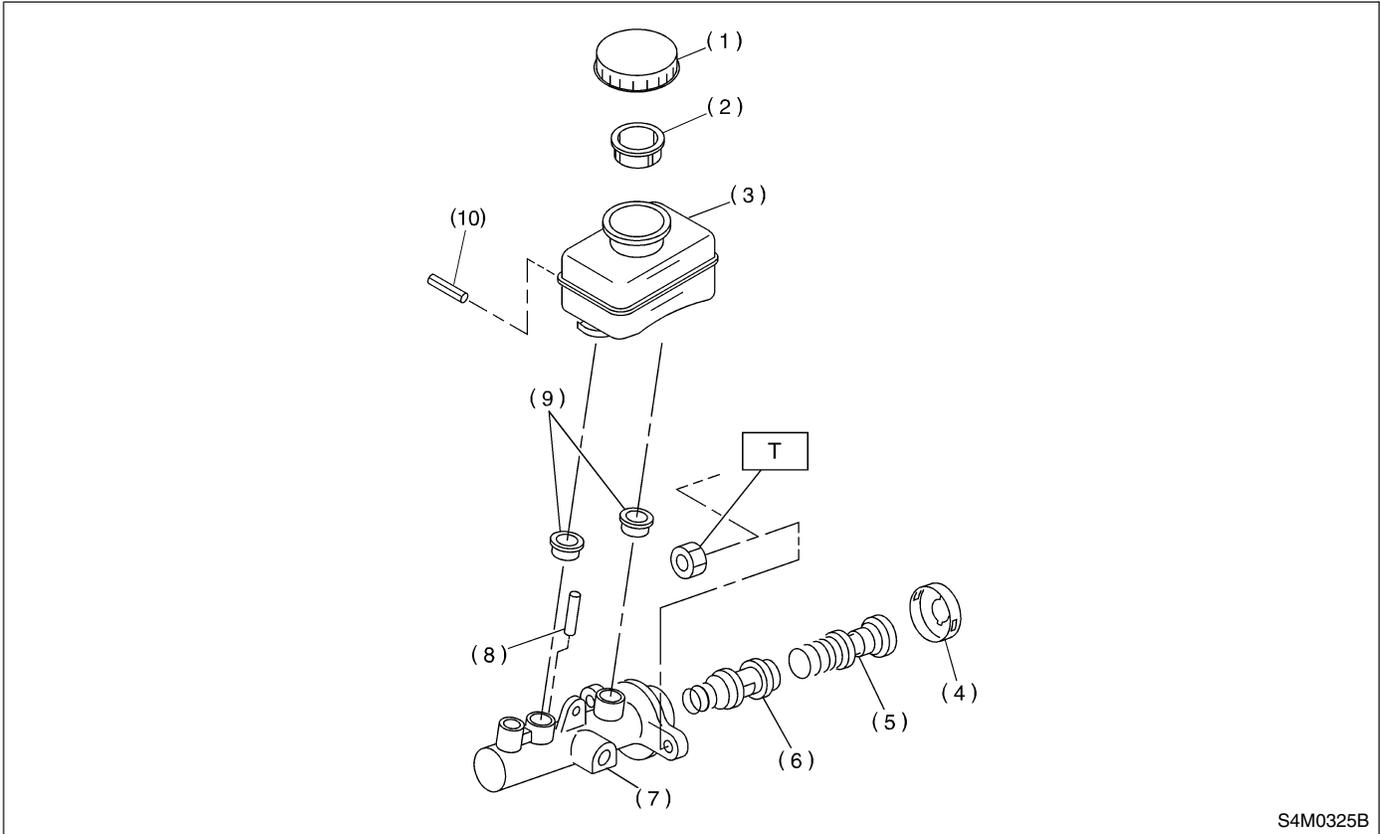
T3: 52 (5.3, 38.3)

GENERAL DESCRIPTION

Brake

3. MASTER CYLINDER S405001A0505

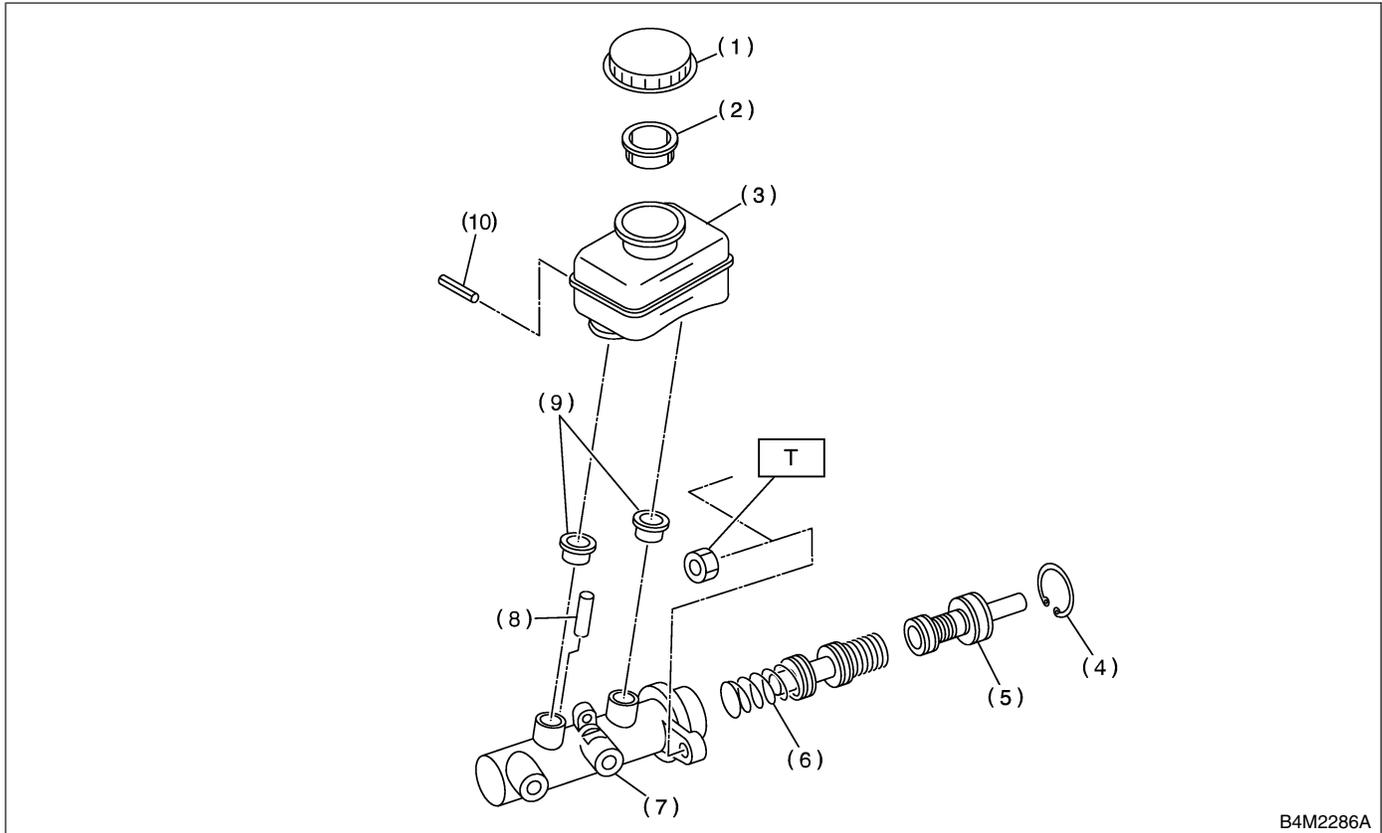
● Without VDC model



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

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

● With VDC model



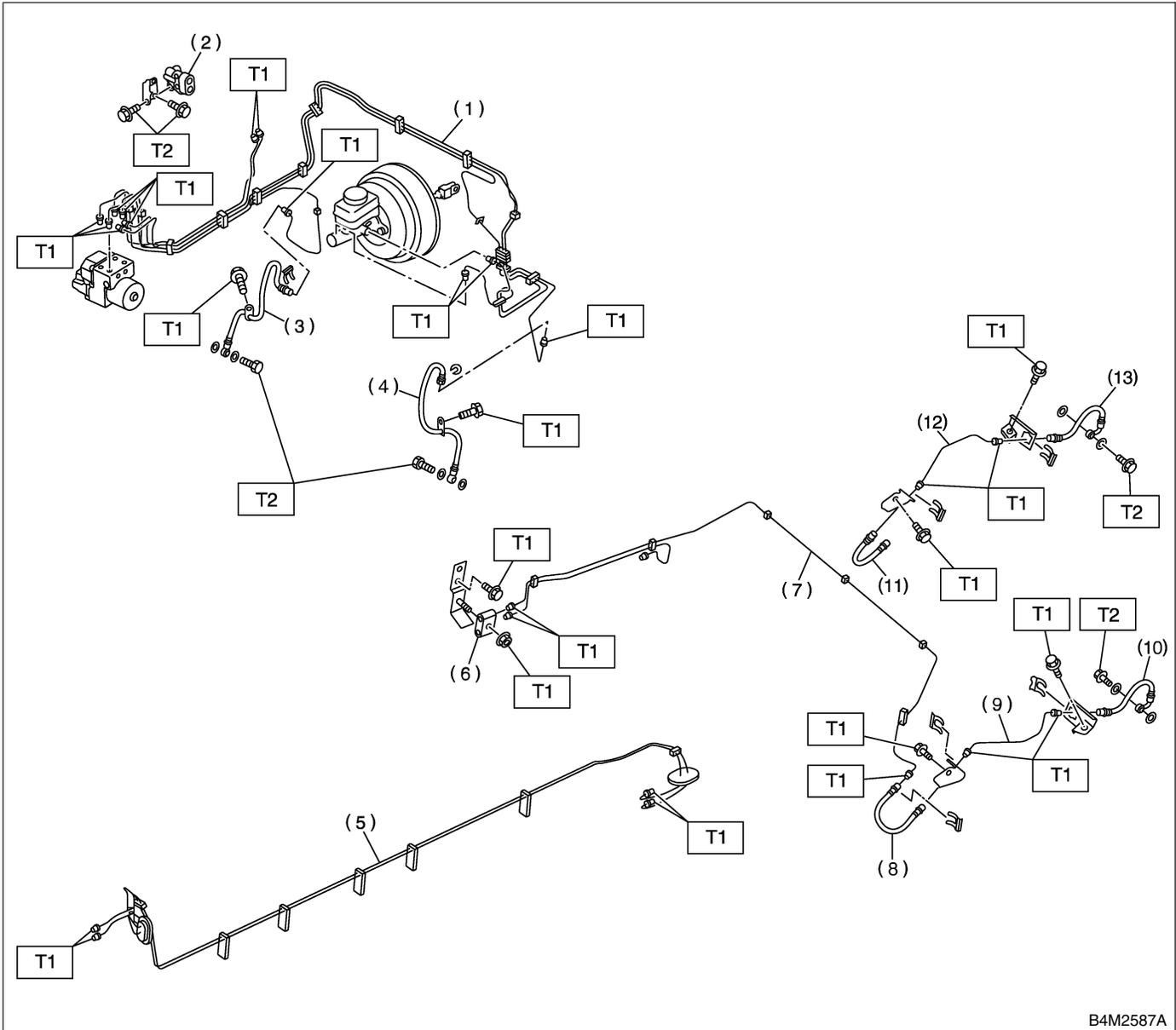
- | | |
|--------------------|----------------------|
| (1) Cap | (6) Secondary piston |
| (2) Filter | (7) Cylinder body |
| (3) Reservoir tank | (8) Cylinder pin |
| (4) C-ring | (9) Seal |
| (5) Primary piston | (10) Pin |

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

GENERAL DESCRIPTION

Brake

4. BRAKE PIPES AND HOSE S405001A0506



- (1) Front brake pipe assembly
- (2) Proportioning valve
- (3) Front brake hose RH
- (4) Front brake hose LH
- (5) Center brake pipe assembly
- (6) Two-way connector
- (7) Rear brake pipe assembly
- (8) Rear brake hose LH
- (9) Rear brake pipe LH
- (10) Rear brake hose rear LH
- (11) Rear brake hose RH
- (12) Rear brake pipe RH

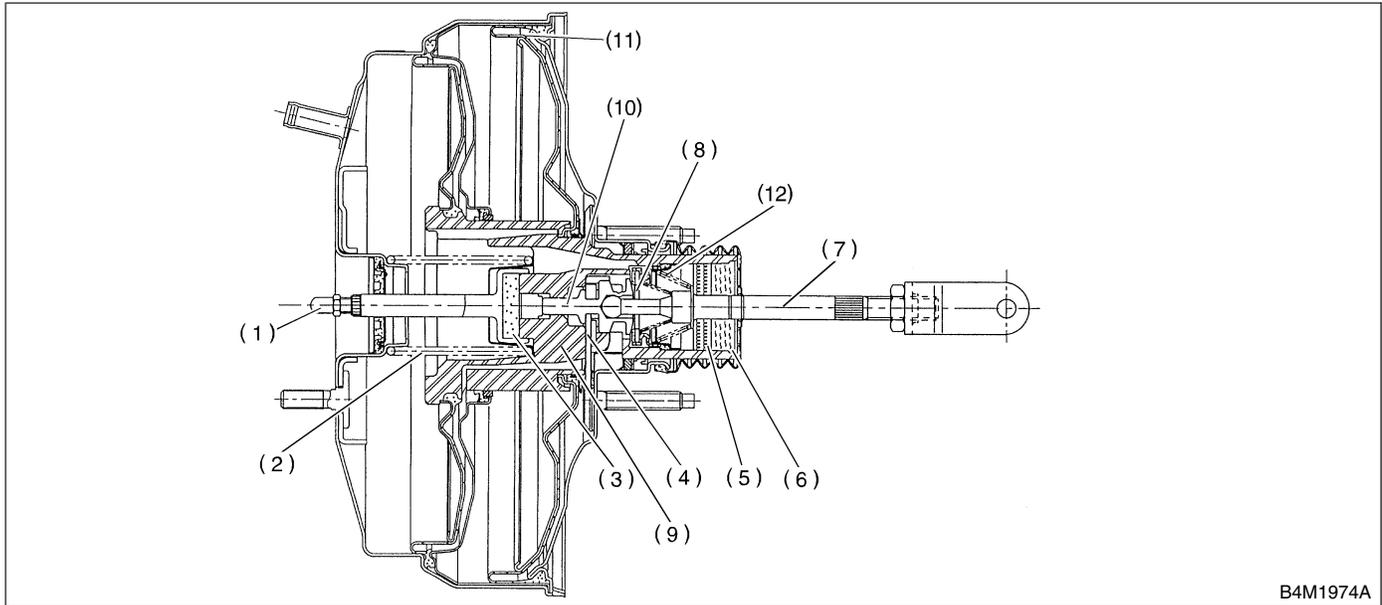
- (13) Rear brake hose rear RH

Tightening torque: N·m (kgf·m, ft·lb)

T1: 15 (1.5, 10.8)

T2: 18 (1.8, 13.0)

5. BRAKE BOOSTER S405001A0507



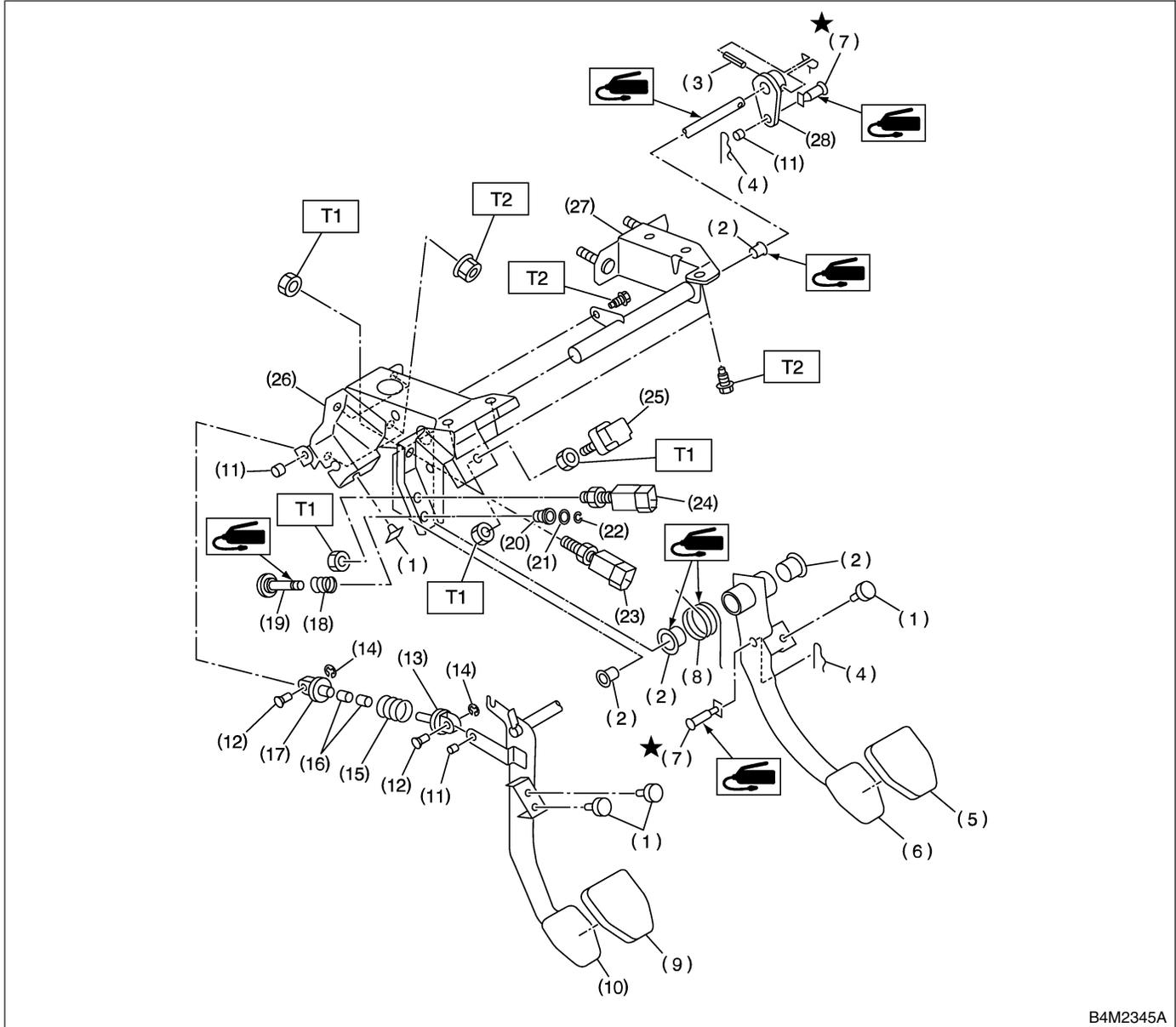
B4M1974A

- | | | |
|-------------------|-------------------|--------------------------|
| (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

6. BRAKE PEDAL FOR MT MODEL S405001A0508



B4M2345A

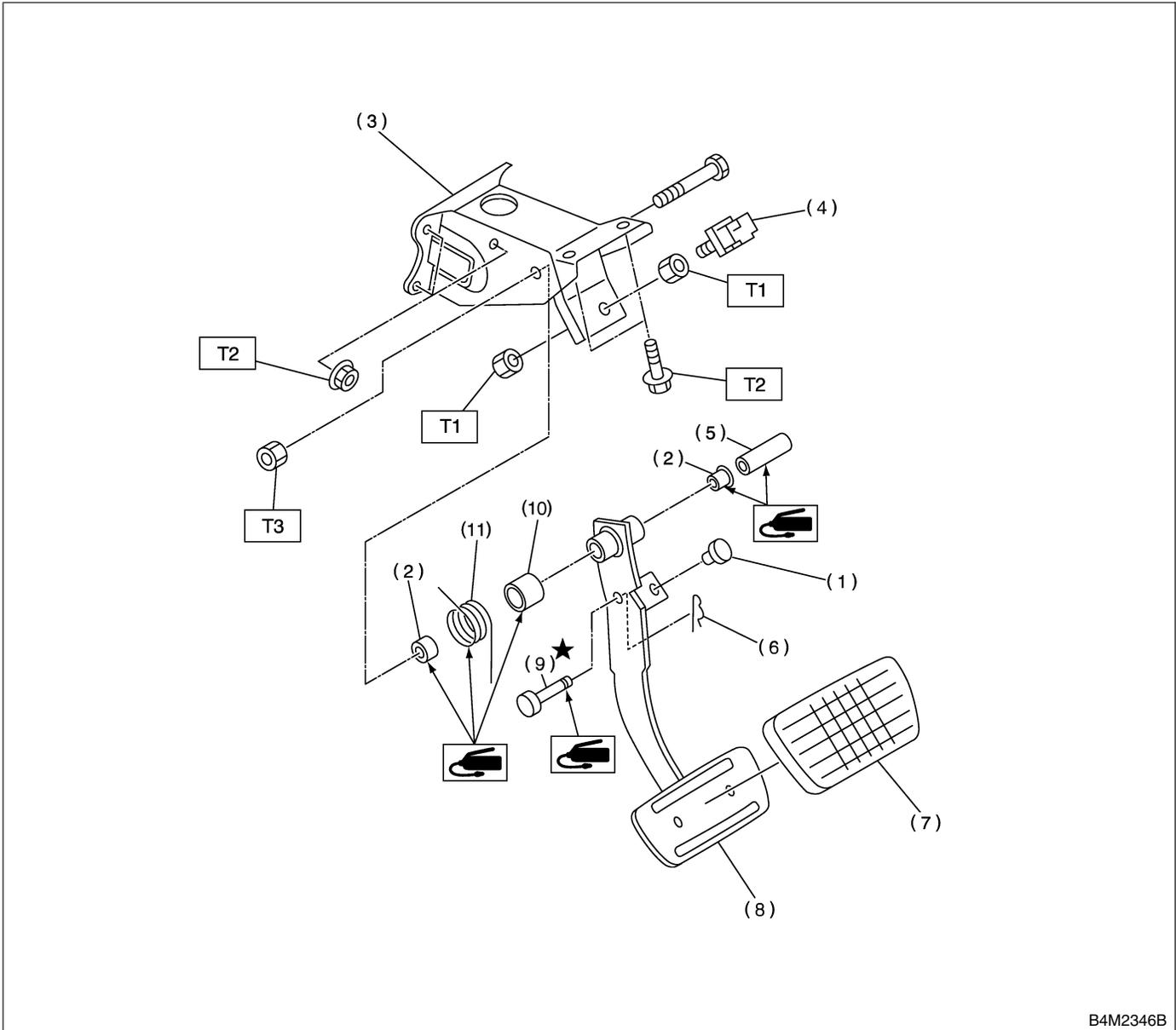
- | | | |
|------------------------|--|--|
| (1) Stopper | (13) Assist rod A | (24) Clutch switch (With cruise control) |
| (2) Bushing | (14) Clip | (25) Stop light switch |
| (3) Spring pin | (15) Assist spring | (26) Pedal bracket |
| (4) Snap pin | (16) Assist bushing | (27) Clutch master cylinder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

Tightening torque: N·m (kgf·m, ft·lb)

T1: 8 (0.8, 5.8)

T2: 18 (1.8, 13.0)

7. BRAKE PEDAL FOR AT MODEL S405001A0509



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

- (7) Brake pedal pad
- (8) Brake pedal
- (9) Clevis pin
- (10) Brake spacer
- (11) 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)

GENERAL DESCRIPTION

Brake

C: CAUTION S405001A03

- 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.

D: PREPARATION TOOL S405001A17

1. GENERAL PURPOSE TOOLS S405001A1702

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