

GENERAL DESCRIPTION

Starting/Charging Systems

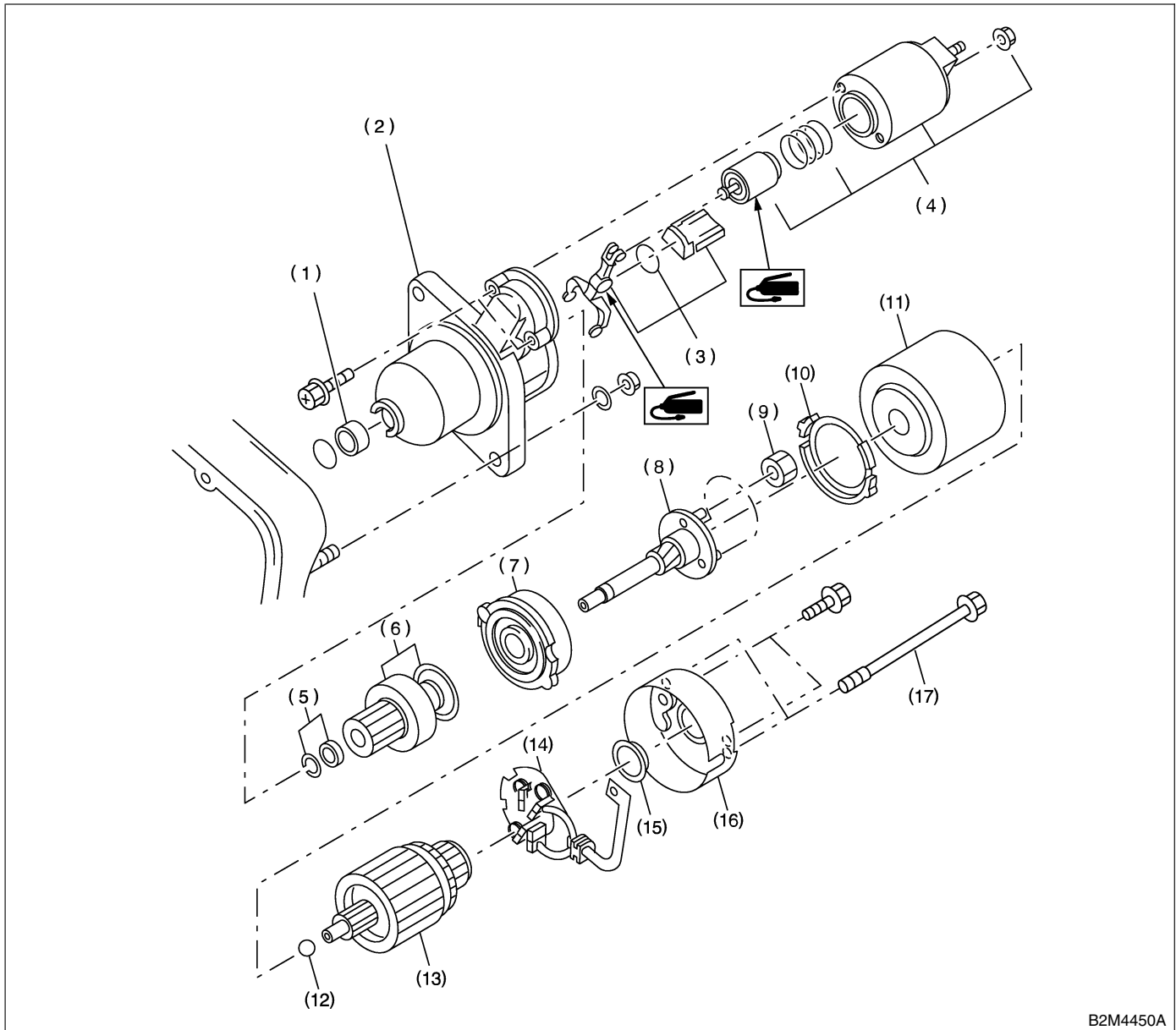
1. General Description S149001

A: SPECIFICATIONS S149001E49

Item		Designation	
Starter	Type	Reduction type	
	Model	TN128000-8321	
	Manufacturer	NIPPONDENSO TENNESSEE	
	Voltage and output	12 V — 1.4 kW	
	Direction of rotation	Counterclockwise (when observed from pinion)	
	Number of pinion teeth	9	
	No-load characteristics	Voltage	11 V
		Current	90 A or less
		Rotating speed	2,900 rpm or more
	Load characteristics	Voltage	8 V
		Current	370 A or less
		Torque	13.7 N·m (1.4 kgf-m, 10.1 ft-lb)
		Rotating speed	880 rpm or more
	Lock characteristics	Voltage	5 V
		Current	1,050 A or less
Torque		27.5 N·m (2.8 kgf-m, 20.3 ft-lb) or more	
Generator	Type	Rotating-field three-phase type	
	Model	LR190-742	
	Manufacturer	MITUBISHI ELECTRIC	
	Voltage and output	12 V — 100 A	
	Polarity on ground side	Negative	
	Rotating direction	Clockwise (when observed from pulley side.)	
	Armature connection	3-phase Y-type	
	Output current	1,500 rpm — 43 A or more	
		2,500 rpm — 76 A or more	
5,000 rpm — 100 A or more			
Regulated voltage	14.5 ^{+0.3} / _{-0.4} V [20°C (68°F)]		
Battery	Reserve capacity	110 min	
	Cold cranking amps	490 amp.	

B: COMPONENT S149001A05

1. STARTER S149001A0501



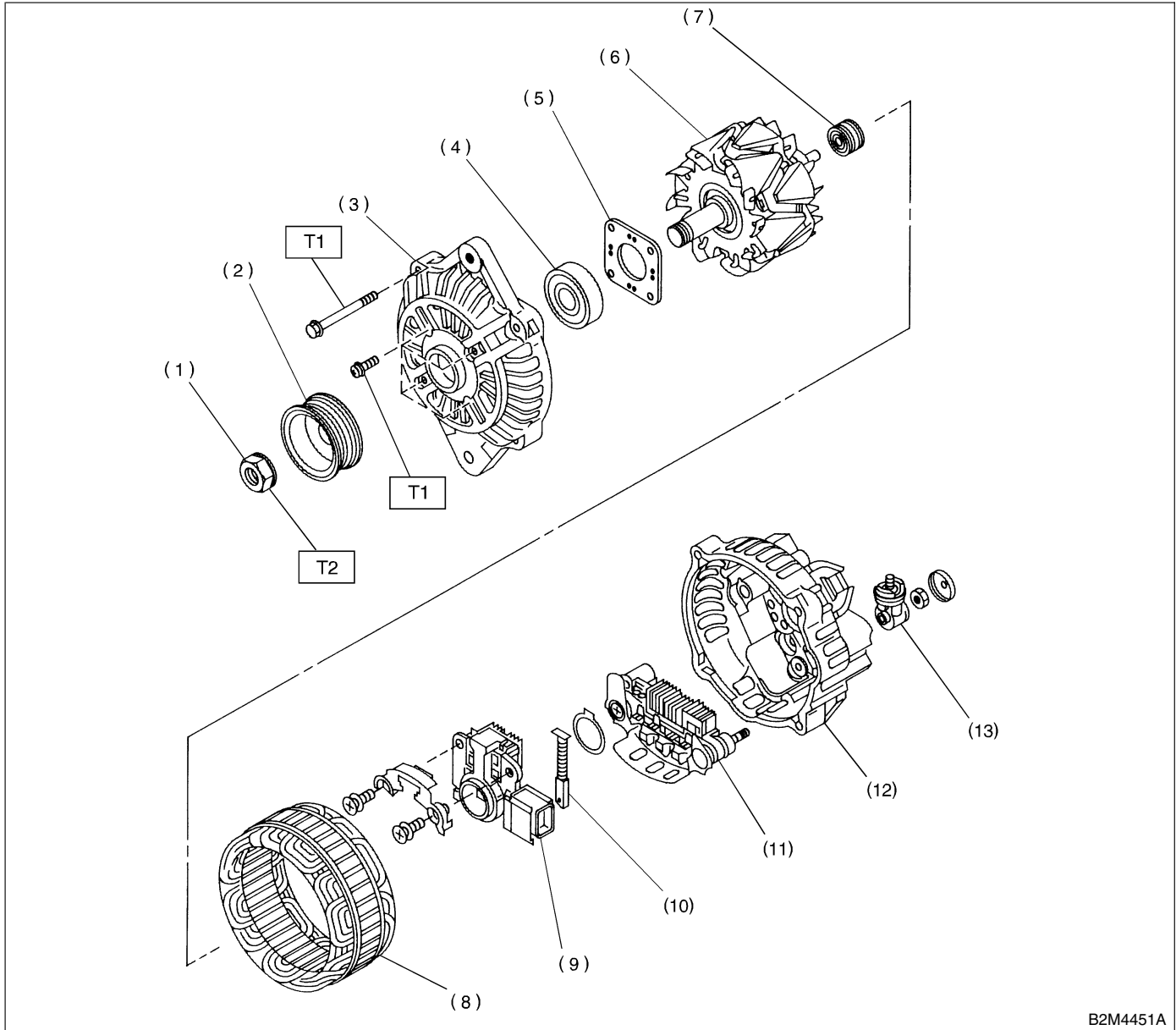
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- | | | |
|------------------------|------------------------|-------------------|
| (1) Sleeve bearing | (7) Internal gear ASSY | (13) Armature |
| (2) Front bracket | (8) Shaft ASSY | (14) Brush holder |
| (3) Lever set | (9) Gear ASSY | (15) Bearing |
| (4) Magnet switch ASSY | (10) Packing | (16) Rear bracket |
| (5) Stopper set | (11) Yoke | (17) Through bolt |
| (6) Overrunning clutch | (12) Ball | |

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2. GENERATOR S149001A0502



B2M4451A

- (1) Pulley nut
- (2) Pulley
- (3) Front cover
- (4) Ball bearing
- (5) Bearing retainer
- (6) Rotor
- (7) Bearing
- (8) Stator coil
- (9) IC regulator with brush
- (10) Brush
- (11) Rectifier
- (12) Rear cover

- (13) Terminal

Tightening torque: N·m (kgf·m, ft·lb)

T1: 3.1 (0.32, 2.3)

T2: 63.7 (6.5, 47.0)

SC(H6)-4

C: CAUTION S149001A03

- 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.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Before disconnecting electrical connectors of sensors or units, be sure to disconnect ground battery cable.