

General Description

STARTING/CHARGING SYSTEMS

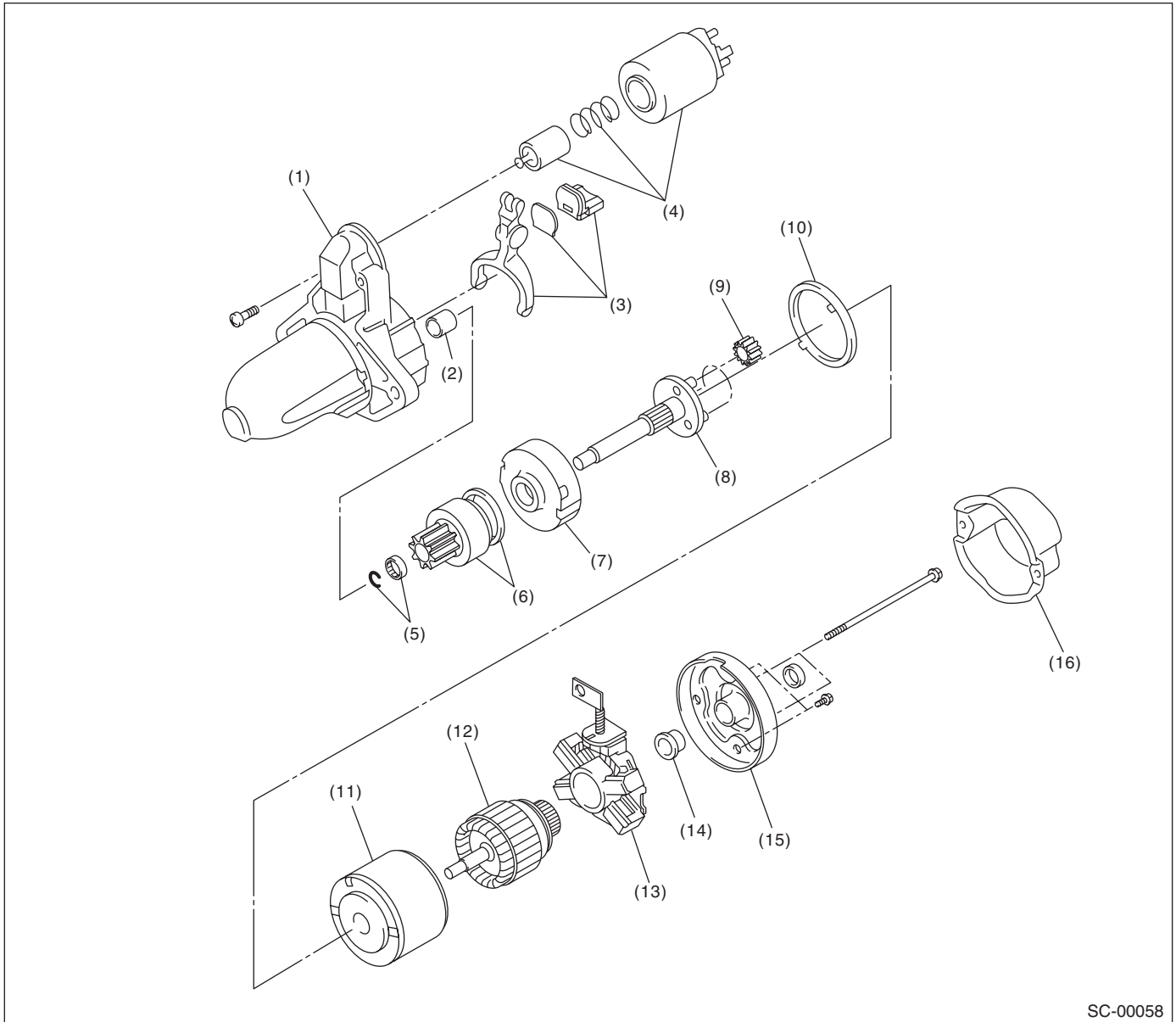
1. General Description

A: SPECIFICATION

Item		Specification		
Vehicle model		MT	AT	
Starter	Type	Reduction type		
	Model	M000T30471	M000T20171	
	Manufacturer	Mitsubishi Electric		
	Voltage and output	12 V — 1.0 kW	12 V — 1.4 kW	
	Direction of rotation	Counterclockwise (when observed from pinion)		
	Number of pinion teeth	8	9	
	No-load characteristics	Voltage	11 V	
		Current	95 A or less	90 A or less
		Rotating speed	More than 2,500 rpm	More than 2,000 rpm
	Load characteristics	Voltage	7.5 V	7.7 V
		Current	300 A	400 A
		Torque	8.84 N·m (0.90 kgf-m, 6.5 ft-lb) or more	16.7 N·m (1.70 kgf-m, 12.3 ft-lb) or more
		Rotating speed	More than 870 rpm	More than 710 rpm
	Lock characteristics	Voltage	4 V	3.5 V
		Current	680 A or less	960 A or less
Torque		17 N·m (1.73 kgf-m, 12.5 ft-lb) or more	31 N·m (3.16 kgf-m, 22.9 ft-lb) or more	
Generator	Type	Rotating-field three-phase type, voltage regulator built-in type, with load response control system		
	Model	Non-turbo	A2TG0391	
		Turbo	A3TG0491	
	Manufacturer	Mitsubishi Electric		
	Voltage and output	Non-turbo	12 V — 90 A	
		Turbo	12 V — 110 A	
	Polarity on ground side	Negative		
	Direction of rotation	Clockwise (when observed from pulley side)		
	Armature connection	3-phase Y-type		
	Output current	Non-turbo	1,500 rpm — 40 A or more 2,500 rpm — 74 A or more 5,000 rpm — 84 A or more	
Turbo		1,500 rpm — 50 A or more 2,500 rpm — 91 A or more 5,000 rpm — 105 A or more		
Regulated voltage	14.1 — 14.8 V [20°C (68°F)]			
Battery	Voltage and capacity	12V-48AH (55D23L)	12V-52AH (75D23L)	

B: COMPONENT

1. STARTER



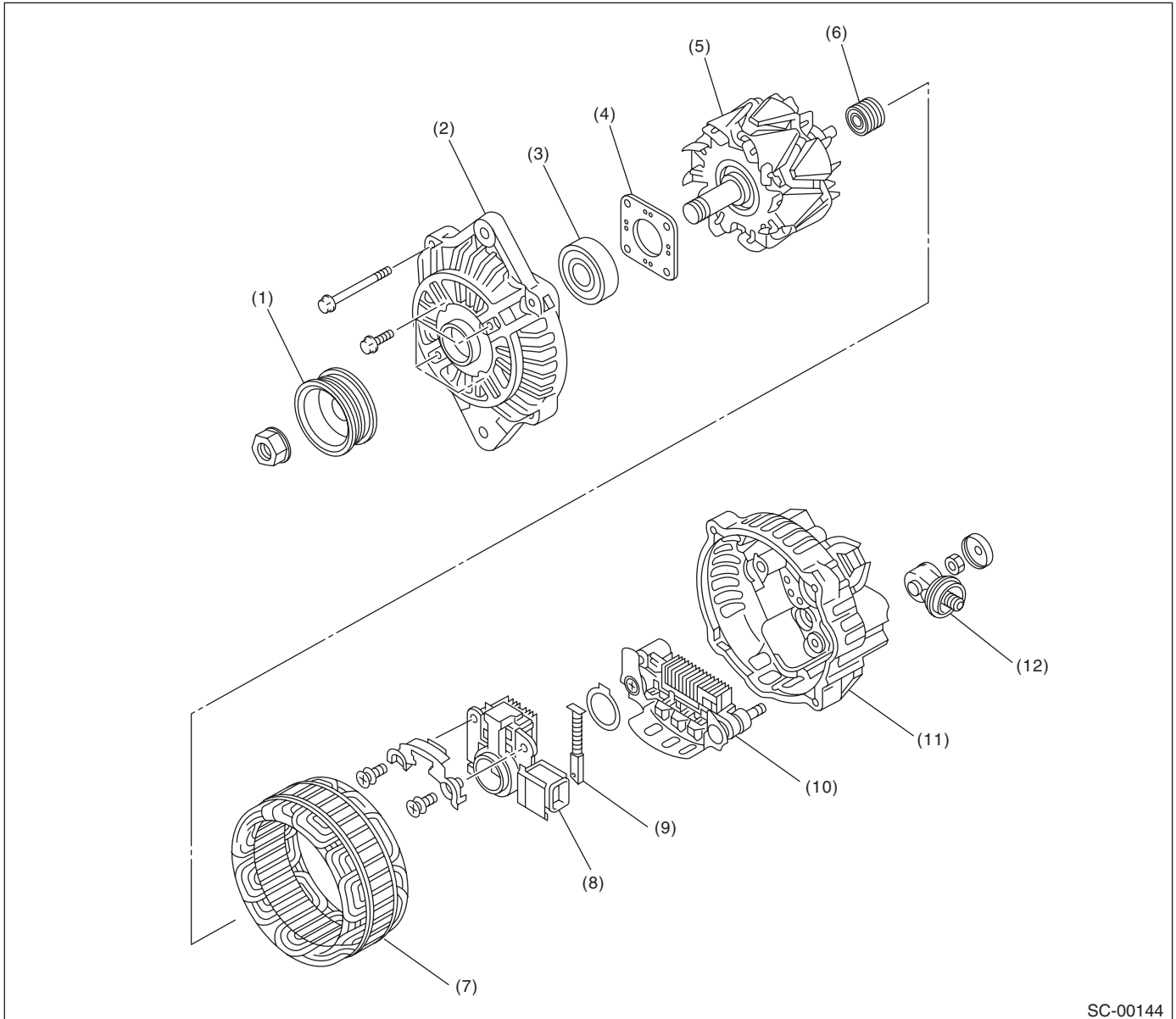
SC-00058

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

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2. GENERATOR



SC-00144

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

C: CAUTION

- Wear appropriate work clothing, including a cap, protective goggles and protective shoes when performing any work.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust and dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly and replacement.
- Vehicle components are extremely hot after driving. Be wary of receiving burns from heated parts.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or rigid racks at the specified points.
- Before disconnecting connectors of sensors or units, be sure to disconnect the ground cable from the battery.