

# SERVICE SPECIFICATIONS

## SERVICE DATA

Starter	Rated voltage and output power		12V 1.2 kW, 1.4 kW, 1.6 kW
	No-load characteristics	Current	90 A or less at 11.5 V
	1.0 kW type	rpm	3,000 rpm or more
	1.4 kW, 1.6 kW type	rpm	3,500 rpm or more
	Brush length		
	1.0 kW type	STD	13.5 mm (0.531 in.)
		Limit	8.5 mm (0.335 in.)
	1.4 kW, 1.6 kW type	STD	15.5 mm (0.610 in.)
		Limit	8.5 mm (0.335 in.)
	Commutator		
	Outer diameter	STD	30 mm (1.18 in.)
		Limit	29 mm (1.14 in.)
	Undercut depth	STD	0.6 mm (0.024 in.)
		Limit	0.2 mm (0.008 in.)
	Circuit runout	Limit	0.05 mm (0.002 in.)
	Spring installed load	STD	18–24 N (1.79–2.41 kgf, 3.9–5.3 lbf)
		Limit	12 N (1.2 kgf, 2.6 lbf)

## TORQUE SPECIFICATIONS

Part tightened	N·m	kgf·cm	ft·lbf
Starter Housing X Magnetic switch (22R-E, 1.4 kW)	5.9	60	52 in.·lbf
Starter Housing X Magnetic switch (Others)	9.3	95	82 in.·lbf
Magnetic switch terminal nut	7.9	81	70
Starter Housing X End Frame (22R-E, 1.4 kW)	5.9	60	52 in.·lbf
Starter Housing X End Frame (Others)	9.3	95	82 in.·lbf
Starter mounting bolt	39	400	29