

SERVICE SPECIFICATIONS

SERVICE DATA

Starter (1.4 kW type)	Rated voltage and output power		12 V 1.4 kW
	No-load characteristics	Current	90 A or less at 11.5 V
		rpm	3,000 rpm or more
	Brush length	STD	15.0 mm (0.591 in.)
		Limit	8.0 mm (0.315 in.)
	Spring installed load		9.8 – 16.7 N (1.00 – 1.70 kgf, 2.2 – 3.7 lbf)
	Commutator		
	Diameter	STD	30.0 mm (1.181 in.)
		Limit	29.0 mm (1.412 in.)
	Undercut depth	STD	0.6 mm (0.024 in.)
		Limit	0.2 mm (0.008 in.)
	Circle runout	Limit	0.05 mm (0.0020 in.)
Starter (2.0 kW type)	Rated voltage and output power		12 V 2.0 kW
	No-load characteristics	Current	100 A or less at 11.5 V
		rpm	2,500 rpm or more
	Brush length	STD	15.0 mm (0.591 in.)
		Limit	9.0 mm (0.354 in.)
	Spring installed load		12.7 – 24.5 N (1.30 – 2.50 kgf, 2.7 – 5.3 lbf)
	Commutator		
	Diameter	STD	35.0 mm (1.38 in.)
		Limit	34.0 mm (1.34 in.)
	Undercut depth	STD	0.7 mm (0.024 in.)
		Limit	0.2 mm (0.008 in.)
	Circle runout	Limit	0.05 mm (0.0020 in.)

TORQUE SPECIFICATIONS

Part tightened		N·m	kgf·cm	ft·lbf
Starter mounting bolt		39	400	29
Starter wire mounting nut		8.8	90	78 in·lbf
End cover x Field frame	1.4 kW type	1.5	15	13 in·lbf
	2.0 kW type	3.8	40	35 in·lbf
Starter housing x Magnetic switch	1.4 kW type	5.9	60	52 in·lbf
	2.0 kW type	9.3	95	82 in·lbf
Field frame x Armature assembly	1.4 kW type	5.9	60	52 in·lbf
	2.0 kW type	9.3	95	82 in·lbf
Lead wire x Terminal C of starter	1.4 kW type	7.9	80	70 in·lbf
	2.0 kW type	5.4	55	48 in·lbf