

# STARTING (5VZ-FE)

## SERVICE DATA

SS01A-07

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	15.5 mm (0.610 in.)
		Minimum	10.0 mm (0.394 in.)
	Spring installed load	STD	17.6 – 23.5 N (1.80 – 2.40 kgf, 4.0 – 5.3 lbf)
		Minimum	11.8 N (1.20 kgf, 2.6 lbf)
	Commutator		
	Diameter	STD	30 mm (1.180 in.)
		Minimum	29 mm (1.140 in.)
Starter (1.8 kW type)	Undercut depth	STD	0.6 mm (0.024 in.)
		Minimum	0.2 mm (0.008 in.)
	Circle runout	Maximum	0.05 mm (0.0020 in.)
	Magnetic switch		
	Contact plate for wear	Maximum	0.9 mm (0.035 in.)
	Rated voltage and output power		12 V 1.8 kW
	No-load characteristics	Current	100 A or less at 11.5 V
		rpm	2,500 rpm or more
	Shunt coil resistance at 20°C (68°F)		1.4 – 1.9 Ω
	Brush length	STD	15.0 mm (0.591 in.)
		Minimum	9.0 mm (0.354 in.)
	Spring installed load	STD	21.5 – 27.5 N (2.20 – 2.80 kgf, 4.9 – 6.2 lbf)
		Minimum	12.7 N (1.30 kgf, 2.7 lbf)
	Commutator		
	Diameter	STD	35 mm (1.378 in.)
		Minimum	34 mm (1.339 in.)
	Undercut depth	STD	0.7 mm (0.028 in.)
		Minimum	0.2 mm (0.008 in.)
	Circle runout	Maximum	0.05 mm (0.0020 in.)
	Magnetic switch		
	Contact plate for wear	Maximum	0.9 mm (0.035 in.)