

# STARTING (2UZ-FE)

## SERVICE DATA

SS00D-03

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	Standard	15.5 mm (0.610 in.)
		Minimum	10.0 mm (0.394 in.)
	Spring installed load	Standard	17.6 to 23.5 N (1.8 to 2.4 kgf, 4.0 to 5.3 lbf)
		Minimum	11.8 N (1.20 kgf, 2.7 lbf)
	Commutator		
	Diameter	Standard	30.0 mm (1.181 in.)
		Minimum	29.0 mm (1.142 in.)
	Undercut depth	Standard	0.6 mm (0.024 in.)
		Minimum	0.2 mm (0.008 in.)
	Circle runout	Maximum	0.05 mm (0.0020 in.)
Starter (2.0 kW type)	Magnetic switch		
	Contact plate for wear	Maximum	0.9 mm (0.035 in.)
	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	Standard	15.0 mm (0.591 in.)
		Minimum	9.0 mm (0.354 in.)
	Spring installed load	Standard	21.5 to 27.5 N (2.2 to 2.8 kgf, 4.8 to 6.2 lbf)
		Minimum	12.7 N (1.3 kgf, 2.9 lbf)
	Commutator		
	Diameter	Standard	35.0 mm (1.378 in.)
		Minimum	34.0 mm (1.339 in.)
	Undercut depth	Standard	0.7 mm (0.028 in.)
		Minimum	0.2 mm (0.008 in.)
	Circle runout	Maximum	0.05 mm (0.0020 in.)
	Field frame		
	Shunt coil resistance	at 20°C (68°F)	1.5 to 1.9 Ω
	Magnetic switch		
	Contact plate for wear	Maximum	0.9 mm (0.035 in.)