

SERVICE SPECIFICATIONS

SERVICE DATA

Starter	Rated voltage and output power		12 V 2.0 kW	
	No-load characteristic	Current	120 A or less at 11.5 V	
		rpm	3,300 rpm or more at 11.5 V	
	Brush length	STD	15.0–15.5 mm	0.591–0.610 in.
		Limit	9.5 mm	0.374 in.
	Commutator	Outer diameter	STD	35.0 mm
			Limit	34.0 mm
		Undercut depth	STD	0.7–0.9 mm
			Limit	0.2 mm
		Circle runout	Limit	0.05 mm
	Spring installed load		26–32 N (2.7–3.3 kgf, 6.0–7.3 lbf)	

TORQUE SPECIFICATIONS

Part tightened	N·m	kgf·cm	ft·lbf
Starter X Cylinder block	39	400	29
Rear water by-pass joint X Cylinder head	18	185	13
Water by-pass pipe X Cylinder block	18	185	13
Intake manifold X Cylinder head	18	185	13
Fuel return pipe X Fuel pressure regulator	35	360	26
Fuel inlet hose X LH delivery pipe	39	400	29
for SST	33	340	24
Air intake chamber X Intake manifold	18	185	13
EGR pipe X Air intake chamber	18	185	13
EGR pipe X RH cylinder head	18	185	13
Cold start injector tube X RH delivery pipe	15	150	11
Throttle body X Air intake chamber	18	185	13