1ZZ-FE STARTING

SERVICE DATA

Starter assembly		
Specified current		90 A or less at 11.5 V
Starter relay assembly		
Resistance (3 - 5)	Standard	10 kΩ or higher Below 1 Ω (Apply battery voltage to terminals 1 and 2)
Magnetic switch resistance	Terminal 50 - C	1 Ω or lower
	Terminal 50 - Switch body	2 Ω or lower
Starter armature		
Resistance	Segments	1 Ω or lower
	Commutator-Armature coil	10 kΩ or higher
Commutator depth	Standard	3.1 mm (0.122 in.)
	Maximum	3.8 mm (0.150 in.)
Starter commutator end frame assembly		
Brush length	Standard	9.0 mm (0.354 in.)
	Minimum	4.0 mm (0.158 in.)
Resistance Positive (+) brush - Positive (-) brush	Standard	10 kΩ or higher
Snap ring		
Length	Maximum	5.0 mm (0.197 in.)
Ignition or starter switch assembly		
Resistance	LOCK	10 kΩ or higher
	ACC	Below 1 Ω
	ON	Below 1 Ω
	START	Below 1 Ω

TORQUE SPECIFICATIONS

Part Tightened	N*m	kgf*cm	ft*lbf
Lead wire x Terminal C	10	102	7
Starter assembly x Transaxle housing assembly	37	378	27
Starter wire x Starter assembly	9.8	100	7
Battery negative terminal x Battery	5.4	55	48 in.*lbf
Starter commutator end frame assembly x Starter drive housing assembly	6.0	61	53 in.*lbf
Magnet switch x Starter drive housing assembly	7.5	76	66 in.*lbf