

1GR-FE CHARGING

SERVICE DATA

Battery	Voltage		at 20°C (68°F)	12.6 to 12.9 V	
Voltage regulator	Regulating voltage			13.2 to 14.8 V	
Generator (DENSO made)	Generator brush holder assembly	Brush length	Standard	10.5 mm (0.413 in.)	
			Minimum	4.5 mm (0.177 in.)	
	Generator rotor assembly	Resistance	at 20°C (68°F)	2.3 to 2.7 Ω	
		Slip ring diameter	Standard	14.2 to 14.4 mm (0.559 to 0.567 in.)	
	Minimum		14.0 mm (0.551 in.)		
Generator (BOSCH made)	Generator rotor assembly	Rotor coil resistance	at 20°C (68°F)	2.27 to 2.53 Ω	
		Slip ring diameter	Standard	15.3 to 15.5 mm (0.602 to 0.610 in.)	
			Minimum	14.9 mm (0.587 in.)	
	Starter sub-assembly generator with rectifier	Positive rectifier	Positive (+) tester probe - Positive (+) terminal		Below 1 Ω
			Negative (-) tester probe - Rectifier terminal		
			Negative (-) tester probe - Positive (+) terminal	10 kΩ or higher	
		Negative rectifier	Positive (+) tester probe - Negative (-) terminal		10 kΩ or higher
			Negative (-) tester probe Rectifier terminal		
			Negative (-) tester probe - Negative (-) terminal		
		Positive (+) tester probe - Rectifier terminal		Below 1 Ω	
	Starter for open circuit	Between rectifier terminals		Below 1 Ω	
Generator brush holder assembly	Brush exposed length	Minimum		6.0 mm (0.236 in.)	

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TORQUE SPECIFICATIONS

Part Tightened	N*m	kgf*cm	ft.*lbf	
Generator assembly x V-ribbed belt tensioner and cylinder head	43	438	32	
Generator assembly x Wire harness clamp bracket	8.0	82	71 in.*lbf	
Generator assembly x Terminal B	9.8	100	7	
Wire harness stay x Body	8.0	82	71 in.*lbf	
V-bank cover x Intake air surge tank sub-assembly and Air cleaner assembly	7.5	76	66 in.*lbf	
Engine under cover sub-assembly No. 1 x Frame assembly	30	306	22	
Engine under cover assembly rear x Frame assembly	30	306	22	
Retainer plate x Drive end frame assembly generator (Denso made)	2.2	22	19 in.*lbf	
Generator coil assembly x Drive frame assembly generator (Denso made)	5.8	59	51 in.*lbf	
Generator brush holder assembly x Generator coil assembly (Denso made)	1.8	18	16 in.*lbf	
Generator rear end cover x Generator coil assembly (Denso made)	4.6	47	41 in.*lbf	
Generator pulley x Generator rotor assembly (Denso made)	111	1,125	81	
Pulley x Generator rotor assembly (BOSCH made)	65	663	48	
Starter sub-assembly generator w/ rectifier x Drive end frame assembly (BOSCH made)	4.3	44	38 in.*lbf	
Regulator sub-assembly generator w/ brush x Starter sub-assembly generator w/ rectifier (BOSCH made)	Screw A	2.5	25	22 in.*lbf
	Screw B	1.2	12	11 in.*lbf
Generator rear end cover x Starter sub-assembly generator w/ rectifier (BOSCH made)	Nut A	19	194	14
	Nut B	12	122	9.0
	Screw	2.8	29	25 in.*lbf

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