1ZZ-FE CHARGING

SERVICE DATA

Battery		
Voltage	Standard	12.5 to 12.9 V at 20°C (68°F)
Charging circuit without load		
Amperage	Standard	10 A or less
Voltage	Standard	12.9 to 14.9 V
Charging circuit with load		
Amperage	Standard	30 A or more
Generator brush holder assembly		
Brush length	Standard	9.5 to 11.5 mm (0.374 to 0.453 in.)
	Minimum	4.5 mm (0.177 in.)
Generator regulator assembly		
Resistance	B and F	When the positive and negative poles of terminals F and B are switched over, there is a resistance of below 1 Ω in one direction but 10 kΩ or higher in the other direction
	E and F	When the positive and negative poles of terminals F and E are switched over, there is a resistance of below 1 Ω in one direction but 10 kΩ or higher in the other direction
Generator holder w/ rectifier		
Resistance	Positive (+) and each rectifier terminal	When the positive and negative poles of the positive (+) terminal and each rectifier terminal are switched over, there is a resistance of below 1 Ω in one direction but 10 kΩ or higher in the other direction
	Negative (-) and each rectifier terminal	When the positive and negative poles of the negative (-) terminal and each rectifier terminal are switched over, there is a resistance of below 1 Ω in one direction but 10 kΩ or higher in the other direction
Generator rotor assembly		
Resistance	at 20°C (68°F)	2.1 to 2.5 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 rectifier end frame		
Resistance	Coil wires	Below 1 Ω
	Coil wire and body	1 MΩ or higher

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TORQUE SPECIFICATIONS

Part Tightened		N*m	kgf*cm	ft*lbf
Battery negative terminal x Battery		5.4	55	48 in.*lbf
Generator assembly x Engine mounting bracket RH		25	250	18
Generator assembly x Timing chain cover sub-assembly		54	550	40
Generator wire x Generator assembly		9.8	100	7
Retainer plate x Generator drive end frame		3.0	31	27 in.*lbf
Generator rectifier end frame x Generator drive end frame		4.5	46	40 in.*lbf
Generator cord clip x Generator drive end frame		5.4	55	48 in.*lbf
Generator holder w/ rectifier x Generator drive end frame		2.9	30	26 in.*lbf
Generator regulator assembly x Generator rectifier end frame		2.0	20	18 in.*lbf
Generator brush holder assembly x Generator rectifier end frame		2.0	20	18 in.*lbf
Generator rear end cover x Generator rectifier end frame		4.4	45	39 in.*lbf
Terminal plate x Generator rectifier end frame	Bolt	3.9	40	35 in.*lbf
	Nut	4.4	45	39 in.*lbf
Generator pulley x Generator rotor assembly		111	1,132	82

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