



# Standards and Service Limits

## Engine Electrical

Item	Measurement	Qualification	Standard or New	Service Limit			
Ignition coil	Rated voltage		12 V				
	Firing order		1-4-2-5-3-6				
Spark plug	Type	J32A1 engine	NGK: PZFR5F-11 DENSO: PKJ16CR-L11				
		J32A2 engine	NGK: PZFR6E-11 DENSO: PKJ20CR-M11				
	Gap		1.0-1.1 mm (0.039-0.043 in.)	1.3 mm (0.051 in.)			
Ignition timing		At idle (check the <i>red</i> mark)	M/T (in  or  Alternator	Output at 13.5 V and normal engine temperature	J32A1 engine, J32A2 engine (M/T)	105 A	
J32A2 engine (A/T)	120 A						
Coil (rotor) resistance	at 68°F (20°C)	2.9 kΩ					
Slip ring O.D.		14.4 mm (0.57 in.)	14.0 mm (0.55 in.)				
Brush length		10.5 mm (0.41 in.)	1.5 mm (0.06 in.)				
Brush spring tension		3.2 N (0.33 kgf, 0.73 lbs)					
Starter	Output		1.6 kW				
	Commutator mica depth		0.4-0.5 mm (0.016-0.020 in.)	0.15 mm (0.006 in.)			
	Commutator runout		0.02 mm (0.001 in.) max.	0.05 mm (0.002 in.)			
	Commutator O.D.		28.0-28.1 mm (1.102-1.106 in.)	27.5 mm (1.083 in.)			
	Brush length		15.8-16.2 mm (0.62-0.64 in.)	11.0 mm (0.43 in.)			
	Brush spring tension (new)		15.7-17.7 N (1.60-1.80 kgf, 3.53-3.97 lbs)				

## Engine Assembly

Item	Measurement	Qualification	Standard or New	Service Limit
Compression	Pressure Check at 200 rpm with wide open throttle (See Design Specs for ratio)	Minimum	930 kPa (9.5 kgf/cm <sup>2</sup> , 135 psi)	_____
		Maximum variation	200 kPa (2.0 kgf/cm <sup>2</sup> , 28 psi)	_____