Alternator Instructions

WOSP offer a complete range of alternators to suit the Classic Car and Motor Racing market. From our brand new high quality standard Lucas replacements and upgrades to the light-weight high output Nippon Denso range of race alternators. All our units are 100% brand new and give you the choice of fitment options, varying outputs, single wire hook-up's, positive earth variations and even units fully chromed for the ultimate show car! In addition to this large range of units we are also offering a complete range of spares including pulleys, alternator looms and voltage regulators.

Alternator Terminal Identification Chart:

Manufacturer	Battery	Earth	Field	Lamp	Ignition	Phase	CPU in	CPU out	Sense	Dummy
Delco	B+ / +	GRD	F	D+ / L / 1	I / IG	P / R / W	F		M / S / 2	D
Hitachi	B / A	E	F	L / +	IG / R	P / R / W	FR	G	S	D
Lucas	B+	B- / -	F	D+ / IND		STA			S	
Nippon Denso	B+ / B	E-	F	L	IG / R	P / R / W	FR	C	S	D

67% of all alternator failure is due to faulty or weak battery (batteries should be replaced every 3 years with the required correct cold cranking amps).
14% of all alternator failure is due to poor electrical connections, fuseable links, bad battery cables and bad grounds (cables can be tested by verifying that the voltage drop doesn't exceed ½ volt from end to end).
9% of all alternator failure is due to belt wear or improper adjustment (check for cracks, polished wear on belts and proper tension belts).
6% of all alternator failure is due to jump starting another car improperly (failure to disconnect connection on alternator may cause voltage spikes).
NOTE: Before installing alternator you must be certain of a fully charged battery.
NOTE: Never remove battery cable from battery to check charging system. This will cause damage to the alternator and computer system.

Charge Balance Calculation

Add up all power used by all continuous and prolonged loads. = P1 Watts
Add up all intermittent power loads and multiply by factor 0.1 = P2 Watts

Total Power = P1 + P2 Watts

Minimum charge current = $\frac{P1}{14V}$ Amps

Total charge current = $\frac{P1 + P2}{14V}$ Amps

- **Alternator output at idle should be 1.5 times minimum charge current.**
- **Desired alternator output should be 1.25-1.5 times total charge current.**

All WOSPERFORMANCE products are 100% brand new, outright, complete units and carry as standard a 12month warranty. In the unlikely event that you encounter any issues or problems with any of our products we insist you return them to the company of purchase for return and inspection. In most cases a replacement unit will be sent immediately. We rely on feedback from our customers in order to further develop each particular unit and installation and most importantly constantly improve quality.