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Professional racing Starters & alternators

Pulley Ratios

Check the performance curve, there you will find a plotted graph of the alternator output at 80F° and 220F° versus alternator rotor speed.

Using the following formulas, you can determine the correct alternator pulley size. Remember all units are rated up to 17000 rpms... so alternator speed may not be an issue.

Pulley Ratios • Alternator Speed

Alternator RPM
Two belts, one driving intermediate accessory pulley Fig. B
One belt drives all accessories Fig. A

$$= \frac{\text{Crank Pulley O.D.}}{\text{Alternator Pulley O.D.}} \times \text{Engine RPM (Tach)}$$

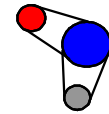


Fig. A

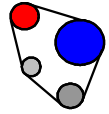


Fig. B

Alternator RPM
One belt drives crankshaft and accessory pulley.
Accessory changes O.D. and drives alternator Fig. C

$$= \frac{\text{Water Pump Pulley O.D.}}{\text{Alternator Pulley O.D.}} \times \text{Water Pump RPM}$$

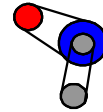


Fig. C

$$\frac{\text{Crank Pulley O.D.}}{\text{Water Pump Pulley O.D.}} \times \text{Engine RPM (Tach)} = \text{Water Pump RPM}$$

Once you determine the engine versus alternator speeds, check the performance curve to make sure the alternator's output is inside the speed required during low engine rpms. Change pulley size as necessary to maintain alternator minimum speed requirements based on your total amp load. You are ready to go.