



Street vehicle users (under 6,000 engine RPM's):

This alternator should not be allowed to exceed 6,000 engine RPM's at any time! Alternator components are not designed to withstand the increased stress resulting from excessive alternator RPM's.

Racing and Off-highway users (over 6,000 engine RPM's):

HITACHI recommends that you calculate your pulley ratio and multiply it times your highest expected engine RPM to determine if your alternator will operate within the acceptable range. Please use the information provided below to determine particular application's needs.

$$(\text{Pulley ratio}) \times (\text{Maximum Engine RPM}) = \text{Maximum Alternator RPM}$$

$$\text{Example: } (2.95) \times (6000 \text{ RPM}) = 17,700 \text{ maximum alternator RPM}$$

The pulley ratio is an important consideration in selecting an alternator pulley, since it is used to determine the proper outer diameter. The pulley ratio is the ratio between the outer diameter of the drive pulley and the alternator pulley.

Formula	
Pulley Ratio =	$\frac{\text{Drive Pulley Diameter}}{\text{Alternator Pulley Diameter}}$

Example	
2.95 to 1 ratio =	$\frac{7'' \text{ drive pulley diameter}}{2\text{-}3/8'' \text{ alternator pulley diameter}}$

Alternator revolution speed should never exceed 18,000 at any time!

If your situation allows for greater than 18,000 alternator rpm's, Hitachi recommends increasing the alternator pulley diameter or decreasing the drive pulley diameter to compensate. Please contact Hitachi to discuss your alternator pulley options. If pulley ratio compensation is not an option, it is recommended that some type of engine revolution limiter device be used.

NOTE: Hitachi is not responsible for vehicle damage, personal injury or any other damage resulting from improper use of this product.

NOTICE: Only qualified personnel or experienced mechanics familiar with the disassembly and reassembly of the alternator should be allowed to replace the alternator pulley.

Tech Hot Line 310-343-7330 • Monday - Friday 8 am – 5 pm (PST)