Forklift Alternators

Forklift Alternators - A device used so as to convert mechanical energy into electric energy is known as an alternator. It could carry out this function in the form of an electrical current. An AC electrical generator could in essence also be termed an alternator. Then again, the word is usually utilized to refer to a small, rotating device powered by internal combustion engines. Alternators that are located in power stations and are powered by steam turbines are called turbo-alternators. Most of these machines utilize a rotating magnetic field but from time to time linear alternators are also used.

A current is induced within the conductor whenever the magnetic field all-around the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core known as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is generated as the mechanical input makes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Usually, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field produces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these use slip rings and brushes with a rotor winding or a permanent magnet to be able to produce a magnetic field of current. Brushlees AC generators are usually located in larger devices like for example industrial sized lifting equipment. A rotor magnetic field may be produced by a stationary field winding with moving poles in the rotor. Automotive alternators usually utilize a rotor winding which allows control of the voltage induced by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet machines avoid the loss because of the magnetizing current within the rotor. These machines are limited in size due to the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.