Alternator for Forklift

Forklift Alternator - A device used to change mechanical energy into electrical energy is referred to as an alternator. It could perform this function in the form of an electrical current. An AC electrical generator can in principal also be referred to as an alternator. Then again, the word is usually utilized to refer to a rotating, small device driven by internal combustion engines. Alternators that are located in power stations and are driven by steam turbines are called turbo-alternators. Nearly all of these devices use a rotating magnetic field but from time to time linear alternators are used.

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

"Brushless" alternators - these make use of slip rings and brushes with a rotor winding or a permanent magnet so as to produce a magnetic field of current. Brushlees AC generators are most often found in larger machines such as industrial sized lifting equipment. A rotor magnetic field can be generated by a stationary field winding with moving poles in the rotor. Automotive alternators often make use of a rotor winding that allows control of the voltage induced by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current inside the rotor. These devices are restricted in size because of the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.