Forklift Alternators

Forklift Alternator - A device utilized to be able to change mechanical energy into electric energy is referred to as an alternator. It can perform this function in the form of an electric current. An AC electrical generator could in essence be referred to as an alternator. Then again, the word is usually used to refer to a small, rotating machine driven by internal combustion engines. Alternators that are placed in power stations and are driven by steam turbines are called turbo-alternators. The majority of these machines use a rotating magnetic field but at times linear alternators are also utilized.

A current is produced in the conductor whenever the magnetic field surrounding the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core known as 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 turn. This rotating magnetic field produces an AC voltage in the stator windings. Typically, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field generates 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these utilize brushes and slip rings together with a rotor winding or a permanent magnet to be able to generate a magnetic field of current. Brushlees AC generators are usually found in bigger machines like industrial sized lifting equipment. A rotor magnetic field could be produced by a stationary field winding with moving poles in the rotor. Automotive alternators often utilize a rotor winding which allows control of the voltage generated by the alternator. It does this by varying the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current inside the rotor. These devices are limited in size because of the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.