Forklift Alternator

Forklift Alternators - A machine used to be able to transform mechanical energy into electric energy is actually called an alternator. It can perform this function in the form of an electrical current. An AC electrical generator can in essence also be called an alternator. Then again, the word is typically used to refer to a small, rotating machine powered by internal combustion engines. Alternators which are situated in power stations and are driven by steam turbines are actually known as turbo-alternators. The majority of these devices use a rotating magnetic field but occasionally linear alternators are also utilized.

A current is induced inside the conductor when the magnetic field around the conductor changes. Generally 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. When the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input causes the rotor to revolve. This rotating magnetic field generates an AC voltage in the stator windings. Normally, 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 utilize slip rings and brushes with a rotor winding or a permanent magnet to be able to induce a magnetic field of current. Brushlees AC generators are normally located in larger devices like for instance industrial sized lifting equipment. A rotor magnetic field could be produced by a stationary field winding with moving poles in the rotor. Automotive alternators usually use a rotor winding which allows control of the voltage induced by the alternator. This is done by varying the current in the rotor field winding. Permanent magnet machines avoid the loss because of the magnetizing current within the rotor. These machines are restricted in size due to the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.