Forklift Alternators

Forklift Alternators - A device used to convert mechanical energy into electrical energy is actually called an alternator. It could perform this function in the form of an electric current. An AC electrical generator could basically also be labeled an alternator. Nonetheless, the word is typically utilized to refer to a small, rotating machine powered by internal combustion engines. Alternators which are placed in power stations and are driven by steam turbines are actually referred to as turbo-alternators. Most of these devices utilize a rotating magnetic field but sometimes linear alternators are likewise used.

If the magnetic field around a conductor changes, a current is induced in the conductor and this is how alternators produce their electrical energy. Normally the rotor, which is actually a rotating magnet, revolves within a stationary set of conductors wound in coils located on an iron core which is actually called the stator. Whenever 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. Usually, 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 use brushes and slip rings along with a rotor winding or a permanent magnet to be able to generate a magnetic field of current. Brushlees AC generators are usually located in bigger devices like 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 use a rotor winding that allows control of the voltage generated by the alternator. This is done 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 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.