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 electric current. An AC electrical generator can in essence likewise be called an alternator. Nonetheless, the word is normally used to refer to a small, rotating machine driven by internal combustion engines. Alternators that are located in power stations and are powered by steam turbines are actually known as turbo-alternators. Most of these devices use a rotating magnetic field but at times linear alternators are utilized.

If the magnetic field around a conductor changes, a current is induced within the conductor and this is how alternators generate their electricity. Normally the rotor, which is actually a rotating magnet, turns within a stationary set of conductors wound in coils located on an iron core which is referred to as the stator. When the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input makes the rotor to turn. This rotating magnetic field produces 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 along with a rotor winding or a permanent magnet so as to produce a magnetic field of current. Brushlees AC generators are normally found in bigger devices like for example 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 utilize a rotor winding that allows control of the voltage generated by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet devices avoid the loss because of the magnetizing current inside the rotor. These devices are restricted 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.