Forklift Alternators

Forklift Alternator - An alternator is a device which converts mechanical energy into electric energy. This is done in the form of an electrical current. Basically, an AC electric generator can likewise be labeled an alternator. The word typically refers to a small, rotating machine powered by automotive and different internal combustion engines. Alternators which are placed in power stations and are driven by steam turbines are referred to as turbo-alternators. Nearly all of these machines make use of a rotating magnetic field but from time to time linear alternators are also utilized.

When the magnetic field all-around a conductor changes, a current is generated within the conductor and this is how alternators produce their electricity. Usually the rotor, which is a rotating magnet, turns within a stationary set of conductors wound in coils located on an iron core which is called the stator. Whenever 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 generates an AC voltage in the stator windings. Typically, 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 induce a magnetic field of current. Brushlees AC generators are usually located in larger 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 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 within the rotor. These devices are limited in size because of the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.