

Forklift Alternators

Forklift Alternators - A machine utilized in order to transform mechanical energy into electrical energy is referred to as an alternator. It could carry out this function in the form of an electrical current. An AC electrical generator can basically likewise be termed an alternator. Nonetheless, the word is usually used to refer to a rotating, small device driven by internal combustion engines. Alternators which 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 from time to time linear alternators are likewise used.

When the magnetic field surrounding a conductor changes, a current is generated in the conductor and this is how alternators produce their electrical energy. Usually 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 known as the stator. When the field cuts across the conductors, an induced electromagnetic field also 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. Normally, 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 use brushes and slip rings with a rotor winding or a permanent magnet in order to generate a magnetic field of current. Brushless AC generators are usually located in larger devices like for instance industrial sized lifting equipment. A rotor magnetic field could be induced by a stationary field winding with moving poles in the rotor. Automotive alternators normally make use of a rotor winding which allows control of the voltage generated by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet machines avoid the loss because of the magnetizing current within the rotor. These devices are limited in size due to the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.