

Alternator for Forklift

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

A current is generated within the conductor whenever the magnetic field surrounding 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 called the stator. When the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is produced as the mechanical input makes the rotor to turn. This rotating magnetic field produces an AC voltage in the stator windings. Typically, 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 together with a rotor winding or a permanent magnet in order to generate a magnetic field of current. Brushless AC generators are normally found in larger machines like industrial sized lifting equipment. A rotor magnetic field could be generated by a stationary field winding with moving poles in the rotor. Automotive alternators often utilize a rotor winding that allows control of the voltage produced 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 in 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.