

Alternator for Forklift

Forklift Alternator - A device utilized so as to transform mechanical energy into electrical energy is referred to as an alternator. It can perform this function in the form of an electrical current. An AC electric generator can in principal also be called an alternator. However, the word is usually used to refer to a small, rotating device driven by internal combustion engines. Alternators which are located in power stations and are powered by steam turbines are known as turbo-alternators. Most of these machines use a rotating magnetic field but every so often linear alternators are likewise utilized.

A current is induced within the conductor when the magnetic field all-around the conductor changes. Generally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core known as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field or EMF is produced as the mechanical input makes the rotor to turn. 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 produces 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 along with a rotor winding or a permanent magnet to be able to generate a magnetic field of current. Brushless AC generators are most often found in bigger devices such as industrial sized lifting equipment. A rotor magnetic field can be induced by a stationary field winding with moving poles in the rotor. Automotive alternators normally utilize a rotor winding that allows control of the voltage generated by the alternator. This is done 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 because of the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.