

Alternator for Forklift

Alternator for Forklift - A device used so as to convert mechanical energy into electrical energy is called an alternator. It can perform this function in the form of an electrical current. An AC electric generator can in principal be called an alternator. Nevertheless, the word is typically used to refer to a small, rotating machine driven by internal combustion engines. Alternators that are situated in power stations and are powered by steam turbines are actually called turbo-alternators. Most of these machines utilize a rotating magnetic field but every now and then linear alternators are likewise utilized.

A current is induced inside the conductor when the magnetic field 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 referred to as the stator. When the field cuts across the conductors, an induced electromagnetic field also called EMF is generated as the mechanical input causes 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 induces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these use slip rings and brushes with a rotor winding or a permanent magnet to be able to generate a magnetic field of current. Brushless AC generators are usually 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 use a rotor winding that allows control of the voltage generated by the alternator. This is done by varying the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current inside the rotor. These machines are restricted in size due to the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.