

Alternator for Forklift

Forklift Alternators - A device used in order to convert mechanical energy into electric energy is known as an alternator. It can perform this function in the form of an electrical current. An AC electrical generator can in essence likewise be labeled an alternator. Nevertheless, the word is typically utilized to refer to a small, rotating machine driven by internal combustion engines. Alternators which are placed in power stations and are driven by steam turbines are referred to as turbo-alternators. Most of these machines use a rotating magnetic field but from time to time linear alternators are also used.

A current is induced in the conductor whenever the magnetic field around the conductor changes. Normally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core called the stator. If the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input makes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Usually, there are 3 sets of stator windings. These are physically offset so that the rotating magnetic field induces 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field could be caused by production of a lasting magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are usually found in bigger machines compared to those used in automotive applications. A rotor magnetic field may 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 generated by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current within the rotor. These machines 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.