

Forklift Alternator

Alternator for Forklift - A device used in order to transform mechanical energy into electric energy is known as an alternator. It can perform this function in the form of an electric current. An AC electric generator could basically also be termed an alternator. However, the word is typically utilized to refer to a small, rotating machine driven by internal combustion engines. Alternators which are located in power stations and are powered by steam turbines are actually known as turbo-alternators. Nearly all of these devices use a rotating magnetic field but every now and then linear alternators are likewise used.

Whenever the magnetic field surrounding a conductor changes, a current is generated within the conductor and this is actually how alternators produce their electricity. Often the rotor, which is a rotating magnet, revolves within a stationary set of conductors wound in coils located on an iron core which is referred to as the stator. When the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input causes 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 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 can be made by production of a lasting magnet or by a rotor winding energized with direct current through brushes and slip rings. Brushless AC generators are normally found in bigger machines compared to those utilized in automotive applications. A rotor magnetic field can be generated by a stationary field winding with moving poles in the rotor. Automotive alternators usually make use of a rotor winding which allows control of the voltage generated by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet devices avoid the loss because of the magnetizing current within the rotor. These devices are restricted in size due to the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.