Alternator for Forklift

Forklift Alternators - A device utilized so as to convert mechanical energy into electrical energy is actually called an alternator. It can perform this function in the form of an electrical current. An AC electrical generator can in principal be labeled an alternator. Nonetheless, the word is usually utilized to refer to a small, rotating machine powered by internal combustion engines. Alternators that are located in power stations and are powered by steam turbines are actually referred to as turbo-alternators. The majority of these devices utilize a rotating magnetic field but every so often linear alternators are also utilized.

Whenever the magnetic field surrounding a conductor changes, a current is produced within the conductor and this is the way alternators produce their electrical energy. Usually the rotor, which is a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is called the stator. Whenever the field cuts across the conductors, an induced electromagnetic field also called EMF is produced as the mechanical input causes 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 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 normally located in larger machines compared to those utilized in automotive applications. A rotor magnetic field may be induced by a stationary field winding with moving poles in the rotor. Automotive alternators often utilize 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 because of the magnetizing current in the rotor. These machines 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.