Alternator for Forklift

Forklift Alternators - A machine utilized so as to transform mechanical energy into electric energy is referred to as an alternator. It can perform this function in the form of an electrical current. An AC electrical generator could basically also be termed an alternator. Then again, the word is typically utilized to refer to a rotating, small machine driven by internal combustion engines. Alternators which are placed in power stations and are powered by steam turbines are called turbo-alternators. The majority of these machines use a rotating magnetic field but sometimes linear alternators are likewise used.

A current is generated in the conductor when the magnetic field all-around the conductor changes. Usually 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 or 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 generates 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 caused by induction of a permanent magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are normally found in larger machines compared to those used in automotive applications. A rotor magnetic field could be induced 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. This is done by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current within 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.