Alternator for Forklift

Alternator for Forklift - An alternator is actually a machine which changes mechanical energy into electrical energy. It does this in the form of an electrical current. In principal, an AC electrical generator can likewise be referred to as an alternator. The word normally refers to a small, rotating machine powered by automotive and different internal combustion engines. Alternators which are placed in power stations and are driven by steam turbines are actually known as turbo-alternators. Most of these machines utilize a rotating magnetic field but every now and then linear alternators are utilized.

A current is induced in the conductor when the magnetic field around the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core called the stator. Whenever the field cuts across the conductors, an induced electromagnetic field likewise 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. Typically, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field produces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these use slip rings and brushes together with a rotor winding or a permanent magnet to generate a magnetic field of current. Brushlees AC generators are most often located in bigger devices like industrial sized lifting equipment. A rotor magnetic field can be produced by a stationary field winding with moving poles in the rotor. Automotive alternators normally make use of a rotor winding which allows control of the voltage induced by the alternator. It does this 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 because of the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.