Alternator for Forklift

Alternator for Forklift - An alternator is a machine which transforms 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 usually refers to a small, rotating device powered by automotive and other internal combustion engines. Alternators which are placed in power stations and are powered by steam turbines are called turbo-alternators. The majority of these devices utilize a rotating magnetic field but every so often linear alternators are likewise utilized.

A current is generated within the conductor whenever the magnetic field surrounding the conductor changes. Normally 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. 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 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.

"Brushless" alternators - these make use of slip rings and brushes together with a rotor winding or a permanent magnet so as to generate a magnetic field of current. Brushlees AC generators are normally located in larger devices such as industrial sized lifting equipment. A rotor magnetic field may be induced by a stationary field winding with moving poles in the rotor. Automotive alternators often make use of a rotor winding that allows control of the voltage produced by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet machines avoid the loss because of the magnetizing current inside 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.