Forklift Alternators

Alternator for Forklift - A device used to be able to transform mechanical energy into electrical energy is called an alternator. It could perform this function in the form of an electric current. An AC electric generator can in principal likewise be referred to as an alternator. Nonetheless, the word is typically used to refer to a rotating, small machine powered by internal combustion engines. Alternators that are placed in power stations and are driven by steam turbines are referred to as turbo-alternators. Most of these machines use a rotating magnetic field but from time to time linear alternators are also utilized.

When the magnetic field surrounding a conductor changes, a current is produced within the conductor and this is how alternators produce their electricity. Normally the rotor, which is actually 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 also called EMF is generated as the mechanical input makes the rotor to revolve. This rotating magnetic field produces an AC voltage in the stator windings. Usually, 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 may be made by production 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 bigger machines as opposed 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 often make use of a rotor winding that allows control of the voltage produced by the alternator. It does this by varying the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current in the rotor. These devices are limited in size because of the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.