Forklift Alternator

Forklift Alternators - A device utilized to convert mechanical energy into electrical energy is actually known as an alternator. It could carry out this function in the form of an electric current. An AC electric generator can in principal be referred to as an alternator. Then again, the word is usually utilized to refer to a rotating, small device driven by internal combustion engines. Alternators which are located in power stations and are powered by steam turbines are actually known as turbo-alternators. Nearly all of these devices use a rotating magnetic field but every so often linear alternators are also used.

When the magnetic field around a conductor changes, a current is generated within the conductor and this is the way alternators generate their electricity. Usually the rotor, which is actually a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is referred to as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is generated as the mechanical input causes 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 induces 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 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 larger machines than those utilized in automotive applications. A rotor magnetic field could be induced by a stationary field winding with moving poles in the rotor. Automotive alternators usually utilize a rotor winding which allows control of the voltage produced by the alternator. This is done by varying the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current within the rotor. These devices are restricted 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.