Forklift Alternators

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

When the magnetic field around a conductor changes, a current is produced within the conductor and this is actually how alternators produce their electrical energy. Often the rotor, which is actually a rotating magnet, turns within a stationary set of conductors wound in coils located on an iron core which is called the stator. Whenever the field cuts across the conductors, an induced electromagnetic field or 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 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 induction of a permanent magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are usually located in larger machines than those used in automotive applications. A rotor magnetic field may be generated by a stationary field winding with moving poles in the rotor. Automotive alternators usually make use of a rotor winding which allows control of the voltage induced by the alternator. It does this by changing 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 price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.