

Forklift Alternator

Forklift Alternators - An alternator is actually a machine which changes mechanical energy into electric energy. It does this in the form of an electric current. Basically, an AC electric generator could be labeled an alternator. The word usually refers to a small, rotating machine powered by automotive and various internal combustion engines. Alternators that are situated in power stations and are powered by steam turbines are called turbo-alternators. The majority of these devices use a rotating magnetic field but from time to time linear alternators are likewise utilized.

Whenever the magnetic field around a conductor changes, a current is induced inside the conductor and this is the way alternators produce their electricity. Often 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 actually referred to as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is produced as the mechanical input makes the rotor to revolve. This rotating magnetic field generates 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 induction of a lasting magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are often found in larger devices than those used in automotive applications. A rotor magnetic field could 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 generated by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current within the rotor. These devices are restricted in size due to the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.