

Forklift Alternators

Alternator for Forklift - An alternator is actually a machine which converts mechanical energy into electrical energy. It does this in the form of an electrical current. In essence, an AC electrical generator can also be referred to as an alternator. The word usually refers to a small, rotating device driven by automotive and other internal combustion engines. Alternators which are located in power stations and are driven by steam turbines are referred to as turbo-alternators. Most of these devices use a rotating magnetic field but every so often linear alternators are likewise utilized.

Whenever the magnetic field all-around a conductor changes, a current is generated within the conductor and this is the way alternators generate their electricity. Normally the rotor, which is actually a rotating magnet, turns 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 makes the rotor to revolve. This rotating magnetic field generates an AC voltage in the stator windings. Normally, there are 3 sets of stator windings. These are physically offset so that the rotating magnetic field produces 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field could be made by production of a permanent magnet or by a rotor winding energized with direct current through brushes and slip rings. Brushless AC generators are often located in bigger devices compared to those used in automotive applications. 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 devices avoid the loss because of the magnetizing current in 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.