

Forklift Alternators

Alternator for Forklift - A machine used so as to convert mechanical energy into electric energy is actually called an alternator. It can perform this function in the form of an electrical current. An AC electric generator could basically also be called an alternator. Then again, the word is usually utilized to refer to a small, rotating machine powered by internal combustion engines. Alternators which are placed in power stations and are powered by steam turbines are actually known as turbo-alternators. The majority of these devices utilize a rotating magnetic field but every now and then linear alternators are used.

Whenever the magnetic field surrounding a conductor changes, a current is produced within the conductor and this is the way alternators produce their electricity. Often 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 called the stator. If 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 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 brushes and slip rings. Brushless AC generators are usually located in larger devices than those used in automotive applications. A rotor magnetic field can be produced by a stationary field winding with moving poles in the rotor. Automotive alternators usually use 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 machines avoid the loss due to the magnetizing current in the rotor. These machines 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.