

Forklift Alternators

Forklift Alternators - A machine utilized in order to convert mechanical energy into electrical energy is actually referred to as an alternator. It can carry out this function in the form of an electric current. An AC electrical generator can basically be called an alternator. Nevertheless, the word is usually utilized to refer to a rotating, small device powered by internal combustion engines. Alternators that are located in power stations and are driven by steam turbines are referred to as turbo-alternators. Nearly all of these devices make use of a rotating magnetic field but every now and then linear alternators are used.

A current is induced inside the conductor if the magnetic field around the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core known as the stator. When the field cuts across the conductors, an induced electromagnetic field otherwise called EMF is produced as the mechanical input causes 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.

"Brushless" alternators - these make use of brushes and slip rings together with a rotor winding or a permanent magnet so as to generate a magnetic field of current. Brushless AC generators are most often found in larger devices like for example industrial sized lifting equipment. A rotor magnetic field could be generated 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 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 in the rotor. These devices are limited in size due to the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.