

Forklift Alternators

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

Whenever the magnetic field all-around a conductor changes, a current is induced in the conductor and this is the way alternators produce their electrical energy. Usually the rotor, which is a rotating magnet, turns within a stationary set of conductors wound in coils located on an iron core which is actually known 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 turn. This rotating magnetic field generates 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 slip rings and brushes together with a rotor winding or a permanent magnet in order to generate a magnetic field of current. Brushless AC generators are most often located in larger devices like for instance industrial sized lifting equipment. A rotor magnetic field may be generated by a stationary field winding with moving poles in the rotor. Automotive alternators usually utilize 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 due to the magnetizing current inside the rotor. These devices are restricted in size because of the price of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.