

Alternator for Forklift

Forklift Alternators - A device utilized to be able to change mechanical energy into electric energy is actually called an alternator. It could perform this function in the form of an electric current. An AC electrical generator could in essence also be called an alternator. However, the word is normally used to refer to a rotating, small device driven by internal combustion engines. Alternators which are placed in power stations and are powered by steam turbines are actually called turbo-alternators. Nearly all of these machines make use of a rotating magnetic field but every now and then linear alternators are likewise used.

A current is produced within the conductor if the magnetic field surrounding the conductor changes. Usually the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core referred to as the stator. Whenever the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input makes the rotor to revolve. 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 induces 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 along with a rotor winding or a permanent magnet in order to generate a magnetic field of current. Brushless AC generators are normally located in bigger devices such as 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 utilize a rotor winding which allows control of the voltage generated 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 cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.