

Forklift Alternators

Forklift Alternators - A device utilized so as to change mechanical energy into electric energy is called an alternator. It can perform this function in the form of an electric current. An AC electric generator could basically also be referred to as an alternator. Then again, the word is usually used to refer to a rotating, small device powered by internal combustion engines. Alternators which are placed in power stations and are driven by steam turbines are actually called turbo-alternators. The majority of these machines utilize a rotating magnetic field but at times linear alternators are likewise utilized.

A current is induced inside the conductor whenever the magnetic field around the conductor changes. Normally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are located on an iron core referred to as the stator. If the field cuts across the conductors, an induced electromagnetic field likewise called EMF is produced 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 generates 3 phase currents, displaced by one-third of a period with respect to each other.

In a "brushless" alternator, the rotor magnetic field can be made by production of a permanent magnet or by a rotor winding energized with direct current through slip rings and brushes. Brushless AC generators are normally found in larger devices as opposed to those used in automotive applications. A rotor magnetic field can be induced by a stationary field winding with moving poles in the rotor. Automotive alternators usually use a rotor winding that 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 limited in size because of the cost of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.