

Forklift Alternators

Alternator for Forklift - A device used so as to convert mechanical energy into electrical energy is called an alternator. It can carry out this function in the form of an electrical current. An AC electric generator can in essence likewise be termed an alternator. Nonetheless, the word is normally used to refer to a rotating, small device powered by internal combustion engines. Alternators that are situated in power stations and are driven by steam turbines are actually known as turbo-alternators. Nearly all of these devices make use of a rotating magnetic field but every now and then linear alternators are also utilized.

If the magnetic field surrounding a conductor changes, a current is induced inside the conductor and this is the way alternators produce their electrical energy. Often the rotor, which is actually a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is actually called the stator. Whenever the field cuts across the conductors, an induced electromagnetic field or EMF is produced as the mechanical input makes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Usually, 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 utilize slip rings and brushes along with a rotor winding or a permanent magnet to be able to induce a magnetic field of current. Brushless AC generators are usually found in larger devices such as industrial sized lifting equipment. A rotor magnetic field may be induced by a stationary field winding with moving poles in the rotor. Automotive alternators usually make use of a rotor winding which allows control of the voltage generated by the alternator. This is done by changing the current in the rotor field winding. Permanent magnet devices avoid the loss due to the magnetizing current within 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.