Forklift Alternator

Alternator for Forklift - A device used so as to change mechanical energy into electrical energy is actually known as an alternator. It can carry out this function in the form of an electric current. An AC electric generator can basically be labeled an alternator. Nonetheless, the word is typically used to refer to a small, rotating device driven by internal combustion engines. Alternators that are placed in power stations and are powered by steam turbines are referred to as turbo-alternators. The majority of these devices utilize a rotating magnetic field but at times linear alternators are also used.

Whenever the magnetic field around a conductor changes, a current is generated inside the conductor and this is how alternators produce their electricity. Often the rotor, which is a rotating magnet, turns within a stationary set of conductors wound in coils situated on an iron core which is 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 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 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 together with a rotor winding or a permanent magnet to produce a magnetic field of current. Brushlees AC generators are normally located in bigger machines like industrial sized lifting equipment. A rotor magnetic field can be produced by a stationary field winding with moving poles in the rotor. Automotive alternators normally utilize a rotor winding that allows control of the voltage induced by the alternator. It does this by varying the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current within the rotor. These machines are limited 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.