Forklift Alternator

Forklift Alternators - An alternator is a machine which changes mechanical energy into electrical energy. It does this in the form of an electrical current. In essence, an AC electrical generator could likewise be called an alternator. The word typically refers to a rotating, small device powered by automotive and different internal combustion engines. Alternators which are placed in power stations and are powered by steam turbines are actually called turbo-alternators. The majority of these devices use a rotating magnetic field but from time to time linear alternators are used.

If the magnetic field all-around a conductor changes, a current is induced inside the conductor and this is actually the way alternators produce their electricity. Often the rotor, which is a rotating magnet, revolves within a stationary set of conductors wound in coils situated on an iron core which is actually referred to as 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 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 produces 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these utilize brushes and slip rings with a rotor winding or a permanent magnet in order to produce a magnetic field of current. Brushlees AC generators are most often located in bigger devices like for instance industrial sized lifting equipment. A rotor magnetic field can be generated by a stationary field winding with moving poles in the rotor. Automotive alternators normally use 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 within the rotor. These machines are restricted in size due to the price of the magnet material. The terminal voltage varies with the speed of the generator as the permanent magnet field is constant.