Torque Converters for Forklift

Torque Converter for Forklifts - A torque converter in modern usage, is usually a fluid coupling that is used to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This enables the load to be separated from the main power source. A torque converter can provide the equivalent of a reduction gear by being able to multiply torque whenever there is a considerable difference between output and input rotational speed.

The most popular kind of torque converter utilized in auto transmissions is the fluid coupling type. During the 1920s there was also the Constantinesco or also known as pendulum-based torque converter. There are different mechanical designs used for always variable transmissions that can multiply torque. Like for instance, the Variomatic is a kind which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an component known as a stator. This alters the drive's characteristics during occasions of high slippage and generates an increase in torque output.

There are a at least three rotating parts within a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be prevented from rotating under any situation and this is where the term stator originates from. In reality, the stator is mounted on an overrunning clutch. This particular design stops the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

In the three element design there have been changes that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Usually, these alterations have taken the form of multiple stators and turbines. Every set has been designed to generate differing amounts of torque multiplication. Some instances comprise the Dynaflow which uses a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch so as to reduce heat and so as to improve cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.