## Torque Converters for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling that is used to be able to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Similar to 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 offer the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between output and input rotational speed.

The most common kind of torque converter utilized in car transmissions is the fluid coupling model. During the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs utilized for constantly variable transmissions that could multiply torque. For example, the Variomatic is a kind that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an added part that is the stator. This changes the drive's characteristics through times of high slippage and produces an increase in torque output.

In a torque converter, there are at least of three rotating elements: the turbine, to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it could alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever condition and this is where the word stator starts from. In fact, 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 allowing forward rotation.

Changes to the basic three element design have been incorporated sometimes. These alterations have proven worthy specially in application where higher than normal torque multiplication is needed. Usually, these adjustments have taken the form of multiple stators and turbines. Each set has been designed to produce differing amounts of torque multiplication. Various examples consist of the Dynaflow that utilizes a five element converter so as to produce the wide range of torque multiplication required to propel a heavy vehicle.

Although it is not strictly a part of classic torque converter design, different automotive converters include a lock-up clutch in order to lessen heat and in order to enhance cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.