Forklift Torque Converter

Torque Converter for Forklifts - A torque converter in modern usage, is normally a fluid coupling which is utilized to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, 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 whenever there is a substantial difference between output and input rotational speed.

The most popular type of torque converter utilized in auto transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs for constantly changeable transmissions which can multiply torque. Like for instance, the Variomatic is a version which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that is incapable of multiplying torque. A torque converter has an extra part which is the stator. This changes the drive's characteristics all through times of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating components: 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 can alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the word stator begins from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

In the three element design there have been adjustments which have been integrated sometimes. Where there is higher than normal torque manipulation is required, changes to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of multiple stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Various examples consist of the Dynaflow that makes use of a five element converter so as to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different car converters consist of a lock-up clutch so as to reduce heat and to improve the cruising power and transmission effectiveness, even though it is not strictly part of the torque converter design. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.