## Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling that is used in order to transfer rotating power from a prime mover, for example an electric motor or an internal combustion engine, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter could provide the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between input and output rotational speed.

The fluid coupling type is the most common type of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs for always variable transmissions that can multiply torque. For example, the Variomatic is a version 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 extra component that is the stator. This alters the drive's characteristics throughout times of high slippage and produces an increase in torque output.

Inside a torque converter, there are at least of three rotating elements: the turbine, so as to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under any situation and this is where the term 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 permitting forward rotation.

In the three element design there have been changes which have been integrated at times. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of various turbines and stators. Every set has been designed to generate differing amounts of torque multiplication. Some instances comprise the Dynaflow which utilizes a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

While it is not strictly a part of classic torque converter design, different automotive converters comprise a lock-up clutch to be able to reduce heat and so as to enhance cruising power transmission efficiency. 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.