

## Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling that is used to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This allows 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 whenever there is a significant difference between output and input rotational speed.

The fluid coupling unit is the most popular type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are various mechanical designs for constantly variable transmissions that can multiply torque. For example, the Variomatic is one version which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an component referred to as a stator. This changes the drive's characteristics through occasions of high slippage and produces an increase in torque output.

Within a torque converter, there are at least of three rotating parts: the turbine, to drive the load, the impeller that 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 word stator originates from. In point of fact, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

In the three element design there have been modifications which have been incorporated periodically. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Usually, these modifications have taken the form of several turbines and stators. Each set has been designed to generate differing amounts of torque multiplication. Several instances consist of the Dynaflo that uses a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

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