

## Forklift Torque Converter

Torque Converter for Forklifts - A torque converter is a fluid coupling which is used to be able to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter could 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 fluid coupling unit is actually the most common type of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are different mechanical designs for continuously variable transmissions that could multiply torque. For example, the Variomatic is one kind that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element known as a stator. This changes the drive's characteristics through times of high slippage and generates an increase in torque output.

Within a torque converter, there are a minimum of three rotating elements: the turbine, in order 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 change 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 term stator begins from. Actually, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Alterations to the basic three element design have been incorporated at times. These alterations have proven worthy especially in application where higher than normal torque multiplication is required. More often than not, these adjustments have taken the form of various stators and turbines. Every set has been meant to generate differing amounts of torque multiplication. Several examples consist of the Dynaflo that makes use of a five element converter in order to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various automobile converters include a lock-up clutch in order to reduce heat and to be able to improve the cruising power and transmission efficiency, although it is not strictly component 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 related with fluid drive.