

## Torque Converters for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is utilized to be able 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 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 substantial difference between input and output rotational speed.

The most popular type of torque converter utilized in car transmissions is the fluid coupling unit. In the 1920s there was also the Constantinesco or also known as pendulum-based torque converter. There are various mechanical designs for always variable transmissions that have the ability to multiply torque. Like for example, the Variomatic is a type which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an extra part which is the stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least 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. Normally, the design of the torque converter dictates that the stator be stopped from rotating under any situation and this is where the word stator originates from. In 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 enabling forward rotation.

In the three element design there have been alterations that have been integrated sometimes. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. More often than not, these alterations have taken the form of several stators and turbines. Each set has been designed to produce differing amounts of torque multiplication. Some examples comprise the Dynaflo which utilizes a five element converter to be able to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different car converters comprise a lock-up clutch to reduce heat and to improve the cruising power and transmission effectiveness, though 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 that eliminates losses connected with fluid drive.