

## Forklift Torque Converters

Torque Converter for Forklifts - A torque converter in modern usage, is commonly a fluid coupling which is utilized so as to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Same as 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 provide the equivalent of a reduction gear by being able to multiply torque if there is a significant difference between input and output rotational speed.

The most common type of torque converter used in car transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs for always variable transmissions that have the ability to multiply torque. For example, the Variomatic is a type which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an additional part that is the stator. This changes the drive's characteristics during times of high slippage and produces an increase in torque output.

There are a minimum of three rotating parts inside a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine 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 whatever situation and this is where the word stator begins from. In truth, 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 modifications that have been incorporated at times. Where there is higher than normal torque manipulation is required, modifications to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of many turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Some examples consist of the Dynaflo which utilizes a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a component of classic torque converter design, different automotive converters consist of a lock-up clutch in order to lessen heat and 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.