

## Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is used to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows 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 if there is a considerable difference between output and input rotational speed.

The fluid coupling type is actually the most common kind of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs for continuously variable transmissions which can multiply torque. Like for instance, 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 called a stator. This alters the drive's characteristics throughout times of high slippage and produces an increase in torque output.

There are at least three rotating parts inside a torque converter: the turbine, which 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 alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition 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 allowing forward rotation.

In the three element design there have been modifications that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of multiple turbines and stators. Every set has been meant to produce differing amounts of torque multiplication. Some instances comprise the Dynaflo which uses a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, various automotive converters consist of a lock-up clutch so as to reduce heat and to enhance cruising power transmission efficiency. 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.