

## Torque Converter for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is utilized to transfer rotating power from a prime mover, for example an internal combustion engine or an electrical motor, to a rotating driven load. Like 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 could offer the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between output and input rotational speed.

The fluid coupling unit is actually the most popular type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs utilized for constantly changeable transmissions that have the ability to multiply torque. For example, the Variomatic is a type which has a belt drive and expanding pulleys.

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

There are at least three rotating elements within a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller 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 whatever condition and this is where the term stator starts from. In point of fact, 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 allowing forward rotation.

Changes to the basic three element design have been integrated periodically. These modifications have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. Most commonly, these modifications have taken the form of many turbines and stators. Every set has been meant to produce differing amounts of torque multiplication. Several instances comprise the Dynaflo which makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various automobile converters consist of a lock-up clutch so as to reduce heat and to improve the cruising power and transmission efficiency, even though it is not strictly component of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.