

## Torque Converter for Forklifts

Torque Converter for Forklifts - A torque converter in modern usage, is usually a fluid coupling that is used to transfer rotating power from a prime mover, like for instance 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 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 if there is a significant difference between input and output rotational speed.

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

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

There are at least three rotating components in a torque converter: the turbine, that drives the load, the impeller, which 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 whichever condition and this is where the term stator begins from. In reality, the stator is mounted on an overrunning clutch. This design stops 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 changes have proven worthy particularly in application where higher than normal torque multiplication is needed. Usually, these adjustments have taken the form of multiple turbines and stators. Each set has been designed to produce differing amounts of torque multiplication. Several instances consist of the Dynaflo that makes use of a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a component of classic torque converter design, various automotive converters include a lock-up clutch so as to lessen heat and so as to improve 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 associated with fluid drive.