

## Torque Converter for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling that is utilized so as to transfer rotating power from a prime mover, that is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanical clutch. This enables the load to be separated from the main power source. A torque converter can offer the equivalent of a reduction gear by being able to multiply torque whenever there is a considerable difference between output and input rotational speed.

The most common kind of torque converter utilized in car transmissions is the fluid coupling type. In the 1920s there was even the Constantinesco or pendulum-based torque converter. There are different mechanical designs utilized for constantly variable transmissions that could multiply torque. For instance, the Variomatic is a kind that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element known as 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 elements inside a torque converter: the turbine, which 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 any condition and this is where the word stator starts from. Actually, the stator is mounted on an overrunning clutch. This particular design stops the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Changes to the basic three element design have been incorporated sometimes. These changes have proven worthy especially in application where higher than normal torque multiplication is required. More often than not, these adjustments have taken the form of multiple stators and turbines. Each set has been designed to generate differing amounts of torque multiplication. Some examples include the Dynaflo which uses a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch so as to lessen heat and so as to improve the cruising power and transmission effectiveness, although 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 which eliminates losses associated with fluid drive.