

## Torque Converters for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is utilized in order to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, 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 when there is a substantial difference between output and input rotational speed.

The fluid coupling unit is the most common kind of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are other mechanical designs utilized for constantly variable transmissions that could multiply torque. For example, the Variomatic is a type which 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 changes the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

Inside a torque converter, there are a minimum of three rotating elements: the turbine, in order to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine 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 situation and this is where the word stator begins from. In point of fact, the stator is mounted on an overrunning clutch. This 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 modifications have proven worthy particularly in application where higher than normal torque multiplication is needed. Most commonly, these alterations have taken the form of multiple stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Some instances consist of the Dynaflo which utilizes a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch in order to reduce heat and in order 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 that eliminates losses connected with fluid drive.