

## Forklift Torque Converter

Torque Converter for Forklifts - A torque converter is actually a fluid coupling that is used in order to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take the place of a mechanized 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 if there is a significant difference between input and output rotational speed.

The fluid coupling model is actually the most popular type of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are various mechanical designs used for continuously changeable transmissions which could multiply torque. For instance, the Variomatic is one type that has expanding pulleys and a belt drive.

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

There are a minimum of three rotating elements inside a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could 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 enabling forward rotation.

In the three element design there have been modifications which have been integrated sometimes. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. More often than not, these alterations have taken the form of multiple stators and turbines. Each and every set has been meant to generate differing amounts of torque multiplication. Various examples comprise the Dynaflo which makes use of a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch to be able to lessen heat and in order to improve cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses related with fluid drive.