

## Torque Converter for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is utilized so as to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, 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 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 the most popular type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs used for continuously variable transmissions which can multiply torque. For instance, the Variomatic is a type which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an added part that is the stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are a minimum of 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, which is between the impeller and the turbine so that it could alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under whatever situation and this is where the term stator originates from. In reality, 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 enabling forward rotation.

In the three element design there have been changes which have been incorporated periodically. 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 many stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Some instances include the Dynaflo which utilizes a five element converter so as to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different auto converters comprise a lock-up clutch in order to reduce heat and in order to enhance the cruising power and transmission effectiveness, though 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 that eliminates losses connected with fluid drive.