

## Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter is a fluid coupling that is used to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, 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 offer the equivalent of a reduction gear by being able to multiply torque if there is a substantial difference between output and input rotational speed.

The fluid coupling type is actually the most common type of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs for continuously variable transmissions which have the ability to multiply torque. Like for example, the Variomatic is one type which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an additional component that is the stator. This changes the drive's characteristics through occasions of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating parts: the turbine, in order to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it could change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever situation and this is where the word stator begins from. In truth, the stator is mounted on an overrunning clutch. This design prevents 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 periodically. These adjustments have proven worthy particularly in application where higher than normal torque multiplication is required. Most commonly, these adjustments have taken the form of several turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Some examples consist of the Dynaflo which makes use of a five element converter in order 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, various automotive converters consist of a lock-up clutch to lessen heat and so as to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.