Torque Converter for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling that is used to be able 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 like 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 input and output rotational speed.

The most popular type of torque converter used in auto transmissions is the fluid coupling model. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs for continuously variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a type that has expanding pulleys and a belt drive.

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

There are a at least three rotating parts in 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 impeller and the turbine so that it could change 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 any condition and this is where the word stator originates from. In fact, 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 allowing forward rotation.

In the three element design there have been alterations that have been incorporated at times. Where there is higher than normal torque manipulation is needed, changes to the modifications have proven to be worthy. More often than not, these modifications have taken the form of several turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Various instances include the Dynaflow that uses a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different car converters include a lock-up clutch so as to lessen heat and in order to improve the cruising power and transmission efficiency, even 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 which eliminates losses related with fluid drive.