Forklift Torque Converter

Torque Converter for Forklift - A torque converter is actually a fluid coupling which is utilized in order to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is like a basic fluid coupling to take the place of a mechanized clutch. This allows the load to be separated from the main power source. A torque converter could provide the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between input and output rotational speed.

The fluid coupling type is actually the most popular type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs for constantly variable transmissions that can multiply torque. Like for example, the Variomatic is a version which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which is incapable of multiplying torque. A torque converter has an extra element that is the stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

There are a at least three rotating parts within a torque converter: the turbine, which 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 can change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition and this is where the word stator originates from. In point of fact, 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.

Changes to the basic three element design have been integrated at times. These adjustments have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Usually, these alterations have taken the form of multiple turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Various examples include the Dynaflow which makes use of a five element converter in order to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

While it is not strictly a part of classic torque converter design, different automotive converters include a lock-up clutch to be able to reduce heat and in order 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 which eliminates losses related with fluid drive.