Forklift Torque Converter

Torque Converters for Forklift - A torque converter is a fluid coupling that is utilized in order 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 same as a basic fluid coupling to take the place of a mechanical clutch. This allows 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 when there is a significant 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 otherwise called Constantinesco converter. There are various mechanical designs used for continuously changeable transmissions that can multiply torque. For example, the Variomatic is one type which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an component known as a stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are a at least three rotating parts inside 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 turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under whatever situation and this is where the word stator starts 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 permitting forward rotation.

Modifications to the basic three element design have been incorporated sometimes. These modifications have proven worthy specially in application where higher than normal torque multiplication is needed. More often than not, these alterations have taken the form of various stators and turbines. Every set has been meant to produce differing amounts of torque multiplication. Various instances include the Dynaflow that uses a five element converter to be able to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch so as to lessen heat and to improve cruising power transmission efficiency. 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.