Torque Converter for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is utilized to be able to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows 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 whenever there is a significant difference between input and output rotational speed.

The fluid coupling type is the most popular type of torque converter used in car transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are other mechanical designs utilized for constantly changeable transmissions which could multiply torque. For instance, the Variomatic is one version which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an part known as a stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

Inside a torque converter, there are at least of three rotating parts: the turbine, so as to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator 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 prevented from rotating under any condition and this is where the term stator starts from. Actually, 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.

Changes to the basic three element design have been integrated at times. These changes have proven worthy especially in application where higher than normal torque multiplication is needed. More often than not, these adjustments have taken the form of several stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Several examples comprise the Dynaflow that makes use of a five element converter so as to generate 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 include a lock-up clutch so as to lessen heat and to be able to enhance 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 associated with fluid drive.