Torque Converters for Forklifts

Forklift Torque Converters - A torque converter is a fluid coupling which is utilized to be able 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 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 could provide 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 most popular type of torque converter utilized in car transmissions is the fluid coupling model. During the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs utilized for always changeable transmissions that can multiply torque. For example, the Variomatic is one version which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an additional element which is the stator. This changes the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

Inside a torque converter, there are a minimum of three rotating parts: the turbine, to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it can alter 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 whatever condition and this is where the term stator starts from. In reality, 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.

In the three element design there have been modifications that have been integrated sometimes. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of many stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Several instances comprise the Dynaflow that makes use of a five element converter in order to produce 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, various automotive converters include a lock-up clutch so as to reduce heat and in order to enhance cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.