Torque Converter for Forklifts

Forklift Torque Converters - A torque converter in modern usage, is commonly a fluid coupling that is utilized so as to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like 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 when there is a substantial difference between output and input rotational speed.

The fluid coupling model is the most common type of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are different mechanical designs used for continuously changeable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is one type which has expanding pulleys and a belt drive.

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

There are a minimum of three rotating elements 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 turbine and the impeller so that it could change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever situation and this is where the term 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.

In the three element design there have been changes that have been incorporated periodically. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Usually, these modifications have taken the form of multiple stators and turbines. Every set has been designed to produce differing amounts of torque multiplication. Various examples comprise the Dynaflow which uses a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch to lessen heat and to be able to improve cruising power transmission efficiency. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.