Forklift Torque Converters

Torque Converter for Forklifts - A torque converter is actually 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 similar to a basic fluid coupling to take the place of a mechanized clutch. This enables 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 if there is a considerable difference between input and output rotational speed.

The fluid coupling model is actually the most popular type of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs for continuously changeable transmissions that have the ability to multiply torque. For example, the Variomatic is a version that has a belt drive and expanding pulleys.

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

Inside a torque converter, there are a minimum of three rotating elements: the turbine, in order 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. Traditionally, 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. In 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 allowing forward rotation.

In the three element design there have been changes that have been incorporated sometimes. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of multiple turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Some examples include the Dynaflow that utilizes a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters consist of a lock-up clutch in order to reduce heat and in order to enhance the cruising power and transmission effectiveness, though it is not strictly part of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.