

Torque Converters for Forklifts

Forklift Torque Converters - A torque converter in modern usage, is commonly a fluid coupling which is utilized to transfer rotating power from a prime mover, for example an internal combustion engine or an electrical motor, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes 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 whenever there is a substantial difference between output and input rotational speed.

The fluid coupling type is the most common type of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs used for always changeable transmissions which can multiply torque. For instance, the Variomatic is one version which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that is incapable of multiplying torque. A torque converter has an extra part which is the 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 components: 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 could alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under whichever situation and this is where the term stator originates 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 which have been integrated sometimes. Where there is higher than normal torque manipulation is considered necessary, changes to the modifications have proven to be worthy. More often than not, these alterations have taken the form of multiple stators and turbines. Every set has been meant to produce differing amounts of torque multiplication. Several instances include the Dynaflo which makes use of a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

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