

Torque Converters for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling that 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 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 if there is a substantial difference between input and output rotational speed.

The most common type of torque converter utilized in auto transmissions is the fluid coupling model. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs for always changeable transmissions that can multiply torque. Like for example, the Variomatic is a kind that has expanding pulleys and a belt drive.

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

Within a torque converter, there are a minimum of three rotating elements: the turbine, 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 change 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 whatever situation and this is where the term stator originates from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents 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 incorporated sometimes. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of many turbines and stators. Every set has been meant to produce differing amounts of torque multiplication. Various examples include the Dynaflo that makes use of a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch to lessen heat and to improve the cruising power and transmission efficiency, although 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.