

Torque Converters for Forklift

Torque Converters for Forklift - 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. Same as a basic fluid coupling, the torque converter takes 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 when there is a substantial difference between output and input rotational speed.

The fluid coupling type is actually the most popular type of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs utilized for constantly changeable transmissions that could multiply torque. Like for example, the Variomatic is one type which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an added element which is the stator. This alters the drive's characteristics throughout times of high slippage and produces an increase in torque output.

In a torque converter, there are at least of three rotating components: the turbine, to be able to drive the load, the impeller that 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. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition 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 enabling forward rotation.

In the three element design there have been adjustments which have been incorporated periodically. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of many turbines and stators. Each set has been designed to generate differing amounts of torque multiplication. Various examples comprise the Dynaflo that uses a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different automobile converters consist of a lock-up clutch to be able to reduce heat and to be able to enhance the cruising power and transmission efficiency, even though it is not strictly component of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.