

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling which is utilized so as to transfer rotating power from a prime mover, like for example 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 enables the load to be separated from the main power source. A torque converter could provide 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 model is the most common type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs for constantly variable transmissions that can multiply torque. Like for example, the Variomatic is one version that has a belt drive and expanding pulleys.

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

Inside a torque converter, there are a minimum 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 turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the term stator starts from. In reality, 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 alterations that have been incorporated periodically. Where there is higher than normal torque manipulation is needed, adjustments to the modifications have proven to be worthy. Usually, these modifications have taken the form of various stators and turbines. Each and every set has been designed to generate differing amounts of torque multiplication. Several examples consist of the Dynaflo that makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various car converters comprise a lock-up clutch to reduce heat and so as 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 connected with fluid drive.