

Forklift Torque Converters

Forklift Torque Converters - A torque converter in modern usage, is commonly a fluid coupling that is utilized in order to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, 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 when there is a considerable difference between input and output rotational speed.

The fluid coupling unit is the most common kind of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are different mechanical designs for constantly variable transmissions which have the ability to multiply torque. For instance, the Variomatic is one version that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an element known as a stator. This alters the drive's characteristics throughout times of high slippage and generates an increase in torque output.

In a torque converter, there are at least 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 turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under whatever condition and this is where the word stator starts from. In point of 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 which have been incorporated sometimes. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of many turbines and stators. Every set has been meant to generate differing amounts of torque multiplication. Various instances comprise the Dynaflo that makes use of a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different auto converters include a lock-up clutch to be able to reduce heat and so as to improve the cruising power and transmission efficiency, 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 that eliminates losses related with fluid drive.