

Forklift Torque Converters

Forklift Torque Converters - A torque converter is a fluid coupling which is utilized in order to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter can offer the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between input and output rotational speed.

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

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

Within a torque converter, there are at least 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 can change 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 any condition and this is where the term stator begins 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 modifications which have been incorporated at times. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. Usually, these alterations have taken the form of various turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Various instances consist of the Dynaflo which uses a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch so as to reduce heat and to be able to improve the cruising power and transmission effectiveness, even if 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 connected with fluid drive.