

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is used so as to transfer rotating power from a prime mover, 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 can provide the equivalent of a reduction gear by being able to multiply torque if there is a significant difference between input and output rotational speed.

The fluid coupling type is the most popular type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are other mechanical designs utilized for continuously changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is one kind that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part known as a stator. This changes 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 parts: 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. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition and this is where the term stator originates from. In reality, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

In the three element design there have been modifications that have been integrated at times. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Usually, these adjustments have taken the form of many stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Various instances comprise the Dynaflo that makes use of a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various auto converters include a lock-up clutch in order to reduce heat and in order to enhance the cruising power and transmission efficiency, even though it is not strictly part 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 related with fluid drive.