

Forklift Torque Converters

Torque Converter for Forklift - A torque converter in modern usage, is commonly a fluid coupling that is utilized to transfer rotating power from a prime mover, like for instance 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 mechanical 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 if there is a considerable difference between input and output rotational speed.

The most popular kind of torque converter used in auto transmissions is the fluid coupling kind. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are different mechanical designs for always changeable transmissions which could multiply torque. For instance, the Variomatic is one version that has expanding pulleys and a belt drive.

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 all through times of high slippage and generates an increase in torque output.

Inside a torque converter, there are a minimum of three rotating elements: the turbine, 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 alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition and this is where the word stator starts from. Actually, the stator is mounted on an overrunning clutch. This 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 adjustments which have been incorporated periodically. Where there is higher than normal torque manipulation is considered necessary, changes to the modifications have proven to be worthy. Usually, these alterations have taken the form of multiple stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Several instances comprise the Dynaflo that uses a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, various automotive converters include a lock-up clutch to be able to lessen heat and to improve cruising power transmission efficiency. 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.