

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling that is utilized in order to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows 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 whenever there is a substantial difference between input and output rotational speed.

The fluid coupling model is actually the most popular 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 changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is a version which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which is incapable of multiplying torque. A torque converter has an extra part that is the stator. This changes the drive's characteristics throughout occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are at least of three rotating parts: the turbine, in order to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it could alter 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 situation and this is where the term stator begins 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 enabling forward rotation.

In the three element design there have been adjustments that have been integrated sometimes. Where there is higher than normal torque manipulation is considered necessary, changes to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of various turbines and stators. Every set has been meant to produce differing amounts of torque multiplication. Several instances comprise the Dynaflo that makes use of a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch so as to reduce heat and to be able to enhance cruising power transmission effectiveness. 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.