

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling which is used in order to transfer rotating power from a prime mover, 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 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 whenever there is a considerable difference between output and input rotational speed.

The most popular kind of torque converter used in auto transmissions is the fluid coupling type. During the 1920s there was also the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs for always changeable transmissions which have the ability to multiply torque. Like for example, the Variomatic is a version which has a belt drive and expanding pulleys.

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

There are a minimum of three rotating components in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it could change 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 whatever situation and this is where the term stator begins from. In 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 allowing forward rotation.

In the three element design there have been changes that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. More often than not, these alterations have taken the form of many stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Some instances comprise the Dynaflo that utilizes a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various car converters consist of a lock-up clutch to reduce heat and to improve the cruising power and transmission efficiency, although it is not strictly part of the torque converter design. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.