

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is utilized to be able to transfer rotating power from a prime mover, like for example 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 offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between output and input rotational speed.

The fluid coupling unit is the most common kind of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs utilized for constantly variable transmissions that can multiply torque. Like for example, the Variomatic is a version that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an extra part that is the stator. This changes the drive's characteristics all through times of high slippage and produces an increase in torque output.

There are at least three rotating parts in a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could alter 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 whichever situation and this is where the word stator starts from. In fact, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Adjustments to the basic three element design have been incorporated at times. These modifications have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. Usually, these modifications have taken the form of various stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Various instances consist of the Dynaflo that makes use of a five element converter so as to generate the wide range of torque multiplication considered necessary 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 to be able to reduce heat and in order to enhance cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses related with fluid drive.