

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is used to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Similar to 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 provide the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between output and input rotational speed.

The most common kind of torque converter used in auto transmissions is the fluid coupling model. In the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs used for constantly changeable transmissions that can 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 that cannot multiply torque. A torque converter has an extra component that is the stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

In a torque converter, there are at least of three rotating components: the turbine, so as to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller 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 whichever situation and this is where the word stator originates from. In reality, the stator is mounted on an overrunning clutch. This particular design stops the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

Changes to the basic three element design have been incorporated at times. These changes have proven worthy especially in application where higher than normal torque multiplication is needed. Most commonly, these alterations have taken the form of multiple turbines and stators. Every set has been designed to generate differing amounts of torque multiplication. Some instances comprise the Dynaflow which uses a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters comprise a lock-up clutch in order to lessen heat and to improve 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 related with fluid drive.