

Torque Converters for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling that is utilized so as to transfer rotating power from a prime mover, that is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanized 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 when there is a considerable difference between input and output rotational speed.

The most popular kind of torque converter utilized in automobile transmissions is the fluid coupling type. In the 1920s there was also the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs used for continuously changeable transmissions that can 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 which cannot multiply torque. A torque converter has an extra part which is the stator. This changes the drive's characteristics through times of high slippage and generates an increase in torque output.

There are at least three rotating elements inside a torque converter: the turbine, which drives the load, the impeller, that 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 whatever condition and this is where the term stator starts from. In truth, 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 allowing forward rotation.

Adjustments to the basic three element design have been integrated at times. These adjustments have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Most commonly, these alterations have taken the form of many stators and turbines. Each set has been intended to produce differing amounts of torque multiplication. Several instances include the Dynaflo that utilizes 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 part of classic torque converter design, various automotive converters comprise a lock-up clutch so as to lessen heat and 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 associated with fluid drive.