

Torque Converters for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling that is used to be able to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is like a basic fluid coupling to take the place of a mechanical clutch. This enables the load to be separated from the main power source. A torque converter could offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between input and output rotational speed.

The most popular type of torque converter utilized in auto transmissions is the fluid coupling kind. During the 1920s there was also the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs utilized for constantly changeable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a type 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 added part which is the stator. This alters the drive's characteristics throughout occasions of high slippage and produces an increase in torque output.

Within a torque converter, there are a minimum of three rotating parts: 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 impeller and the turbine so that it could alter oil flow returning from the turbine to the impeller. Normally, 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.

Changes to the basic three element design have been integrated sometimes. These alterations have proven worthy specially in application where higher than normal torque multiplication is required. Usually, these adjustments have taken the form of multiple stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Various instances consist of the Dynaflo which utilizes a five element converter to be able to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

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