

Torque Converters for Forklift

Forklift Torque Converters - A torque converter is a fluid coupling that is utilized to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to 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 if there is a considerable difference between input and output rotational speed.

The most common type of torque converter used in automobile transmissions is the fluid coupling kind. In the 1920s there was likewise the Constantinesco or otherwise known as pendulum-based torque converter. There are different mechanical designs for constantly changeable transmissions which have the ability to multiply torque. Like for example, the Variomatic is one type that 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 component that is the stator. This alters the drive's characteristics all through times of high slippage and produces an increase in torque output.

There are at least 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 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 condition and this is where the word stator starts from. In point of 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 enabling forward rotation.

Adjustments to the basic three element design have been incorporated at times. These changes have proven worthy particularly in application where higher than normal torque multiplication is needed. Usually, these alterations have taken the form of several turbines and stators. Every set has been meant to produce differing amounts of torque multiplication. Several examples include the Dynaflo that utilizes a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various auto converters consist of a lock-up clutch to reduce heat and in order 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 associated with fluid drive.