

Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter is actually a fluid coupling that is utilized to be able 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 like 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 could provide the equivalent of a reduction gear by being able to multiply torque when there is a substantial difference between input and output rotational speed.

The fluid coupling model is the most popular type of torque converter used in auto transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs for continuously variable transmissions that have the ability to multiply torque. For example, the Variomatic is a type that 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 part that is the stator. This alters the drive's characteristics throughout times of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating parts: the turbine, so as to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever situation and this is where the word stator starts from. In point of fact, 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.

Modifications to the basic three element design have been incorporated sometimes. These changes have proven worthy specially in application where higher than normal torque multiplication is required. Most commonly, these modifications have taken the form of various stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Several examples comprise the Dynaflo that makes use of a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters include a lock-up clutch so as to lessen heat and to be able to improve the cruising power and transmission efficiency, even if it is not strictly part of the torque converter design. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.