

Torque Converter for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling that is utilized 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 similar to 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 whenever there is a considerable difference between input and output rotational speed.

The fluid coupling unit is the most popular type of torque converter utilized in auto transmissions. During the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs utilized for continuously variable transmissions that can multiply torque. Like for example, the Variomatic is a type that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element referred to as a stator. This alters the drive's characteristics throughout times of high slippage and produces an increase in torque output.

Within a torque converter, there are a minimum of three rotating components: the turbine, to be able to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can change 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 whatever situation and this is where the word stator originates from. Actually, 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 permitting forward rotation.

In the three element design there have been adjustments which have been incorporated at times. Where there is higher than normal torque manipulation is needed, changes to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of various turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Various instances include the Dynaflo that makes use of a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch so as to reduce heat and to enhance the cruising power and transmission efficiency, even though it is not strictly component of the torque converter design. 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.