

Forklift Torque Converters

Torque Converters for Forklift - A torque converter in modern usage, is usually a fluid coupling which is utilized in order to transfer rotating power from a prime mover, for instance an electric motor or an internal combustion engine, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables 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 significant difference between input and output rotational speed.

The fluid coupling kind is the most common type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are different mechanical designs utilized for continuously variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is one version that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an component referred to as a stator. This changes the drive's characteristics during occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating elements within a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it could change oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be prevented from rotating under any situation and this is where the word stator begins from. In truth, the stator is mounted on an overrunning clutch. This particular design prevents 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 integrated at times. These modifications have proven worthy particularly in application where higher than normal torque multiplication is needed. Most commonly, these alterations have taken the form of multiple stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Some instances include the Dynaflo which uses a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

While it is not strictly a component of classic torque converter design, various automotive converters include a lock-up clutch to reduce heat and so as to improve cruising power transmission effectiveness. 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.