

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is used so as to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This allows 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 when there is a significant difference between input and output rotational speed.

The fluid coupling kind is the most popular kind of torque converter used in auto transmissions. During the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are different mechanical designs utilized for always variable transmissions which have the ability to multiply torque. Like for instance, the Variomatic is one kind which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an added component that is the stator. This changes the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are at least of three rotating parts: the turbine, to be able 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 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 any situation 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 allowing forward rotation.

Changes to the basic three element design have been incorporated at times. These modifications have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. Usually, these alterations have taken the form of many turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Some instances include the Dynaflo that uses a five element converter to be able to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters comprise a lock-up clutch to be able to reduce heat and so as to enhance cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.