Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is utilized so as to transfer rotating power from a prime mover, like for example 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 mechanical 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 most common type of torque converter utilized in car transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs used for continuously changeable transmissions which have the ability to multiply torque. Like for instance, the Variomatic is a version that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an added element that is the stator. This alters the drive's characteristics throughout times of high slippage and generates an increase in torque output.

There are a at least three rotating parts inside a torque converter: the turbine, that drives the load, the impeller, which 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. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever condition 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 allowing forward rotation.

Modifications to the basic three element design have been incorporated at times. These alterations have proven worthy particularly in application where higher than normal torque multiplication is required. Usually, these adjustments have taken the form of various turbines and stators. Every set has been intended to produce differing amounts of torque multiplication. Various examples consist of the Dynaflow that uses a five element converter to be able to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch in order to reduce heat and to be able to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.