Forklift Torque Converters

Forklift Torque Converter - A torque converter is a fluid coupling which 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 same as a basic fluid coupling to take the place of a mechanical clutch. This enables 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 if there is a significant difference between output and input rotational speed.

The most popular type of torque converter used in auto transmissions is the fluid coupling unit. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs utilized for constantly variable transmissions which can multiply torque. For example, the Variomatic is a kind that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an extra element that is the stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

There are a at least three rotating parts within a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it can alter 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 condition and this is where the term stator originates from. Actually, the stator is mounted on an overrunning clutch. This 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 alterations that have been incorporated at times. Where there is higher than normal torque manipulation is required, changes to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of various stators and turbines. Each and every set has been meant to generate differing amounts of torque multiplication. Various instances consist of the Dynaflow which uses a five element converter in order 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 consist of a lock-up clutch to reduce heat and to enhance 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 associated with fluid drive.