Forklift Torque Converter

A torque converter is a fluid coupling which is utilized to be able to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as 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 could offer the equivalent of a reduction gear by being able to multiply torque if there is a substantial difference between input and output rotational speed.

The fluid coupling model is actually the most popular type of torque converter utilized in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs utilized for continuously changeable transmissions that can multiply torque. Like for example, the Variomatic is one type which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element called 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 at least of three rotating elements: the turbine, in order to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it could alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the word stator begins from. Actually, 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 allowing forward rotation.

Changes to the basic three element design have been integrated sometimes. These changes have proven worthy particularly in application where higher than normal torque multiplication is required. Most commonly, these modifications have taken the form of multiple stators and turbines. Every set has been meant to produce differing amounts of torque multiplication. Some instances comprise the Dynaflow 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.

Although it is not strictly a part of classic torque converter design, various automotive converters consist of a lock-up clutch to reduce heat and to be able to enhance cruising power transmission efficiency. 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.