Forklift Torque Converter

Forklift Torque Converter - A torque converter is a fluid coupling which is used 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 like 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 provide the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between output and input rotational speed.

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

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component referred to as a stator. This alters the drive's characteristics through occasions of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating elements: the turbine, so as 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 alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition and this is where the word stator originates from. In point of fact, 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.

In the three element design there have been alterations which have been incorporated sometimes. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of multiple stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Some examples include the Dynaflow that makes use of a five element converter so as to generate 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, different automotive converters comprise a lock-up clutch to reduce heat and so as 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 related with fluid drive.