Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is used to be able to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter can provide the equivalent of a reduction gear by being able to multiply torque if there is a considerable difference between output and input rotational speed.

The most common type of torque converter used in auto 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 for always changeable transmissions that could multiply torque. Like for example, the Variomatic is one type that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an added element which is the 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 parts: 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 can change oil flow returning from the turbine to the impeller. Usually, 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. In reality, 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 permitting forward rotation.

In the three element design there have been alterations which have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of many stators and turbines. Every set has been designed to generate differing amounts of torque multiplication. Some instances consist of the Dynaflow which uses a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Different automobile converters consist of a lock-up clutch to lessen heat and to improve the cruising power and transmission effectiveness, even though it is not strictly part of the torque converter design. 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.