Forklift Torque Converters

Forklift Torque Converter - A torque converter is a fluid coupling that is utilized so as 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 similar to a basic fluid coupling to take the place of a mechanized clutch. This enables 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 substantial difference between input and output rotational speed.

The most common kind of torque converter used in car transmissions is the fluid coupling kind. During the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs for constantly changeable transmissions which can multiply torque. For instance, the Variomatic is a kind that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which is incapable of multiplying torque. A torque converter has an additional element that is the stator. This alters the drive's characteristics through occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are a minimum 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 turbine and the impeller so that it could change 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 situation and this is where the term stator originates 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.

Adjustments to the basic three element design have been integrated at times. These adjustments have proven worthy specially in application where higher than normal torque multiplication is considered necessary. More often than not, these alterations have taken the form of several stators and turbines. Each set has been intended to generate differing amounts of torque multiplication. Several instances comprise the Dynaflow that makes use of a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various car converters comprise a lock-up clutch in order to reduce heat and in order to improve the cruising power and transmission effectiveness, even if 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.