Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter is actually a fluid coupling that is used 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 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 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 popular kind of torque converter utilized in car transmissions is the fluid coupling kind. In the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are various mechanical designs utilized for always changeable transmissions that have the ability to multiply torque. For example, the Variomatic is a type that has a belt drive and expanding pulleys.

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

There are a minimum of three rotating parts in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which 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 stopped from rotating under any condition and this is where the term stator begins from. In point of fact, 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.

Changes to the basic three element design have been incorporated periodically. These changes have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. Most commonly, these adjustments have taken the form of multiple stators and turbines. Every set has been designed to generate differing amounts of torque multiplication. Some examples comprise the Dynaflow that makes use of a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

While it is not strictly a component of classic torque converter design, different automotive converters consist of a lock-up clutch to be able to lessen heat and so as to enhance cruising power transmission efficiency. 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.