Torque Converters for Forklift

Forklift Torque Converters - A torque converter is actually a fluid coupling that is used to be able to transfer rotating power from a prime mover, that 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 allows 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 whenever there is a considerable difference between input and output rotational speed.

The most common kind of torque converter used in automobile transmissions is the fluid coupling type. During the 1920s there was also the Constantinesco or pendulum-based torque converter. There are various mechanical designs used for always variable transmissions that could multiply torque. For example, the Variomatic is one kind which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part known as a stator. This changes the drive's characteristics throughout occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating parts inside a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it could 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 term stator starts from. Actually, 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.

Adjustments to the basic three element design have been incorporated sometimes. These changes have proven worthy especially in application where higher than normal torque multiplication is needed. More often than not, these alterations have taken the form of many stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Some examples comprise the Dynaflow which utilizes a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch to be able to lessen heat and in order to improve 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.