Torque Converter for Forklift

Forklift Torque Converter - A torque converter is a fluid coupling which is utilized in order 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 offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between input and output rotational speed.

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

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

There are a minimum of three rotating components in a torque converter: the turbine, which 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 change 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 whichever condition and this is where the word stator begins 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.

Changes to the basic three element design have been integrated at times. These alterations have proven worthy specially in application where higher than normal torque multiplication is needed. More often than not, these alterations have taken the form of multiple stators and turbines. Every set has been designed to generate differing amounts of torque multiplication. Several examples consist of the Dynaflow which utilizes a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, different automotive converters comprise a lock-up clutch to be able to reduce heat and so as 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 that eliminates losses connected with fluid drive.