Torque Converter for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized so as 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 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 when there is a significant difference between input and output rotational speed.

The fluid coupling type is the most common type of torque converter used in car transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs utilized for constantly changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is one version that has expanding pulleys and a belt drive.

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

There are a at least three rotating components in a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine 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 prevented from rotating under whichever situation 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 enabling forward rotation.

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

Even though it is not strictly a component of classic torque converter design, various automotive converters consist of a lock-up clutch to lessen heat and to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.