Torque Converter for Forklift

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

The fluid coupling model is the most common kind of torque converter used in auto transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs for always variable transmissions which can multiply torque. For instance, the Variomatic is a kind which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an added component that is the stator. This changes the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a at least three rotating components inside a torque converter: the turbine, which drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that 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 prevented from rotating under any condition and this is where the term stator originates 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 enabling forward rotation.

Alterations to the basic three element design have been integrated sometimes. These alterations have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. More often than not, these modifications have taken the form of various turbines and stators. Each and every set has been meant to produce differing amounts of torque multiplication. Various examples include the Dynaflow that makes use of a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters include a lock-up clutch to be able to lessen heat and in order to enhance 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 connected with fluid drive.