Torque Converter for Forklift

Torque Converters for Forklift - A torque converter in modern usage, is commonly a fluid coupling which is used so as to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This enables the load to be separated from the main power source. A torque converter could provide the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between input and output rotational speed.

The fluid coupling kind is the most popular type of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs used for continuously variable transmissions that can multiply torque. Like for example, the Variomatic is one kind which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an added element which is the stator. This alters the drive's characteristics all through times of high slippage and produces an increase in torque output.

In a torque converter, there are at least of three rotating elements: the turbine, to be able to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator 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 stopped from rotating under any situation and this is where the word stator originates from. Actually, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

Modifications 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 required. Most commonly, these modifications have taken the form of various stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Various examples consist of the Dynaflow that uses a five element converter in order to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters comprise a lock-up clutch so as to lessen heat and 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 associated with fluid drive.