Forklift Torque Converter

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

The fluid coupling unit is actually the most common type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs used for always variable transmissions which can multiply torque. For example, the Variomatic is a kind that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an additional part that is the stator. This changes the drive's characteristics 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, in order 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 alter 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 whatever situation and this is where the word stator originates 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.

Modifications to the basic three element design have been integrated at times. These alterations have proven worthy especially in application where higher than normal torque multiplication is considered necessary. Usually, these alterations have taken the form of multiple turbines and stators. Every set has been designed to produce differing amounts of torque multiplication. Some instances comprise the Dynaflow that makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Various car converters comprise a lock-up clutch to lessen heat and to be able to enhance the cruising power and transmission effectiveness, even if it is not strictly component of the torque converter design. 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.