Torque Converter for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling which is used 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 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 can provide the equivalent of a reduction gear by being able to multiply torque if there is a considerable difference between input and output rotational speed.

The fluid coupling kind is the most popular kind of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are other mechanical designs for continuously changeable transmissions which can multiply torque. For example, the Variomatic is a type that has a belt drive and expanding pulleys.

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

There are a at least three rotating components in a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it can alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under any condition and this is where the word stator starts from. In fact, 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.

Adjustments to the basic three element design have been incorporated sometimes. These modifications have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. More often than not, these adjustments have taken the form of various stators and turbines. Every set has been meant to generate differing amounts of torque multiplication. Various examples consist of the Dynaflow that utilizes a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch so as to lessen heat and in order to enhance the cruising power and transmission effectiveness, even if it is not strictly part 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 associated with fluid drive.