Torque Converters for Forklift

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is utilized to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables 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 whenever there is a considerable difference between input and output rotational speed.

The most popular kind of torque converter utilized in car transmissions is the fluid coupling model. During the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs used for always changeable transmissions that could multiply torque. For instance, the Variomatic is a version that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an additional part that is the stator. This alters the drive's characteristics through times of high slippage and generates an increase in torque output.

There are a minimum of three rotating components inside a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it can change 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 condition and this is where the term stator starts from. In fact, 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 allowing forward rotation.

Adjustments to the basic three element design have been incorporated periodically. These adjustments have proven worthy particularly in application where higher than normal torque multiplication is needed. Most commonly, these adjustments have taken the form of several turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Various examples comprise the Dynaflow that makes use of a five element converter to be able to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Though it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch so as to reduce heat and to be able to enhance cruising power transmission effectiveness. 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.