Forklift Torque Converter

Torque Converter for Forklifts - A torque converter in modern usage, is commonly 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. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized 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 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 unit. During the 1920s there was also the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs used for constantly changeable transmissions which can multiply torque. For instance, the Variomatic is a kind that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that is incapable of multiplying torque. A torque converter has an additional part which is the stator. This changes the drive's characteristics throughout times of high slippage and produces an increase in torque output.

There are a at least three rotating elements inside a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it can change 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 whatever condition and this is where the word stator begins from. In point of 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 enabling forward rotation.

In the three element design there have been alterations which have been incorporated at times. Where there is higher than normal torque manipulation is required, modifications to the modifications have proven to be worthy. Usually, these adjustments have taken the form of many turbines and stators. Each and every set has been intended to generate differing amounts of torque multiplication. Some examples consist of the Dynaflow which makes use of a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch to be able to reduce heat and to enhance cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.