Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling that is used to be able to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, to a rotating driven load. Like 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 can offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between input and output rotational speed.

The most popular type of torque converter used in automobile transmissions is the fluid coupling model. In the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs utilized for always changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is one version which 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 added part which is the stator. This changes the drive's characteristics through times of high slippage and generates an increase in torque output.

There are a minimum of three rotating components within a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it could alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under any situation and this is where the word stator starts from. In point of fact, 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.

In the three element design there have been adjustments that have been incorporated periodically. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of several stators and turbines. Every set has been meant to generate differing amounts of torque multiplication. Some examples comprise the Dynaflow that utilizes a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different automobile converters comprise a lock-up clutch in order to lessen heat and to enhance the cruising power and transmission efficiency, though 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 which eliminates losses connected with fluid drive.