Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter in modern usage, is usually a fluid coupling that is utilized to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, to a rotating driven load. Same as 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 could offer the equivalent of a reduction gear by being able to multiply torque if there is a significant difference between input and output rotational speed.

The most common type of torque converter utilized in automobile transmissions is the fluid coupling kind. In the 1920s there was also the Constantinesco or pendulum-based torque converter. There are different mechanical designs used for constantly changeable transmissions that can multiply torque. For example, the Variomatic is one type that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an component referred to as a stator. This changes the drive's characteristics throughout 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, which 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 can alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be prevented from rotating under whichever situation and this is where the word stator originates from. Actually, 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 permitting forward rotation.

In the three element design there have been adjustments which have been integrated sometimes. 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 various stators and turbines. Each set has been intended to generate differing amounts of torque multiplication. Various examples include the Dynaflow which makes use of a five element converter to be able 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, different automotive converters include a lock-up clutch so as to reduce heat and to be able to improve 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 connected with fluid drive.