Torque Converters 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 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 mechanical clutch. This enables the load to be separated from the main power source. A torque converter could provide 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 common type of torque converter utilized in car transmissions is the fluid coupling unit. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs used for constantly changeable transmissions that could multiply torque. For instance, the Variomatic is a type which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an part known as a stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

There are a minimum of three rotating elements within 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 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 whichever situation and this is where the word stator starts from. In 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 permitting forward rotation.

In the three element design there have been adjustments which have been integrated at times. Where there is higher than normal torque manipulation is needed, changes to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of several turbines and stators. Each and every set has been intended to produce differing amounts of torque multiplication. Various examples consist of the Dynaflow which uses a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various automobile converters include a lock-up clutch to reduce heat and in order to improve the cruising power and transmission efficiency, even though it is not strictly component 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 related with fluid drive.