Torque Converter for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling that is utilized so as to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take the place of a mechanical 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 if there is a considerable difference between input and output rotational speed.

The most popular type of torque converter used in car transmissions is the fluid coupling type. During the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are different mechanical designs utilized for always variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is one version which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an additional component that is the stator. This alters the drive's characteristics all through occasions 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, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could 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 condition and this is where the term 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 allowing forward rotation.

In the three element design there have been changes which have been integrated sometimes. Where there is higher than normal torque manipulation is required, changes to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of many turbines and stators. Each set has been intended to produce differing amounts of torque multiplication. Some instances consist of the Dynaflow which makes use of a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various automobile converters include a lock-up clutch to lessen heat and to be able to improve the cruising power and transmission efficiency, although it is not strictly part of the torque converter design. 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.