Torque Converters for Forklift

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling that is utilized so as to transfer rotating power from a prime mover, for example an electric motor or an internal combustion engine, to a rotating driven load. Similar to 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 can provide the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between output and input rotational speed.

The most common type of torque converter utilized in auto transmissions is the fluid coupling type. In the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are different mechanical designs for always changeable transmissions which have the ability to multiply torque. For instance, the Variomatic is a type which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an added component that is the stator. This alters the drive's characteristics through occasions of high slippage and generates an increase in torque output.

Inside a torque converter, there are a minimum of three rotating components: the turbine, to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it could 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 any situation and this is where the term stator starts 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 that have been integrated sometimes. Where there is higher than normal torque manipulation is needed, changes to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of multiple stators and turbines. Each and every set has been meant to produce differing amounts of torque multiplication. Several examples comprise the Dynaflow that utilizes a five element converter to be able to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various auto converters include a lock-up clutch to be able to reduce heat and in order to enhance the cruising power and transmission effectiveness, although it is not strictly component 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 related with fluid drive.