Torque Converter for Forklift

Torque Converter for Forklifts - A torque converter in modern usage, is normally a fluid coupling which is utilized so as to transfer rotating power from a prime mover, for instance 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 offer the equivalent of a reduction gear by being able to multiply torque if there is a substantial difference between output and input rotational speed.

The most common kind of torque converter used in car transmissions is the fluid coupling kind. During the 1920s there was also the Constantinesco or pendulum-based torque converter. There are other mechanical designs utilized for constantly variable transmissions which can multiply torque. For instance, the Variomatic is a version that has expanding pulleys and a belt drive.

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

Within a torque converter, there are a minimum of three rotating components: the turbine, in order to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller 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 stopped from rotating under whichever situation and this is where the word stator originates from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents 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 incorporated periodically. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of many stators and turbines. Each set has been designed to produce differing amounts of torque multiplication. Various examples comprise the Dynaflow which makes use of a five element converter to be able to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various car converters include a lock-up clutch in order to lessen heat and to be able to enhance the cruising power and transmission effectiveness, even though 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 which eliminates losses related with fluid drive.