Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is used in order to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanized 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 significant difference between output and input rotational speed.

The fluid coupling kind is actually the most popular kind of torque converter used in car transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are different mechanical designs utilized for constantly changeable transmissions which can multiply torque. For instance, the Variomatic is a type which has a belt drive and expanding pulleys.

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

Within a torque converter, there are a minimum of three rotating parts: the turbine, so as to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can 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 whichever condition and this is where the word stator originates 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 enabling 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 needed, adjustments to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of many stators and turbines. Every set has been intended to generate differing amounts of torque multiplication. Some instances include the Dynaflow which utilizes a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Though it is not strictly a component of classic torque converter design, various automotive converters consist of a lock-up clutch in order to lessen heat and in order to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.