Torque Converters for Forklift

Forklift Torque Converter - A torque converter is a fluid coupling that is utilized to transfer rotating power from a prime mover, that is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take 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 fluid coupling model is actually the most popular kind of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs utilized for constantly variable transmissions which have the ability to multiply torque. Like for example, the Variomatic is one version which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an element referred to as a stator. This alters the drive's characteristics all through times of high slippage and produces an increase in torque output.

Within a torque converter, there are a minimum of three rotating parts: the turbine, to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can 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 term stator begins from. Actually, 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 modifications which have been incorporated periodically. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. Usually, these adjustments have taken the form of many turbines and stators. Each set has been designed to generate differing amounts of torque multiplication. Various instances consist of the Dynaflow that makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

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