Torque Converter for Forklift

Torque Converter for Forklift - A torque converter in modern usage, is usually a fluid coupling which is used 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 could offer 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 kind is the most popular type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs used for always variable transmissions which can multiply torque. Like for example, the Variomatic is one type that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an additional part which is the stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating components: the turbine, so as 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 could alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under whatever situation and this is where the word stator originates 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 enabling forward rotation.

In the three element design there have been alterations that have been integrated periodically. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of several stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Various instances consist of the Dynaflow which utilizes a five element converter so as to produce the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters include a lock-up clutch to lessen heat and so as to improve 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 associated with fluid drive.