Torque Converter for Forklift

Forklift Torque Converter - A torque converter is a fluid coupling which is utilized so as to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is like a basic fluid coupling to take the place of a mechanized clutch. This allows 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 if there is a significant difference between input and output rotational speed.

The fluid coupling kind is actually the most popular type of torque converter utilized in car transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs used for continuously changeable transmissions that can multiply torque. Like for example, the Variomatic is one kind which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an extra part which is the stator. This changes the drive's characteristics throughout occasions of high slippage and produces 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. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever condition and this is where the term 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 modifications that have been integrated sometimes. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of various stators and turbines. Every set has been meant to produce differing amounts of torque multiplication. Some examples include the Dynaflow which makes use of 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 comprise a lock-up clutch to be able to reduce heat and in order to improve cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.