Forklift Torque Converters

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, 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 can offer the equivalent of a reduction gear by being able to multiply torque if there is a considerable difference between input and output rotational speed.

The fluid coupling unit is the most popular kind of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs for continuously variable transmissions which could multiply torque. Like for instance, the Variomatic is a version which 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 component which is the stator. This alters the drive's characteristics throughout occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating elements inside a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it can 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 any condition 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 enabling forward rotation.

In the three element design there have been modifications that have been incorporated at times. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of many turbines and stators. Every set has been designed to produce differing amounts of torque multiplication. Various instances comprise the Dynaflow which makes use of a five element converter so as to generate 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 consist of a lock-up clutch to reduce heat and 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 that eliminates losses connected with fluid drive.