Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is used so as to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This enables 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 whenever there is a significant difference between output and input rotational speed.

The fluid coupling type is the most popular kind of torque converter utilized in automobile transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs used for constantly changeable transmissions that could multiply torque. For instance, the Variomatic is a type that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which is incapable of multiplying torque. A torque converter has an additional component that is the stator. This changes the drive's characteristics through occasions of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating components: the turbine, in order 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 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 whichever condition and this is where the word stator starts from. In truth, the stator is mounted on an overrunning clutch. This particular 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 modifications which have been incorporated periodically. Where there is higher than normal torque manipulation is required, adjustments 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 produce differing amounts of torque multiplication. Some examples consist of the Dynaflow that utilizes a five element converter to be able to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

While it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch to reduce heat and to enhance 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 related with fluid drive.