Forklift Torque Converters

Forklift Torque Converter - A torque converter is actually a fluid coupling that is used so as 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 allows the load to be separated from the main power source. A torque converter can provide the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between output and input rotational speed.

The fluid coupling model is actually the most popular type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are various mechanical designs utilized for always variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a version 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 added element that is the stator. This alters the drive's characteristics during occasions of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating parts: 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 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 stopped from rotating under whichever situation and this is where the word stator starts from. In point of fact, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Adjustments to the basic three element design have been integrated periodically. These modifications have proven worthy specially in application where higher than normal torque multiplication is required. Most commonly, these modifications have taken the form of multiple stators and turbines. Each set has been designed to generate differing amounts of torque multiplication. Various instances include 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.

Although it is not strictly a component of classic torque converter design, various automotive converters include a lock-up clutch so as to lessen heat and to be able 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 that eliminates losses connected with fluid drive.