Forklift Torque Converter

Torque Converter for Forklifts - A torque converter is actually a fluid coupling that is used 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 similar to a basic fluid coupling to take 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 if there is a considerable difference between output and input rotational speed.

The most popular type of torque converter used in auto transmissions is the fluid coupling type. During the 1920s there was likewise the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs for always changeable transmissions that could multiply torque. For example, the Variomatic is a version that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an element known as a stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

There are a at least three rotating components in a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it can alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the term stator begins from. Actually, 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 changes that have been incorporated sometimes. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of various stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Several instances consist of the Dynaflow which makes use of a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Though it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch so as to lessen heat and 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 connected with fluid drive.