

Forklift Torque Converters

Forklift Torque Converters - A torque converter in modern usage, is commonly a fluid coupling that is utilized to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows the load to be separated from the main power source. A torque converter could offer the equivalent of a reduction gear by being able to multiply torque when 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 kind. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs for constantly variable transmissions that could multiply torque. For example, the Variomatic is one kind which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an additional element that is the stator. This alters the drive's characteristics through times of high slippage and produces an increase in torque output.

In a torque converter, there are a minimum of three rotating elements: the turbine, to be able 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 can change oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition and this is where the term stator starts from. In reality, 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 permitting forward rotation.

In the three element design there have been adjustments that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. More often than not, these alterations have taken the form of many stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Various instances consist of the Dynaflo that utilizes a five element converter to be able 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, different automotive converters comprise a lock-up clutch so as to reduce heat and so as to improve cruising power transmission effectiveness. 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.