

Forklift Torque Converter

Forklift Torque Converter - A torque converter is a fluid coupling which is utilized to be able to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take the place of a mechanical 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 when there is a considerable difference between output and input rotational speed.

The most popular kind of torque converter utilized in car transmissions is the fluid coupling unit. In the 1920s there was also the Constantinesco or pendulum-based torque converter. There are various mechanical designs for always changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is a kind that has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an extra element that is the stator. This changes the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

In a torque converter, there are a minimum of three rotating parts: the turbine, to be able 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 could change 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 situation and this is where the word stator originates from. Actually, 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 adjustments that have been incorporated at times. Where there is higher than normal torque manipulation is needed, changes to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of many turbines and stators. Each set has been designed to produce differing amounts of torque multiplication. Some instances consist of the Dynaflow that utilizes a five element converter in order to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch to be able to lessen heat and in order to improve cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.