

Torque Converters for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling which 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 like 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 could provide the equivalent of a reduction gear by being able to multiply torque whenever there is a considerable difference between output and input rotational speed.

The most popular type of torque converter used in automobile transmissions is the fluid coupling kind. In the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs utilized for continuously changeable transmissions which have the ability to multiply torque. Like for example, the Variomatic is one kind which has expanding pulleys and a belt drive.

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

In a torque converter, there are at least of three rotating components: 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 could alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under any condition and this is where the word stator starts from. Actually, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

In the three element design there have been changes that have been integrated at times. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. Usually, these modifications have taken the form of various stators and turbines. Every set has been intended to produce differing amounts of torque multiplication. Various instances include the Dynaflo which makes use of a five element converter in order 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 comprise a lock-up clutch to lessen heat and so as 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 which eliminates losses related with fluid drive.