

Forklift Torque Converters

Torque Converter for Forklift - A torque converter is a fluid coupling which is used 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 mechanized 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 if there is a significant difference between input and output rotational speed.

The fluid coupling unit is actually the most popular kind of torque converter utilized in car transmissions. During the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are other mechanical designs utilized for constantly variable transmissions that have the ability to multiply torque. Like for example, the Variomatic is a type which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that is incapable of multiplying torque. A torque converter has an additional part which is the stator. This alters the drive's characteristics through times of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating elements: 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. Normally, the design of the torque converter dictates that the stator be stopped from rotating under any situation and this is where the word stator starts 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 allowing forward rotation.

In the three element design there have been modifications which have been incorporated periodically. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of various stators and turbines. Each set has been meant to produce differing amounts of torque multiplication. Various instances include the Dynaflo that makes use of a five element converter to be able to produce the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch so as to lessen heat and to be able to enhance the cruising power and transmission efficiency, although it is not strictly component of the torque converter design. 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.