

Torque Converter for Forklifts

Torque Converter for Forklift - A torque converter is a fluid coupling which is utilized 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 mechanical clutch. This allows 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 input and output rotational speed.

The most popular kind of torque converter utilized in auto transmissions is the fluid coupling unit. In the 1920s there was also the Constantinesco or also known as pendulum-based torque converter. There are different mechanical designs for always variable transmissions which have the ability to multiply torque. For example, the Variomatic is one version which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component known as a stator. This alters the drive's characteristics through occasions of high slippage and generates an increase in torque output.

There are a minimum of three rotating components inside a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be prevented from rotating under whatever condition and this is where the term stator starts 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 permitting forward rotation.

In the three element design there have been alterations that have been incorporated sometimes. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. Usually, these alterations have taken the form of multiple turbines and stators. Each set has been intended to generate differing amounts of torque multiplication. Some examples include the Dynaflo that makes use of a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various automobile converters consist of a lock-up clutch so as to reduce heat and to be able to improve the cruising power and transmission efficiency, even if it is not strictly part of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.