

Forklift Torque Converter

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized so as 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 if there is a substantial difference between input and output rotational speed.

The fluid coupling kind is the most common kind of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are different mechanical designs used for always variable transmissions that can multiply torque. Like for instance, the Variomatic is a version which has a belt drive and expanding pulleys.

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

There are a minimum of three rotating components in a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it can alter 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 any condition and this is where the word stator starts from. In point of fact, the stator is mounted on an overrunning clutch. This design stops 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 sometimes. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of several turbines and stators. Each and every set has been intended to generate differing amounts of torque multiplication. Several instances include the Dynaflo which makes use of a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch to lessen heat and to improve the cruising power and transmission efficiency, even though 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 which eliminates losses connected with fluid drive.