

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling that is utilized in order to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This allows 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 when there is a significant difference between input and output rotational speed.

The fluid coupling model is the most popular type of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are different mechanical designs utilized for continuously variable transmissions which could multiply torque. For instance, the Variomatic is a kind which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an component known as a stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

Inside a torque converter, there are a minimum of three rotating elements: the turbine, to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine 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 stopped from rotating under whatever condition and this is where the term stator starts from. In point of fact, 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 enabling forward rotation.

In the three element design there have been modifications that have been integrated periodically. Where there is higher than normal torque manipulation is needed, adjustments to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of various turbines and stators. Each set has been intended to generate differing amounts of torque multiplication. Several examples consist of the Dynaflo which uses a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different car converters comprise a lock-up clutch in order to lessen heat and to enhance the cruising power and transmission effectiveness, 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 which eliminates losses related with fluid drive.