

Forklift Torque Converters

Forklift Torque Converters - A torque converter in modern usage, is normally a fluid coupling that is utilized to transfer rotating power from a prime mover, for instance an electric motor or an internal combustion engine, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanical 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 if there is a substantial difference between output and input rotational speed.

The fluid coupling type is actually the most common type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs used for continuously variable transmissions which could multiply torque. For example, the Variomatic is one version which has a belt drive and expanding pulleys.

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

In a torque converter, there are at least of three rotating parts: the turbine, so as 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 could change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever situation and this is where the term stator starts from. Actually, the stator is mounted on an overrunning clutch. This 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 which have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, changes to the modifications have proven to be worthy. More often than not, these alterations have taken the form of various turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Several examples consist of the Dynaflo which utilizes a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters include a lock-up clutch to be able to lessen heat and to enhance the cruising power and transmission effectiveness, though 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 which eliminates losses associated with fluid drive.