

Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is used to be able to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, to a rotating driven load. Similar to 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 input and output rotational speed.

The fluid coupling type is the most popular kind of torque converter utilized in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs utilized for always variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a version that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element known as a stator. This alters the drive's characteristics all through 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, so as 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 could 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 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 stops the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

Modifications to the basic three element design have been integrated at times. These alterations have proven worthy especially in application where higher than normal torque multiplication is required. Most commonly, these alterations have taken the form of many turbines and stators. Every set has been designed to produce differing amounts of torque multiplication. Some examples comprise 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 car converters comprise a lock-up clutch in order to lessen heat and to be able to enhance the cruising power and transmission efficiency, although it is not strictly part 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 related with fluid drive.