

Torque Converter for Forklift

Torque Converter for Forklift - A torque converter in modern usage, is usually a fluid coupling that is used to be able to transfer rotating power from a prime mover, like for instance an electric motor or an internal combustion engine, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows the load to be separated from the main power source. A torque converter could offer the equivalent of a reduction gear by being able to multiply torque when there is a substantial difference between input and output rotational speed.

The fluid coupling unit is the most popular kind of torque converter used in automobile transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs for constantly variable transmissions that could multiply torque. Like for example, the Variomatic is one type which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part called a stator. This changes the drive's characteristics throughout times of high slippage and produces an increase in torque output.

Inside a torque converter, there are a minimum of three rotating components: the turbine, to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition and this is where the word stator starts from. In truth, 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.

Changes to the basic three element design have been incorporated sometimes. These modifications have proven worthy especially in application where higher than normal torque multiplication is considered necessary. Usually, these adjustments have taken the form of several stators and turbines. Each and every set has been meant to produce differing amounts of torque multiplication. Some examples comprise the Dynaflo that utilizes a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch so as to lessen heat and in order to enhance cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.