

Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is utilized so as to transfer rotating power from a prime mover, like for example 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 enables 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 considerable difference between output and input rotational speed.

The fluid coupling type is actually the most popular kind of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are different mechanical designs for always changeable transmissions that have the ability to multiply torque. For example, the Variomatic is one version that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an part called a stator. This changes the drive's characteristics all through times of high slippage and produces an increase in torque output.

There are at least three rotating parts in a torque converter: the turbine, which drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it can alter 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 situation and this is where the term stator begins from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

Adjustments to the basic three element design have been integrated at times. These modifications have proven worthy particularly in application where higher than normal torque multiplication is required. Usually, these modifications have taken the form of various turbines and stators. Each set has been meant to produce differing amounts of torque multiplication. Several instances comprise the Dynaflo that uses a five element converter in order to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters include a lock-up clutch so as to lessen heat and to be able to improve cruising power transmission efficiency. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.