

Forklift Torque Converters

Torque Converters for Forklift - A torque converter is a fluid coupling which is utilized to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take 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 whenever there is a significant difference between output and input rotational speed.

The most popular kind of torque converter utilized in automobile transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or pendulum-based torque converter. There are various mechanical designs for continuously variable transmissions which could multiply torque. For instance, the Variomatic is a kind that has expanding pulleys and a belt drive.

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

There are a minimum of three rotating parts within 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 change 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 any condition and this is where the word stator originates from. Actually, 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 incorporated periodically. These modifications have proven worthy specially in application where higher than normal torque multiplication is required. Usually, these modifications have taken the form of many turbines and stators. Each set has been meant to generate differing amounts of torque multiplication. Some examples include the Dynaflo that utilizes a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different automobile converters consist of a lock-up clutch so as to reduce heat and so as to enhance the cruising power and transmission effectiveness, even though it is not strictly component of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.