

Forklift Torque Converter

Forklift Torque Converter - A torque converter is a fluid coupling which is used in order 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 same as a basic fluid coupling to take the place of a mechanized 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 substantial difference between input and output rotational speed.

The fluid coupling kind is the most common type of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs for continuously changeable transmissions which can multiply torque. Like for instance, the Variomatic is one type which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an additional component which is the stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are at least three rotating components inside a torque converter: the turbine, that 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 could 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 whatever condition and this is where the word stator begins from. In reality, the stator is mounted on an overrunning clutch. This 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 at times. These alterations have proven worthy especially in application where higher than normal torque multiplication is required. Usually, these adjustments have taken the form of multiple stators and turbines. Each set has been intended to generate differing amounts of torque multiplication. Some instances consist of the Dynaflo that makes use of a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters comprise a lock-up clutch to reduce heat and to improve 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 associated with fluid drive.