

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is used in order to transfer rotating power from a prime mover, for instance an electric motor or an internal combustion engine, 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 offer the equivalent of a reduction gear by being able to multiply torque when there is a substantial difference between output and input rotational speed.

The fluid coupling unit is actually the most common kind of torque converter used in auto transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are different mechanical designs used for constantly variable transmissions which could multiply torque. Like for example, the Variomatic is a kind which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an extra element that is the stator. This changes the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a minimum of three rotating parts in 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 impeller and the turbine so that it could 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 whatever situation 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 permitting forward rotation.

Alterations to the basic three element design have been incorporated at times. These changes have proven worthy especially in application where higher than normal torque multiplication is needed. Usually, these alterations have taken the form of multiple stators and turbines. Each and every set has been intended to produce differing amounts of torque multiplication. Various instances consist of the Dynaflo that makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Different car converters comprise a lock-up clutch so as to reduce heat and in order to enhance the cruising power and transmission effectiveness, even though 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 connected with fluid drive.