Torque Converter for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized to transfer rotating power from a prime mover, that 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 unit is the most popular kind of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs for always changeable transmissions that could multiply torque. For instance, the Variomatic is one version which 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 alters the drive's characteristics all through times of high slippage and produces an increase in torque output.

Inside a torque converter, there are a minimum of three rotating parts: the turbine, in order to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller 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 starts from. In point of fact, 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 allowing forward rotation.

Modifications to the basic three element design have been incorporated at times. These changes have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. Most commonly, these modifications have taken the form of multiple stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Several instances include the Dynaflow which uses a five element converter to be able to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different car converters consist of a lock-up clutch to lessen heat and in order to improve the cruising power and transmission efficiency, 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 connected with fluid drive.