Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is utilized to transfer rotating power from a prime mover, like for example an internal combustion engine or an electrical motor, to a rotating driven load. Like 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 input and output rotational speed.

The most common kind of torque converter used in auto transmissions is the fluid coupling type. In the 1920s there was likewise the Constantinesco or pendulum-based torque converter. There are other mechanical designs utilized for continuously changeable transmissions which could multiply torque. For instance, the Variomatic is one type that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an part referred to as a stator. This changes the drive's characteristics throughout occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating components within a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the word stator begins 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.

Changes to the basic three element design have been incorporated periodically. These alterations have proven worthy especially in application where higher than normal torque multiplication is needed. More often than not, these modifications have taken the form of various stators and turbines. Each and every set has been intended to generate differing amounts of torque multiplication. Several examples comprise the Dynaflow which makes use of a five element converter to be able to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different auto converters consist of a lock-up clutch so as to reduce heat and to improve the cruising power and transmission effectiveness, 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.