Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is used 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 allows 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 considerable difference between output and input rotational speed.

The most popular type of torque converter used in car transmissions is the fluid coupling type. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs used for always variable transmissions that can multiply torque. For instance, the Variomatic is one version 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 extra element that is the stator. This changes the drive's characteristics during occasions of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating components: the turbine, so as to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it could alter 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 whichever condition and this is where the term stator starts 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 periodically. These changes have proven worthy specially in application where higher than normal torque multiplication is required. Usually, these adjustments have taken the form of multiple stators and turbines. Each and every set has been meant to generate differing amounts of torque multiplication. Various examples comprise the Dynaflow that makes use of a five element converter in order to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Different automobile converters consist of a lock-up clutch in order to lessen heat and to be able to improve the cruising power and transmission effectiveness, though it is not strictly part 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.