Forklift Torque Converter

Forklift Torque Converter - A torque converter is 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 similar to a basic fluid coupling to take the place of a mechanical clutch. This allows 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 fluid coupling model is actually the most common type of torque converter used in car transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are various mechanical designs utilized for always changeable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a version which 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 alters the drive's characteristics during times of high slippage and produces an increase in torque output.

Within a torque converter, there are a minimum 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 can alter 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 whatever situation and this is where the word stator originates from. Actually, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

In the three element design there have been alterations which have been incorporated sometimes. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Usually, these modifications have taken the form of several turbines and stators. Each set has been intended to generate differing amounts of torque multiplication. Several examples include the Dynaflow that makes use of a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various car converters comprise a lock-up clutch to be able to lessen heat and so as to enhance the cruising power and transmission effectiveness, even though it is not strictly component 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 related with fluid drive.