Forklift Torque Converter

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized to be able to transfer rotating power from a prime mover, which 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 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 whenever there is a substantial difference between input and output rotational speed.

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

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an element called a stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are a at least three rotating components inside a torque converter: the turbine, which 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 could alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under whatever condition and this is where the word stator starts from. In reality, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still enabling forward rotation.

In the three element design there have been changes which have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of multiple turbines and stators. Each set has been designed to generate differing amounts of torque multiplication. Several instances include the Dynaflow which makes use of a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters consist of a lock-up clutch in order to reduce heat and in order to improve the cruising power and transmission effectiveness, even if 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 that eliminates losses associated with fluid drive.