Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is usually 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. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized 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 if there is a significant difference between input and output rotational speed.

The fluid coupling kind is actually the most common type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs used for constantly changeable transmissions which could multiply torque. For instance, the Variomatic is one kind that 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 changes the drive's characteristics through times of high slippage and produces an increase in torque output.

Inside a torque converter, there are a minimum of three rotating components: the turbine, 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. Usually, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the word stator originates from. In truth, 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 integrated sometimes. These alterations have proven worthy particularly in application where higher than normal torque multiplication is required. Usually, these adjustments have taken the form of many stators and turbines. Each set has been designed to produce differing amounts of torque multiplication. Several examples include the Dynaflow which utilizes a five element converter to be able to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different car converters comprise a lock-up clutch in order to lessen heat and in order to enhance the cruising power and transmission effectiveness, even 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 which eliminates losses related with fluid drive.