Forklift Torque Converter

Forklift Torque Converter - A torque converter is actually a fluid coupling which is used in order to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter can provide the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between output and input rotational speed.

The fluid coupling kind is actually the most popular type of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or Constantinesco converter. There are various mechanical designs for constantly changeable transmissions that could multiply torque. For example, the Variomatic is a type that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part referred to as a stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating components inside a torque converter: the turbine, which drives the load, the impeller, that 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 situation and this is where the term 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.

Changes to the basic three element design have been incorporated sometimes. These alterations have proven worthy particularly in application where higher than normal torque multiplication is considered necessary. More often than not, these adjustments have taken the form of several turbines and stators. Each set has been intended to generate differing amounts of torque multiplication. Some instances include the Dynaflow which uses a five element converter in order to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Various automobile converters comprise a lock-up clutch so as to reduce heat and in order to improve the cruising power and transmission efficiency, even if 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 associated with fluid drive.