Torque Converter for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling that is used to be able 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 like 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 can provide the equivalent of a reduction gear by being able to multiply torque when there is a considerable difference between output and input rotational speed.

The fluid coupling type is the most common type of torque converter used in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs used for continuously changeable transmissions that can multiply torque. For example, the Variomatic is a version that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component known as a stator. This alters the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a at least three rotating elements in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it can change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the term stator starts from. In truth, 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.

Adjustments to the basic three element design have been incorporated periodically. These alterations have proven worthy specially in application where higher than normal torque multiplication is required. More often than not, these adjustments have taken the form of several stators and turbines. Every set has been intended to produce differing amounts of torque multiplication. Some examples consist of the Dynaflow which uses a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

While it is not strictly a part of classic torque converter design, various automotive converters include a lock-up clutch to reduce heat and so as to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.