Torque Converters for Forklift

Torque Converters for Forklift - A torque converter is actually a fluid coupling which is utilized 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 like a basic fluid coupling to take the place of a mechanical clutch. This enables 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 when there is a significant difference between output and input rotational speed.

The most popular type of torque converter utilized in automobile transmissions is the fluid coupling type. During the 1920s there was even the Constantinesco or pendulum-based torque converter. There are other mechanical designs for constantly changeable transmissions which could multiply torque. Like for instance, the Variomatic is a version that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an element called a stator. This changes the drive's characteristics all through times of high slippage and produces an increase in torque output.

There are a minimum of three rotating elements in a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that 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 condition and this is where the term stator starts 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 allowing forward rotation.

Alterations to the basic three element design have been integrated sometimes. These adjustments have proven worthy particularly in application where higher than normal torque multiplication is needed. Most commonly, these adjustments have taken the form of multiple stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Several instances consist of the Dynaflow which makes use of a five element converter to be able to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters consist of a lock-up clutch to be able to lessen heat and to be able to enhance cruising power transmission effectiveness. 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.