Forklift Torque Converters

Forklift Torque Converter - A torque converter is a fluid coupling that is utilized to be able to transfer rotating power from a prime mover, that 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 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 type is actually the most popular kind of torque converter utilized in car transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are different mechanical designs utilized for continuously changeable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is a type which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which could not multiply torque. A torque converter has an extra component that is the stator. This alters the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a minimum of three rotating elements inside 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 turbine and the impeller so that it can change 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 term stator originates from. In fact, the stator is mounted on an overrunning clutch. This particular design prevents 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 integrated periodically. These adjustments have proven worthy especially in application where higher than normal torque multiplication is required. Most commonly, these alterations have taken the form of various stators and turbines. Each and every set has been meant to generate differing amounts of torque multiplication. Various examples include the Dynaflow which utilizes a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch in order to lessen heat and to be able to improve cruising power transmission efficiency. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.