Torque Converters for Forklift

Forklift Torque Converter - A torque converter is actually 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 mechanized clutch. This enables the load to be separated from the main power source. A torque converter can offer the equivalent of a reduction gear by being able to multiply torque if there is a substantial difference between output and input rotational speed.

The most common type of torque converter used in car transmissions is the fluid coupling type. In the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs used for always changeable transmissions that can multiply torque. For example, the Variomatic is a version which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that is incapable of multiplying torque. A torque converter has an extra element which is the stator. This changes the drive's characteristics throughout occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are at least of three rotating components: the turbine, so as to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the turbine and the impeller so that it can 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 situation and this is where the term stator starts from. In point of fact, 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 enabling forward rotation.

In the three element design there have been modifications that have been incorporated at times. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of several stators and turbines. Each set has been meant to produce differing amounts of torque multiplication. Several instances include the Dynaflow which makes use of a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various auto converters comprise a lock-up clutch to reduce heat and in order to enhance 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 which eliminates losses associated with fluid drive.