Torque Converter for Forklift

Torque Converters for Forklifts - A torque converter in modern usage, is usually a fluid coupling which is used so as to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes 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 if there is a considerable difference between output and input rotational speed.

The most popular kind of torque converter used in car transmissions is the fluid coupling kind. During the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs used for continuously variable transmissions that could multiply torque. Like for example, the Variomatic is a type that has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive that cannot multiply torque. A torque converter has an additional part which is the stator. This changes the drive's characteristics all through times of high slippage and produces an increase in torque output.

Within a torque converter, there are at least of three rotating elements: 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 impeller and the turbine 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 begins 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.

Alterations to the basic three element design have been incorporated periodically. These modifications have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Usually, these adjustments have taken the form of various stators and turbines. Each set has been intended to generate differing amounts of torque multiplication. Several examples consist of the Dynaflow which makes use of a five element converter to be able to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Although it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch in order to reduce heat and to be able to improve cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.