

Torque Converters for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized to transfer rotating power from a prime mover, which 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 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 when there is a substantial difference between input and output rotational speed.

The most popular kind of torque converter utilized in car transmissions is the fluid coupling kind. During the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs used for constantly variable transmissions which can multiply torque. For instance, the Variomatic is a kind that has expanding pulleys and a belt drive.

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

In a torque converter, there are at least of three rotating components: the turbine, so as to drive the load, the impeller which is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it could 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 condition and this is where the word stator starts from. In point of fact, the stator is mounted on an overrunning clutch. This 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 alterations that have been incorporated sometimes. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of several turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Several examples include the Dynaflo that uses a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch to reduce heat and to enhance cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses related with fluid drive.