

Torque Converter for Forklift

Torque Converters for Forklift - A torque converter is a fluid coupling which is utilized so as to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to 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 offer the equivalent of a reduction gear by being able to multiply torque when there is a substantial difference between output and input rotational speed.

The most popular type of torque converter utilized in auto transmissions is the fluid coupling type. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs used for always variable transmissions which have the ability to multiply torque. Like for example, the Variomatic is one kind 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 added part that is the stator. This alters the drive's characteristics during times of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating elements: the turbine, in order 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 alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition and this is where the word stator begins from. In 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 allowing forward rotation.

In the three element design there have been alterations that have been integrated sometimes. Where there is higher than normal torque manipulation is needed, adjustments to the modifications have proven to be worthy. Usually, these adjustments have taken the form of multiple stators and turbines. Each set has been meant to produce differing amounts of torque multiplication. Various examples comprise the Dynaflo which uses a five element converter to be able to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different car converters consist of a lock-up clutch to be able to reduce heat and to improve the cruising power and transmission efficiency, although it is not strictly part of the torque converter design. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.