

Torque Converter for Forklift

Forklift Torque Converter - 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 example an internal combustion engine or an electrical motor, to a rotating driven load. Same as a basic fluid coupling, the torque converter takes 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 considerable difference between output and input rotational speed.

The most common type of torque converter utilized in auto transmissions is the fluid coupling model. During the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs utilized for constantly changeable transmissions which have the ability to multiply torque. Like for example, the Variomatic is a version which has expanding pulleys and a belt drive.

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

There are a minimum of three rotating elements in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it can change 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 whatever condition and this is where the word stator starts from. In reality, the stator is mounted on an overrunning clutch. This design prevents 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 which have been integrated sometimes. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of many stators and turbines. Each set has been intended to generate differing amounts of torque multiplication. Several examples consist of the Dynaflo which makes use of a five element converter in order to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters comprise a lock-up clutch to reduce heat and to be able to enhance 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.