

Torque Converter for Forklifts

Torque Converter for Forklifts - A torque converter in modern usage, is commonly a fluid coupling which is utilized in order to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, to a rotating driven load. Similar to a basic fluid coupling, the torque converter takes the place of a mechanized clutch. This allows the load to be separated from the main power source. A torque converter could 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 common type of torque converter utilized in car transmissions is the fluid coupling unit. During the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are various mechanical designs used for constantly changeable transmissions which have the ability to 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 cannot multiply torque. A torque converter has an extra component which is the stator. This alters the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are at least three rotating parts inside a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could 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 any situation and this is where the word stator begins from. Actually, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

In the three element design there have been changes that have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of multiple stators and turbines. Each and every set has been designed to generate differing amounts of torque multiplication. Various instances consist of the Dynaflo that uses a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

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