

Torque Converter for Forklifts

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized in order to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is like a basic fluid coupling to take the place of a mechanized 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 if there is a considerable difference between input and output rotational speed.

The most common kind of torque converter utilized in auto transmissions is the fluid coupling model. In the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are different mechanical designs for constantly changeable transmissions that can multiply torque. Like for example, the Variomatic is one kind that has a belt drive and expanding pulleys.

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

There are a minimum of three rotating components within a torque converter: the turbine, which drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the turbine and the impeller so that it could change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever condition and this is where the word stator originates 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 permitting forward rotation.

In the three element design there have been adjustments which have been integrated periodically. Where there is higher than normal torque manipulation is needed, alterations to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of multiple turbines and stators. Every set has been designed to generate differing amounts of torque multiplication. Several instances consist of the Dynaflo that makes use of a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters include a lock-up clutch to lessen heat and in order 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 that eliminates losses associated with fluid drive.