

Torque Converter for Forklift

Forklift Torque Converters - A torque converter in modern usage, is commonly a fluid coupling that is utilized to be able to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanical clutch. This allows 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 kind. In the 1920s there was even the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs used for always variable transmissions which could multiply torque. For instance, the Variomatic is a kind that 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 part that is the stator. This changes the drive's characteristics all through times of high slippage and generates an increase in torque output.

There are at least three rotating parts 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 turbine and the impeller 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 stopped from rotating under any 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 enabling forward rotation.

In the three element design there have been modifications that have been incorporated periodically. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of multiple turbines and stators. Each set has been designed to generate differing amounts of torque multiplication. Various examples comprise the Dynaflo which utilizes 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 in order to reduce heat and to be able to improve the cruising power and transmission effectiveness, though 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 related with fluid drive.