

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling that is used to transfer rotating power from a prime mover, 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 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 if there is a significant difference between output and input rotational speed.

The fluid coupling type is the most common kind of torque converter utilized in automobile transmissions. During the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs utilized for always changeable transmissions which have the ability to multiply torque. For example, the Variomatic is a type which 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 part that is the stator. This changes the drive's characteristics during occasions of high slippage and generates an increase in torque output.

Inside a torque converter, there are at least of three rotating parts: the turbine, to be able to drive the load, the impeller which 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 whatever situation and this is where the word stator starts from. Actually, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

In the three element design there have been modifications that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of many turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Some examples consist of the Dynaflo which utilizes a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters include a lock-up clutch to reduce heat and so as to enhance the cruising power and transmission efficiency, though 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 connected with fluid drive.