

Forklift Torque Converter

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, 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 mechanical 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 if there is a considerable difference between output and input rotational speed.

The most popular kind of torque converter utilized in auto transmissions is the fluid coupling unit. During the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are different mechanical designs for always variable transmissions that can multiply torque. Like for example, the Variomatic is a type which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part known as a stator. This changes the drive's characteristics throughout occasions of high slippage and produces an increase in torque output.

There are a minimum of three rotating components inside a torque converter: the turbine, which drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the turbine and the impeller so that it can alter oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition and this is where the word stator begins from. In point of fact, 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 alterations which have been incorporated at times. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Most commonly, these alterations have taken the form of various turbines and stators. Every set has been designed to produce differing amounts of torque multiplication. Various instances comprise the Dynaflow which uses a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, different automotive converters consist of a lock-up clutch in order to reduce heat and so as to improve cruising power transmission efficiency. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses associated with fluid drive.