

Forklift Torque Converter

Forklift Torque Converter - A torque converter is a fluid coupling which is utilized so as 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 allows 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 when there is a substantial difference between output and input rotational speed.

The fluid coupling unit is the most common kind of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or otherwise called Constantinesco converter. There are various mechanical designs for always variable transmissions that have the ability to multiply torque. For instance, the Variomatic is a version which has a belt drive and expanding pulleys.

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

Within a torque converter, there are a minimum of three rotating parts: the turbine, so as to drive the load, the impeller that is driven mechanically driven by the prime mover and the stator. The stator is between the impeller and the turbine so that it can change oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under any situation and this is where the term stator starts from. Actually, the stator is mounted on an overrunning clutch. This particular 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 alterations which have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, changes to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of various turbines and stators. Each set has been designed to produce differing amounts of torque multiplication. Some instances consist of the Dynaflo which makes use of a five element converter in order to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters consist of a lock-up clutch to lessen heat and to enhance the cruising power and transmission efficiency, though it is not strictly part of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.