

Forklift Torque Converter

Torque Converter for Forklifts - A torque converter is a fluid coupling that is used to be able to transfer rotating power from a prime mover, that is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is similar to 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 can offer the equivalent of a reduction gear by being able to multiply torque whenever there is a considerable difference between output and input rotational speed.

The most common kind of torque converter used in car transmissions is the fluid coupling unit. In the 1920s there was even the Constantinesco or otherwise known as pendulum-based torque converter. There are different mechanical designs used for continuously variable transmissions which could multiply torque. For example, the Variomatic is one type that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an component referred to as a stator. This changes the drive's characteristics all through times of high slippage and produces an increase in torque output.

There are a minimum of 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 could change 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 situation and this is where the term stator originates from. Actually, 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 alterations which have been integrated sometimes. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. More often than not, these alterations have taken the form of multiple stators and turbines. Each and every set has been designed to produce differing amounts of torque multiplication. Several examples include the Dynaflo which utilizes a five element converter so as to produce the wide range of torque multiplication required to propel a heavy vehicle.

Although it is not strictly a part of classic torque converter design, various automotive converters consist of a lock-up clutch so as to lessen heat and to improve cruising power transmission effectiveness. 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.