

Torque Converters for Forklift

Forklift Torque Converter - A torque converter is actually a fluid coupling which is utilized 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 like a basic fluid coupling to take the place of a mechanical clutch. This allows 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 when there is a substantial difference between output and input rotational speed.

The most common kind of torque converter utilized in car transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or also known as pendulum-based torque converter. There are different mechanical designs utilized for constantly variable transmissions that could multiply torque. For example, the Variomatic is one kind that 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 additional part that is the stator. This alters the drive's characteristics throughout occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are a minimum of three rotating parts: the turbine, in order 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 could change 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 term stator originates 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.

Adjustments to the basic three element design have been integrated at times. These changes have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Most commonly, these alterations have taken the form of various turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Several examples comprise the Dynaflo that makes use of a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Though it is not strictly a component of classic torque converter design, different automotive converters comprise a lock-up clutch so as to lessen heat and to be able to enhance cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.