

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is utilized in order to transfer rotating power from a prime mover, for example an internal combustion engine or an electrical motor, 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 can provide the equivalent of a reduction gear by being able to multiply torque whenever there is a substantial difference between input and output rotational speed.

The fluid coupling model is the most popular kind of torque converter used in car transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs utilized for always variable transmissions that could multiply torque. For instance, the Variomatic is one type which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component called a stator. This alters the drive's characteristics all through 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 turbine and the impeller so that it can 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 whatever condition and this is where the term stator starts from. In point of fact, 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 permitting forward rotation.

In the three element design there have been changes which have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. Most commonly, these modifications have taken the form of various turbines and stators. Every set has been designed to generate differing amounts of torque multiplication. Some instances include the Dynaflo which uses a five element converter so as to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various automobile converters comprise a lock-up clutch so as to reduce heat and to improve the cruising power and transmission effectiveness, even if 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 associated with fluid drive.