Torque Converters for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling which is utilized to transfer rotating power from a prime mover, 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 when there is a substantial difference between input and output rotational speed.

The most common kind of torque converter utilized in automobile transmissions is the fluid coupling unit. During the 1920s there was likewise the Constantinesco or also known as pendulum-based torque converter. There are different mechanical designs for always variable transmissions which have the ability to multiply torque. For example, the Variomatic is a kind which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component referred to as a stator. This alters the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a at least three rotating elements in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine 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 whichever 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 enabling forward rotation.

In the three element design there have been adjustments that have been incorporated sometimes. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. More often than not, these adjustments have taken the form of several stators and turbines. Each set has been meant to produce differing amounts of torque multiplication. Some instances consist of the Dynaflow that makes use of a five element converter to be able to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a part of classic torque converter design, various automotive converters include a lock-up clutch so as to reduce heat and in order 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 related with fluid drive.