Forklift Torque Converters

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

The most popular kind of torque converter used in automobile transmissions is the fluid coupling unit. In the 1920s there was also the Constantinesco or pendulum-based torque converter. There are other mechanical designs used for continuously changeable transmissions which can multiply torque. For instance, the Variomatic is a kind that has a belt drive and expanding pulleys.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an element called a stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

There are a at least three rotating elements inside a torque converter: the turbine, which 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 can alter 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 situation and this is where the term stator starts from. In 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 modifications which have been integrated periodically. Where there is higher than normal torque manipulation is required, adjustments to the modifications have proven to be worthy. Usually, these alterations have taken the form of various turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Several instances include the Dynaflow which makes use of a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Various auto converters include a lock-up clutch in order to lessen heat and to improve the cruising power and transmission effectiveness, although it is not strictly part of the torque converter design. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses related with fluid drive.