Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is used in order to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, to a rotating driven load. Like a basic fluid coupling, the torque converter takes the place of a mechanized 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 considerable difference between input and output rotational speed.

The most popular type 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 other mechanical designs for always variable transmissions which can multiply torque. Like for instance, the Variomatic is one 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 changes the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a at least three rotating parts 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 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 prevented from rotating under whatever situation and this is where the term stator starts from. Actually, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

Changes to the basic three element design have been incorporated periodically. These alterations have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Most commonly, these adjustments have taken the form of several turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Various instances consist of the Dynaflow which uses a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

While it is not strictly a part of classic torque converter design, various automotive converters consist of a lock-up clutch in order to lessen heat and to be able to improve cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.