Torque Converters for Forklifts

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling that is utilized to be able to transfer rotating power from a prime mover, for instance 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 mechanized clutch. This enables the load to be separated from the main power source. A torque converter could offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between input and output rotational speed.

The most popular kind of torque converter utilized in automobile transmissions is the fluid coupling model. In the 1920s there was likewise the Constantinesco or pendulum-based torque converter. There are various mechanical designs utilized for continuously variable transmissions which have the ability to multiply torque. For instance, the Variomatic is one version which 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 changes the drive's characteristics through occasions of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating elements: the turbine, 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 can change oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under whatever situation and this is where the term stator begins from. In reality, 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.

Changes to the basic three element design have been integrated periodically. These adjustments have proven worthy specially in application where higher than normal torque multiplication is needed. Usually, 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 Dynaflow that utilizes a five element converter to be able to produce the wide range of torque multiplication required to propel a heavy vehicle.

Various automobile converters comprise a lock-up clutch in order to reduce heat and to improve the cruising power and transmission efficiency, even if it is not strictly component of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.