

Torque Converters for Forklift

Torque Converters for Forklift - A torque converter is a fluid coupling which is used to transfer rotating power from a prime mover, that is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take the place of a mechanical clutch. This allows 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 when there is a significant difference between input and output rotational speed.

The fluid coupling kind is actually the most popular type of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are other mechanical designs for always variable transmissions which could multiply torque. Like for example, the Variomatic is one version which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an part referred to as a stator. This changes the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

Within a torque converter, there are a minimum 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 impeller and the turbine so that it can change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be prevented from rotating under whatever situation and this is where the term stator originates 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 enabling forward rotation.

Alterations to the basic three element design have been incorporated periodically. These adjustments have proven worthy especially in application where higher than normal torque multiplication is required. Usually, these modifications have taken the form of various turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Several instances consist of the Dynaflo which 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.

Various auto converters comprise a lock-up clutch in order to lessen heat and so as to improve the cruising power and transmission efficiency, though 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.