

Torque Converters for Forklift

Forklift Torque Converter - A torque converter is a fluid coupling that is utilized in order to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is similar to a basic fluid coupling to take the place of a mechanical clutch. This enables the load to be separated from the main power source. A torque converter can 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 fluid coupling type is actually the most common type of torque converter utilized in car transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are different mechanical designs used for continuously variable transmissions which could multiply torque. Like for instance, the Variomatic is a type that 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 times of high slippage and produces an increase in torque output.

There are at least three rotating parts within 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 whatever situation and this is where the word stator starts from. In fact, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

Modifications to the basic three element design have been incorporated sometimes. These modifications have proven worthy specially in application where higher than normal torque multiplication is needed. Most commonly, these adjustments have taken the form of many stators and turbines. Every set has been intended to produce differing amounts of torque multiplication. Various instances comprise the Dynaflo which uses a five element converter so as to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a component of classic torque converter design, various automotive converters consist of a lock-up clutch to be able to reduce heat and so as to enhance 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 connected with fluid drive.