

Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is usually a fluid coupling which is used so as 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 provide the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between output and input rotational speed.

The most popular type of torque converter utilized in automobile transmissions is the fluid coupling type. In the 1920s there was likewise the Constantinesco or otherwise known as pendulum-based torque converter. There are various mechanical designs used for constantly changeable transmissions which can multiply torque. For example, the Variomatic is one version which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an additional element that is the stator. This alters the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

Within a torque converter, there are at least of three rotating parts: the turbine, so as 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. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever condition and this is where the term stator starts from. In point of 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.

Modifications to the basic three element design have been integrated sometimes. These changes have proven worthy specially in application where higher than normal torque multiplication is required. Most commonly, these modifications have taken the form of several stators and turbines. Every set has been meant to generate differing amounts of torque multiplication. Various instances include the Dynaflo which makes use of a five element converter so as to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, various automotive converters comprise a lock-up clutch so as to reduce heat and to be able to improve 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 related with fluid drive.