

Torque Converter for Forklifts

Torque Converters for Forklifts - A torque converter is a fluid coupling which is used to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is like a basic fluid coupling to take the place of a mechanized 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 if there is a significant difference between output and input rotational speed.

The most popular type of torque converter used in auto transmissions is the fluid coupling model. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs used for constantly variable transmissions which can multiply torque. For instance, the Variomatic is one type which has expanding pulleys and a belt drive.

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

In a torque converter, there are a minimum of three rotating parts: the turbine, to be able 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. Normally, the design of the torque converter dictates that the stator be stopped from rotating under whichever situation and this is where the word stator starts from. Actually, the stator is mounted on an overrunning clutch. This 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 integrated periodically. These adjustments have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Usually, these modifications have taken the form of many turbines and stators. Each and every set has been meant to generate differing amounts of torque multiplication. Several examples comprise the Dynaflo that makes use of a five element converter to be able to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

While it is not strictly a component of classic torque converter design, various automotive converters consist of a lock-up clutch to be able to lessen 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 connected with fluid drive.