

Forklift Torque Converter

Forklift Torque Converter - A torque converter is a fluid coupling which is used in order to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is same as 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 offer 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 fluid coupling model is actually the most common type of torque converter utilized in automobile transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are various mechanical designs utilized for always variable transmissions that have the ability to multiply torque. Like for instance, the Variomatic is one kind that has a belt drive and expanding pulleys.

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

Within a torque converter, there are at least of three rotating components: 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 whatever condition and this is where the term stator originates 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.

Changes to the basic three element design have been integrated sometimes. These modifications have proven worthy particularly in application where higher than normal torque multiplication is needed. Most commonly, these modifications have taken the form of multiple stators and turbines. Each set has been meant to generate differing amounts of torque multiplication. Various examples comprise the Dynaflow which utilizes a five element converter in order to generate 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 include a lock-up clutch so as to reduce heat and to be able 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 associated with fluid drive.