

Forklift Torque Converter

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling which is used so as to transfer rotating power from a prime mover, for example an internal combustion engine or an electrical motor, to a rotating driven load. Similar to 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 could offer the equivalent of a reduction gear by being able to multiply torque whenever there is a significant difference between input and output rotational speed.

The fluid coupling model is the most common type of torque converter utilized in auto transmissions. In the 1920's there were pendulum-based torque or also called Constantinesco converter. There are other mechanical designs utilized for always changeable transmissions that can multiply torque. Like for example, the Variomatic is a kind that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an element called a stator. This alters the drive's characteristics throughout occasions of high slippage and generates an increase in torque output.

In a torque converter, there are at least of three rotating parts: the turbine, 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. 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 begins from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

Modifications to the basic three element design have been integrated at times. These adjustments have proven worthy especially in application where higher than normal torque multiplication is needed. More often than not, these adjustments have taken the form of multiple turbines and stators. Every set has been designed to produce differing amounts of torque multiplication. Some examples comprise the Dynaflo that makes use of a five element converter in order to produce the wide range of torque multiplication needed to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, various automotive converters consist of a lock-up clutch so as to lessen heat and in order to enhance cruising power transmission effectiveness. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical that eliminates losses associated with fluid drive.