

Torque Converter for Forklifts

Torque Converter for Forklifts - A torque converter is a fluid coupling that is utilized to be able to transfer rotating power from a prime mover, that 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 mechanical clutch. This allows 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 when there is a considerable difference between output and input rotational speed.

The fluid coupling unit is the most common kind of torque converter utilized in automobile transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are other mechanical designs for constantly changeable transmissions that could multiply torque. For example, the Variomatic is one type which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling cannot multiply torque. Torque converters have an element referred to as a stator. This alters the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

Inside a torque converter, there are at least of three rotating components: the turbine, to be able 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 stopped from rotating under whichever condition and this is where the word stator originates 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.

Changes to the basic three element design have been integrated periodically. These adjustments have proven worthy especially in application where higher than normal torque multiplication is needed. Most commonly, these adjustments have taken the form of multiple turbines and stators. Each set has been intended to generate differing amounts of torque multiplication. Several instances consist of the Dynaflo that makes use of a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Different auto converters consist of a lock-up clutch in order to reduce heat and to improve the cruising power and transmission effectiveness, even if it is not strictly part of the torque converter design. 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.