

Torque Converter for Forklift

Forklift Torque Converters - A torque converter is actually a fluid coupling that is used 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 provide the equivalent of a reduction gear by being able to multiply torque when there is a significant difference between input and output rotational speed.

The most common kind of torque converter used in automobile transmissions is the fluid coupling type. During the 1920s there was also the Constantinesco or likewise known as pendulum-based torque converter. There are other mechanical designs utilized for always changeable transmissions which could multiply torque. Like for instance, the Variomatic is a type that has expanding pulleys and a belt drive.

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

There are at least three rotating elements in a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it could change oil flow returning from the turbine to the impeller. Traditionally, the design of the torque converter dictates that the stator be stopped from rotating under whichever condition and this is where the term stator originates from. In truth, 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 sometimes. These changes have proven worthy specially in application where higher than normal torque multiplication is considered necessary. Most commonly, these alterations have taken the form of many turbines and stators. Each and every set has been intended to produce differing amounts of torque multiplication. Several instances include the Dynaflo which uses a five element converter in order to produce the wide range of torque multiplication required to propel a heavy vehicle.

Even though it is not strictly a component of classic torque converter design, different automotive converters include a lock-up clutch to be able to lessen heat and to enhance cruising power transmission efficiency. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical that eliminates losses connected with fluid drive.