

Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter in modern usage, is normally a fluid coupling that is used so as to transfer rotating power from a prime mover, like for example an electric motor or an internal combustion engine, 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 can provide the equivalent of a reduction gear by being able to multiply torque whenever there is a considerable difference between input and output rotational speed.

The most popular kind of torque converter used in automobile transmissions is the fluid coupling type. In the 1920s there was likewise the Constantinesco or likewise known as pendulum-based torque converter. There are different mechanical designs used for always variable transmissions which could multiply torque. Like for example, the Variomatic is a kind which has expanding pulleys and a belt drive.

A fluid coupling is a 2 element drive that could not multiply torque. A torque converter has an extra component which is the stator. This changes the drive's characteristics throughout times of high slippage and produces an increase in torque output.

There are at least three rotating elements in a torque converter: the turbine, that drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it could alter oil flow returning from the turbine to the impeller. Usually, the design of the torque converter dictates that the stator be stopped from rotating under any condition and this is where the term stator begins from. Actually, 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.

In the three element design there have been alterations which have been incorporated at times. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Usually, these adjustments have taken the form of several turbines and stators. Each and every set has been designed to produce differing amounts of torque multiplication. Some examples include 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.

Different car converters consist of a lock-up clutch so as to lessen heat and to be able to improve the cruising power and transmission efficiency, though it is not strictly component of the torque converter design. The application of the clutch locks the turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.