

Torque Converter for Forklifts

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

The most popular type of torque converter utilized in auto transmissions is the fluid coupling unit. During the 1920s there was even the Constantinesco or also known as pendulum-based torque converter. There are other mechanical designs used for constantly variable transmissions that could multiply torque. Like for example, the Variomatic is a type which has expanding pulleys and a belt drive.

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

Inside a torque converter, there are a minimum of three rotating parts: 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 turbine and the impeller so that it could alter 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 any situation and this is where the word stator originates from. In point of fact, the stator is mounted on an overrunning clutch. This design stops the stator from counter rotating with respect to the prime mover while still permitting forward rotation.

In the three element design there have been adjustments that have been incorporated periodically. Where there is higher than normal torque manipulation is considered necessary, adjustments to the modifications have proven to be worthy. Usually, these alterations have taken the form of various turbines and stators. Each and every set has been meant to produce differing amounts of torque multiplication. Various examples include the Dynaflow which uses a five element converter in order to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

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