

Torque Converters for Forklifts

Torque Converter for Forklift - A torque converter is a fluid coupling which is utilized so as to transfer rotating power from a prime mover, that is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is like a basic fluid coupling to take 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 if there is a significant difference between output and input rotational speed.

The most popular kind of torque converter utilized in auto transmissions is the fluid coupling model. In the 1920s there was also the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs utilized for always changeable transmissions that have the ability to multiply torque. For instance, the Variomatic is a kind which has a belt drive and expanding pulleys.

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

In a torque converter, there are a minimum of three rotating components: 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 can 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 situation and this is where the term stator begins from. In point of fact, the stator is mounted on an overrunning clutch. This particular design prevents the stator from counter rotating with respect to the prime mover while still allowing forward rotation.

In the three element design there have been alterations that have been incorporated sometimes. Where there is higher than normal torque manipulation is needed, modifications to the modifications have proven to be worthy. Usually, these adjustments have taken the form of multiple turbines and stators. Each set has been designed to produce differing amounts of torque multiplication. Various examples comprise the Dynaflo which makes use of a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different automobile converters consist of a lock-up clutch to reduce heat and so as to improve the cruising power and transmission efficiency, even if it is not strictly component of the torque converter design. 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.