

Torque Converter for Forklifts

Torque Converters for Forklift - A torque converter in modern usage, is commonly a fluid coupling that is used to be able to transfer rotating power from a prime mover, like for instance an internal combustion engine or an electrical motor, to a rotating driven load. Like a basic fluid coupling, the torque converter takes 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 most popular kind of torque converter utilized in auto transmissions is the fluid coupling type. In the 1920s there was even the Constantinesco or likewise known as pendulum-based torque converter. There are various mechanical designs for always changeable transmissions which have the ability to multiply torque. For example, the Variomatic is a kind which has a belt drive and expanding pulleys.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an element referred to as a stator. This changes the drive's characteristics all through occasions of high slippage and produces an increase in torque output.

There are at least three rotating components in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, that is between the impeller and the turbine so that it can alter oil flow returning from the turbine to the impeller. Normally, the design of the torque converter dictates that the stator be prevented from rotating under whichever situation and this is where the word stator begins from. Actually, 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.

In the three element design there have been changes which have been incorporated periodically. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. Most commonly, these adjustments have taken the form of multiple turbines and stators. Each set has been designed to produce differing amounts of torque multiplication. Some instances include the Dynaflo which utilizes a five element converter so as to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Different automobile converters include a lock-up clutch to be able to lessen heat and so as to improve the cruising power and transmission effectiveness, even 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 that eliminates losses connected with fluid drive.