

Forklift Torque Converters

Forklift Torque Converter - A torque converter in modern usage, is normally a fluid coupling which is utilized to be able to transfer rotating power from a prime mover, for example 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 mechanized 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 if there is a substantial difference between input and output rotational speed.

The fluid coupling kind is the most common type of torque converter utilized in car transmissions. In the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are various mechanical designs used for constantly changeable transmissions that can multiply torque. For example, the Variomatic is one kind which has expanding pulleys and a belt drive.

The 2 element drive fluid coupling could not multiply torque. Torque converters have an component known as a stator. This alters the drive's characteristics all through occasions of high slippage and generates an increase in torque output.

There are a minimum of three rotating elements within a torque converter: the turbine, which 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 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 whichever condition and this is where the term 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 allowing forward rotation.

In the three element design there have been adjustments which have been incorporated sometimes. Where there is higher than normal torque manipulation is required, alterations to the modifications have proven to be worthy. More often than not, these alterations have taken the form of many turbines and stators. Each set has been meant to produce differing amounts of torque multiplication. Several examples consist of the Dynaflo which uses a five element converter to be able to generate the wide range of torque multiplication required to propel a heavy vehicle.

Different car converters consist of a lock-up clutch to be able to reduce heat and to improve the cruising power and transmission effectiveness, though 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 related with fluid drive.