

Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is utilized so as to transfer rotating power from a prime mover, like for instance 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 enables 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 fluid coupling model is the most common type of torque converter utilized in auto transmissions. During the 1920's there were pendulum-based torque or likewise called Constantinesco converter. There are other mechanical designs for constantly changeable transmissions that can multiply torque. Like for example, the Variomatic is one type which has expanding pulleys and a belt drive.

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

Within a torque converter, there are at least of three rotating elements: the turbine, in order 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 change 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 whatever condition and this is where the term stator originates from. In point of fact, the stator is mounted on an overrunning clutch. This design prevents 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 integrated periodically. Where there is higher than normal torque manipulation is considered necessary, modifications to the modifications have proven to be worthy. Usually, these alterations have taken the form of several stators and turbines. Every set has been meant to generate differing amounts of torque multiplication. Several examples comprise the Dynaflo that uses a five element converter in order to produce the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Though it is not strictly a part of classic torque converter design, various automotive converters comprise a lock-up clutch to reduce heat and to improve cruising power transmission effectiveness. 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.