

Torque Converters for Forklift

Torque Converter for Forklift - A torque converter is a fluid coupling that is used so as to transfer rotating power from a prime mover, which is an internal combustion engine or as electrical motor, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanized clutch. This enables the load to be separated from the main power source. A torque converter can provide the equivalent of a reduction gear by being able to multiply torque if there is a significant difference between input and output rotational speed.

The fluid coupling kind is the most popular kind of torque converter utilized in car transmissions. During the 1920's there were pendulum-based torque or Constantinesco converter. There are various mechanical designs for constantly changeable transmissions which could multiply torque. Like for instance, the Variomatic is one version 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 through times of high slippage and generates an increase in torque output.

There are a minimum of three rotating components in a torque converter: the turbine, which drives the load, the impeller, which is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine so that it can 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 truth, 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 modifications that have been integrated periodically. Where there is higher than normal torque manipulation is considered necessary, alterations to the modifications have proven to be worthy. Usually, these alterations have taken the form of many stators and turbines. Each and every set has been meant to produce differing amounts of torque multiplication. Various examples consist of the Dynaflo that utilizes a five element converter to be able to produce the wide range of torque multiplication required to propel a heavy vehicle.

Various automobile converters consist of a lock-up clutch in order to reduce heat and in order to improve the cruising power and transmission effectiveness, though 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.