

Forklift Torque Converters

Torque Converter for Forklifts - A torque converter is a fluid coupling which is used so as to transfer rotating power from a prime mover, which is an electric motor or an internal combustion engine, to a rotating driven load. The torque converter is same as a basic fluid coupling to take the place of a mechanical 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 input and output rotational speed.

The most popular kind of torque converter used in car transmissions is the fluid coupling type. In the 1920s there was likewise the Constantinesco or otherwise known as pendulum-based torque converter. There are other mechanical designs used for always variable transmissions which can multiply torque. For instance, the Variomatic is one kind which has a belt drive and expanding pulleys.

A fluid coupling is a 2 element drive which cannot multiply torque. A torque converter has an extra part which is the stator. This changes the drive's characteristics during times of high slippage and generates an increase in torque output.

There are at least three rotating components within a torque converter: the turbine, that drives the load, the impeller, which 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 stopped from rotating under whatever condition and this is where the term stator begins from. Actually, the stator is mounted on an overrunning clutch. This particular design stops the stator from counter rotating with respect to the prime mover while still permitting 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 modifications have taken the form of multiple turbines and stators. Each and every set has been meant to produce differing amounts of torque multiplication. Various instances consist of the Dynaflo which utilizes a five element converter so as to generate the wide range of torque multiplication considered necessary to propel a heavy vehicle.

Various car converters comprise a lock-up clutch to lessen heat and to be able 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 turbine to the impeller. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.