Torque Converter for Forklift

Forklift Torque Converter - A torque converter in modern usage, is commonly a fluid coupling that is used in order to transfer rotating power from a prime mover, for instance an internal combustion engine or an electrical motor, 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 provide the equivalent of a reduction gear by being able to multiply torque whenever there is a substantial difference between input and output rotational speed.

The fluid coupling model is actually 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 could multiply torque. For instance, the Variomatic is one type that has expanding pulleys and a belt drive.

The 2 element drive fluid coupling is incapable of multiplying torque. Torque converters have an element called a stator. This alters the drive's characteristics throughout times of high slippage and produces an increase in torque output.

There are a minimum of three rotating parts in a torque converter: the turbine, that drives the load, the impeller, that is mechanically driven by the prime mover and the stator, which is between the impeller and the turbine 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 situation and this is where the term stator begins from. In reality, 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.

Adjustments to the basic three element design have been incorporated periodically. These alterations have proven worthy specially in application where higher than normal torque multiplication is considered necessary. More often than not, these modifications have taken the form of various turbines and stators. Each and every set has been designed to generate differing amounts of torque multiplication. Various instances include the Dynaflow which makes use of a five element converter so as to generate the wide range of torque multiplication needed to propel a heavy vehicle.

Although it is not strictly a part of classic torque converter design, different automotive converters consist of a lock-up clutch so as to lessen heat and in order to improve cruising power transmission effectiveness. The application of the clutch locks the impeller to the turbine. This causes all power transmission to be mechanical which eliminates losses connected with fluid drive.