

Throttle Body for Forklift

Throttle Body for Forklifts - Where fuel injected engines are concerned, the throttle body is the part of the air intake system that controls the amount of air which flows into the engine. This particular mechanism operates in response to driver accelerator pedal input in the main. Usually, the throttle body is situated between the air filter box and the intake manifold. It is usually fixed to or positioned close to the mass airflow sensor. The largest part in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is to regulate air flow.

On the majority of cars, the accelerator pedal motion is transferred through the throttle cable, thus activating the throttle linkages works so as to move the throttle plate. In automobiles with electronic throttle control, also called "drive-by-wire" an electric motor regulates the throttle linkages. The accelerator pedal is attached to a sensor and not to the throttle body. This sensor sends the pedal position to the ECU or also known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position together with inputs from other engine sensors. The throttle body has a throttle position sensor. The throttle cable is attached to the black part on the left hand side that is curved in design. The copper coil situated close to this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates revolve in the throttle body each time pressure is placed on the accelerator. The throttle passage is then opened in order to allow more air to flow into the intake manifold. Usually, an airflow sensor measures this adjustment and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors so as to produce the desired air-fuel ratio. Often a throttle position sensor or TPS is connected to the shaft of the throttle plate in order to provide the ECU with information on whether the throttle is in the wide-open throttle or likewise called "WOT" position, the idle position or anywhere in between these two extremes.

Several throttle bodies may have valves and adjustments in order to regulate the minimum airflow during the idle period. Even in units that are not "drive-by-wire" there would often be a small electric motor driven valve, the Idle Air Control Valve or IACV that the ECU uses in order to regulate the amount of air which could bypass the main throttle opening.

It is common that numerous vehicles have one throttle body, although, more than one can be used and attached together by linkages to be able to improve throttle response. High performance automobiles such as the BMW M1, together with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or "individual throttle bodies."

A throttle body is like the carburetor in a non-injected engine. Carburetors combine the functionality of the throttle body and the fuel injectors together. They operate by mixing the fuel and air together and by regulating the amount of air flow. Cars which have throttle body injection, which is known as CFI by Ford and TBI by GM, locate the fuel injectors inside the throttle body. This enables an old engine the opportunity to be transformed from carburetor to fuel injection without considerably altering the engine design.