

Throttle Body for Forklifts

Throttle Body for Forklifts - The throttle body is part of the intake control system in fuel injected engines in order to regulate the amount of air flow to the engine. This mechanism operates by applying pressure upon the operator accelerator pedal input. Normally, the throttle body is located between the intake manifold and the air filter box. It is normally fixed to or located next to the mass airflow sensor. The biggest component within the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main task is to regulate air flow.

On the majority of vehicles, the accelerator pedal motion is transferred via the throttle cable, hence activating the throttle linkages works to move the throttle plate. In vehicles with electronic throttle control, likewise known as "drive-by-wire" an electric motor controls 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 various engine sensors. The throttle body consists of a throttle position sensor. The throttle cable connects to the black portion on the left hand side which is curved in design. The copper coil positioned near this is what returns the throttle body to its idle position once the pedal is released.

Throttle plates turn within the throttle body each and every time pressure is applied on the accelerator. The throttle passage is then opened so as to permit a lot more air to flow into the intake manifold. Normally, an airflow sensor measures this alteration and communicates with the ECU. In response, the Engine Control Unit then increases the amount of fluid being sent to the fuel injectors in order to generate the desired air-fuel ratio. Frequently a throttle position sensor or TPS is connected to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the wide-open throttle or otherwise called "WOT" position, the idle position or somewhere in between these two extremes.

So as to control the least amount of air flow while idling, various throttle bodies can include valves and adjustments. 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 otherwise called IACV which the ECU uses in order to control the amount of air that could bypass the main throttle opening.

It is common that lots of automobiles contain one throttle body, even if, more than one could be used and attached together by linkages to be able to improve throttle response. High performance cars like for instance the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are called ITBs or also known as "individual throttle bodies."

The throttle body and the carburetor in a non-injected engine are somewhat similar. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They can modulate the amount of air flow and combine the air and fuel together. Cars that include throttle body injection, that is referred to as TBI by GM and CFI by Ford, situate the fuel injectors in the throttle body. This allows an older engine the possibility to be transformed from carburetor to fuel injection without really altering the engine design.