

Throttle Body for Forklifts

Forklift Throttle Body - The throttle body is part of the intake control system in fuel injected engines to regulate the amount of air flow to the engine. This particular mechanism works by placing pressure on the operator accelerator pedal input. Normally, the throttle body is positioned between the intake manifold and the air filter box. It is often connected to or located next to the mass airflow sensor. The largest component in the throttle body is a butterfly valve referred to as the throttle plate. The throttle plate's main task is to control air flow.

On the majority of vehicles, the accelerator pedal motion is transferred via the throttle cable, therefore activating the throttle linkages works in order to move the throttle plate. In automobiles consisting of 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 particular sensor sends the pedal position to the ECU or otherwise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based on accelerator pedal position along with inputs from various engine sensors. The throttle body has a throttle position sensor. The throttle cable connects to the black portion on the left hand side that is curved in design. The copper coil placed near this is what returns the throttle body to its idle position after the pedal is released.

The throttle plate rotates inside the throttle body each time the driver applies pressure on the accelerator pedal. This opens the throttle passage and permits more air to flow into the intake manifold. Usually, 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 also called TPS is attached to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the idle position, the wide-open position or also called "WOT" position or anywhere in between these two extremes.

Some throttle bodies can include valves and adjustments to be able to control the minimum airflow through the idle period. Even in units that are not "drive-by-wire" there will normally be a small electric motor driven valve, the Idle Air Control Valve or also called IACV which the ECU utilizes to be able to control the amount of air that can bypass the main throttle opening.

In several vehicles it is common for them to contain one throttle body. So as to improve throttle response, more than one could be used and connected together by linkages. High performance automobiles such as the BMW M1, along with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each and every cylinder. These models are referred to as ITBs or otherwise known as "individual throttle bodies."

The carburetor and the throttle body in a non-injected engine are quite the same. The carburetor combines the functionality of both the throttle body and the fuel injectors into one. They could control the amount of air flow and blend the air and fuel together. Cars that include throttle body injection, which is referred to as CFI by Ford and TBI by GM, put the fuel injectors within the throttle body. This enables an old engine the opportunity to be converted from carburetor to fuel injection without really changing the engine design.