

Throttle Body for Forklifts

Throttle Body for Forklifts - The throttle body is a component of the intake control system in fuel injected engines to regulate the amount of air flow to the engine. This mechanism operates by applying pressure on the operator accelerator pedal input. Normally, the throttle body is located between the intake manifold and the air filter box. It is usually attached to or positioned near the mass airflow sensor. The biggest component in the throttle body is a butterfly valve called the throttle plate. The throttle plate's main task is to be able 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 to move the throttle plate. In vehicles consisting of electronic throttle control, otherwise known as "drive-by-wire" an electric motor controls the throttle linkages. The accelerator pedal connects to a sensor and not to the throttle body. This particular 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 along with inputs from other engine sensors. The throttle body consists of a throttle position sensor. The throttle cable connects to the black part on the left hand side that is curved in design. The copper coil situated next to this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates turn in the throttle body every time pressure is placed on the accelerator. The throttle passage is then opened to be able to enable much more air to flow into the intake manifold. Typically, 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 to be able to produce the desired air-fuel ratio. Often a throttle position sensor or likewise called TPS is attached to the shaft of the throttle plate to provide the ECU with information on whether the throttle is in the wide-open throttle or also called "WOT" position, the idle position or anywhere in between these two extremes.

So as to regulate the lowest amount of air flow while idling, several throttle bodies may have valves and adjustments. Even in units which are not "drive-by-wire" there would normally be a small electric motor driven valve, the Idle Air Control Valve or IACV which the ECU uses to control the amount of air which could bypass the main throttle opening.

It is common that various cars contain a single throttle body, even if, more than one can be used and connected together by linkages in order to improve throttle response. High performance vehicles like the BMW M1, along with high performance motorcycles like the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or likewise known as "individual throttle bodies."

A throttle body is like the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body together. They work by combining the fuel and air together and by regulating the amount of air flow. Cars that include throttle body injection, which is referred to as CFI by Ford and TBI by GM, situate the fuel injectors inside the throttle body. This allows an older engine the chance to be converted from carburetor to fuel injection without significantly changing the engine design.