

Forklift Throttle Body

Forklift Throttle Body - The throttle body is a component of the intake control system in fuel injected engines to be able to regulate the amount of air flow to the engine. This mechanism functions by applying pressure upon the operator accelerator pedal input. Usually, the throttle body is positioned between the air filter box and the intake manifold. It is normally fixed to or located near the mass airflow sensor. The biggest component in the throttle body is a butterfly valve known as the throttle plate. The throttle plate's main function is in order to regulate air flow.

On nearly all vehicles, the accelerator pedal motion is transferred via 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 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 likewise known as Engine Control Unit. The ECU is responsible for determining the throttle opening based upon accelerator pedal position along with inputs from various engine sensors. The throttle body has a throttle position sensor. The throttle cable is attached to the black portion on the left hand side which is curved in design. The copper coil situated near this is what returns the throttle body to its idle position as soon as the pedal is released.

Throttle plates rotate inside the throttle body every time pressure is placed on the accelerator. The throttle passage is then opened in order to permit a lot more air to flow into the intake manifold. Typically, 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. Frequently a throttle position sensor or otherwise called TPS is attached 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 "WOT" position, the idle position or anywhere in between these two extremes.

In order to control the minimum air flow while idling, several throttle bodies may have valves and adjustments. Even in units which are not "drive-by-wire" there would usually be a small electric motor driven valve, the Idle Air Control Valve or otherwise called IACV that the ECU utilizes to be able to control the amount of air that can bypass the main throttle opening.

It is common that a lot of automobiles have one throttle body, even if, more than one could be utilized and attached together by linkages to be able to improve throttle response. High performance vehicles such as the BMW M1, along with high performance motorcycles such as the Suzuki Hayabusa have a separate throttle body for each cylinder. These models are referred to as ITBs or "individual throttle bodies."

A throttle body is similar to the carburetor in a non-injected engine. Carburetors combine the functionality of the fuel injectors and the throttle body into one. They function by combining the fuel and air together and by modulating the amount of air flow. Automobiles which have throttle body injection, that is known as TBI by GM and CFI by Ford, put the fuel injectors in the throttle body. This enables an older engine the chance to be transformed from carburetor to fuel injection without significantly changing the design of the engine.