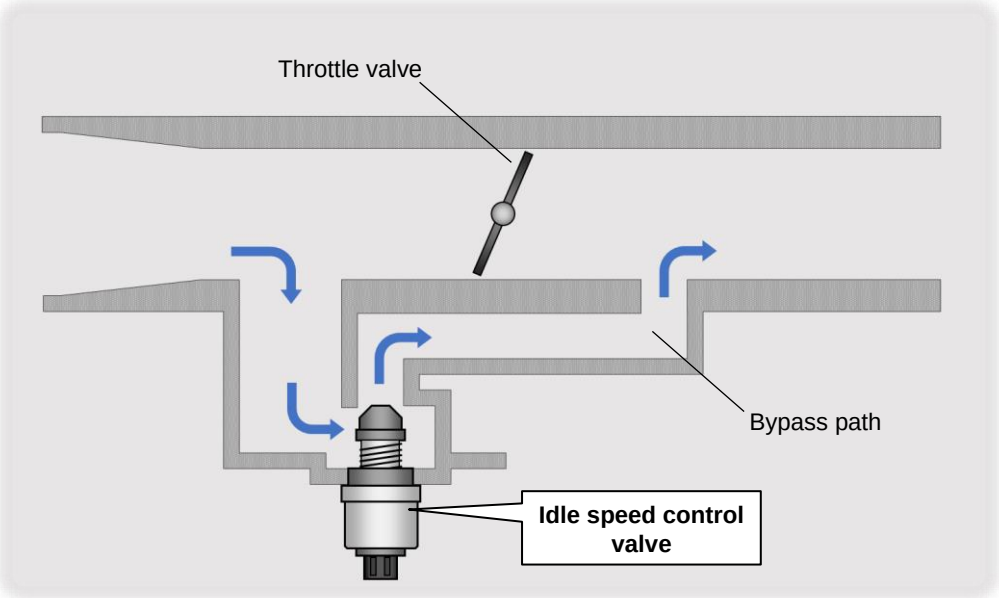
WHAT IS AN IDLE SPEED CONTROL VALVE?

The idle speed control (ISC) valve controls the idling speed and is also referred to as an idle air control (IAC) valve, air bypath valve (ABV), or linear flow valve (LFV).

To adjust the amount of air supplied to the engine while traveling, the throttle valve opens according to the extent of accelerator pedal operation. Although the throttle valve remains closed while the vehicle is parked, there is an air passage bypassing the throttle valve. The engine control unit (ECU) controls the ISC valve and adjusts the air volume in the bypass path, achieving an appropriate idling speed corresponding to various conditions, such as the use of the air conditioner.

The ISC valve is installed in vehicles that employ a conventional cable-type throttle accelerator. Recent vehicles using an electronic throttle body (ETB) do not have an ISC valve because the idling speed can be controlled directly using the ETB.



TYPICAL SYMPTOMS IN CASE OF FAILURE

Symptoms in case of failure

- Idling speed does not increase during the use of the air conditioner or other devices.
- Idling becomes unstable
- Engine stall occurs while at standstill, e.g., when waiting for a traffic light.

© Hitachi Astemo, Ltd. 2021. All rights reserved.