

SUCTION CONTROL VALVE [SKYACTIV-D 2.2]

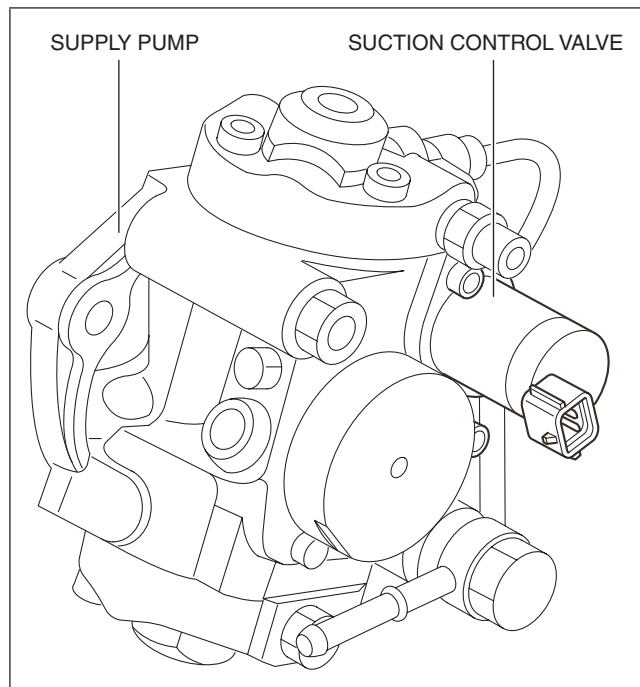
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Purpose, Function

- By controlling the supply pump intake amount, the suction control valve controls the pressure pump feed amount and the pressure inside the fuel distribution pipe.

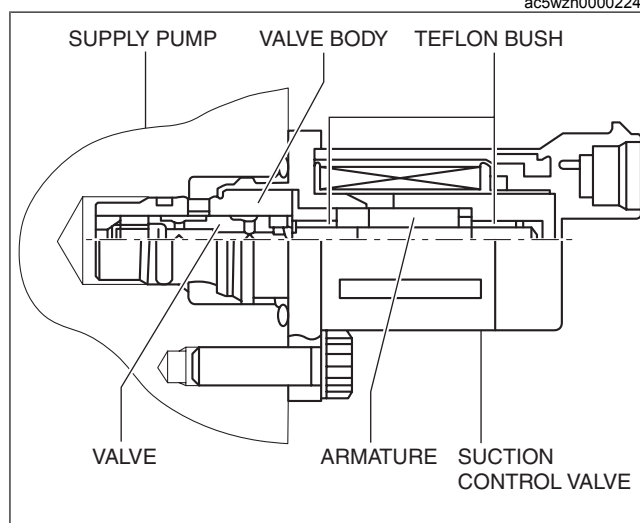
Construction

- The suction control valve is built into the supply pump.



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- The suction control valve consists of the valve, valve body, armature, and teflon bush.



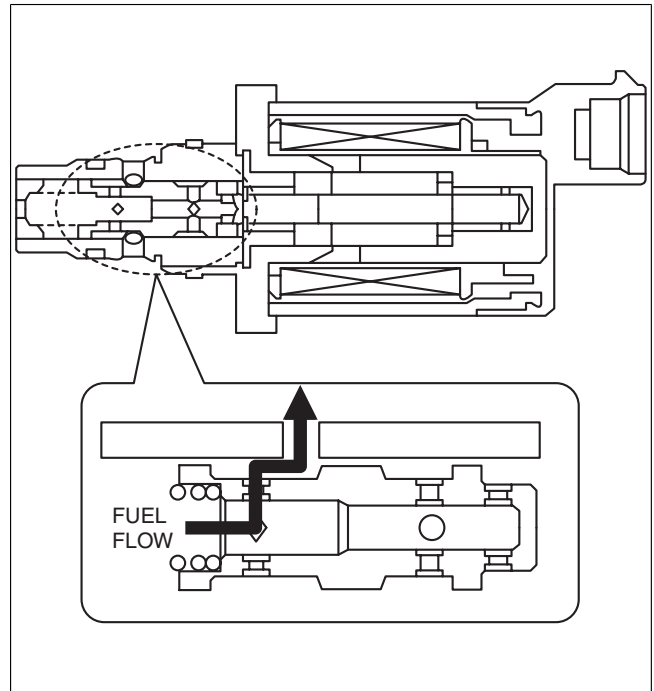
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Operation

- The intake amount is determined by the total opening size of the valve as controlled by the duty value of the solenoid actuation current.
- The duty solenoid can adjust the open and close time ratio to control the intake amount by changing the ON time during a single cycle. For a normally open type suction control valve, making the duty ratio smaller increases the intake amount and, conversely, making the duty value larger decreases the intake amount.

De-energized (open)

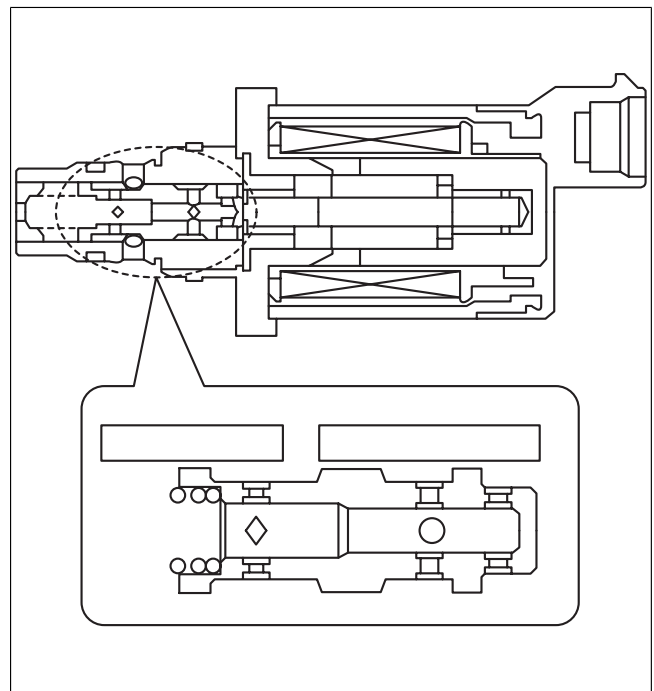
- The solenoid inner port is opened and fuel is sent into the control chamber.



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Energized (closed)

- The solenoid inner port is closed. Fuel siphoned by the feed pump is returned to the fuel tank through the regulator valve.



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