

1974-79 EXHAUST EMISSION SYSTEMS

Saab Deceleration Valve

All Models

DESCRIPTION

The deceleration valve is used on all models. Valve is located in the intake manifold or at carburetor throttle plate and is connected by a hose to the throttle valve housing in front of the throttle valve.

The valve is held in place by the clip that secures the crankcase ventilation nipple to the intake manifold. An "O" ring is fitted between the valve and the intake manifold.

OPERATION

Deceleration valve body contains a spring loaded diaphragm which is held in place by the bottom cover. Diaphragm is subjected to manifold vacuum on the top side and to atmospheric pressure on the underside (by a bleed hole in cover).

During periods of deceleration, intake manifold vacuum is sufficient for the diaphragm to overcome the spring loading and lift the deceleration valve off its seat. With valve open, vacuum draws a metered amount of air and fuel from fuel pick-up tube through the deceleration valve and into manifold.

This additional air/fuel mixture, coupled with other engine modifications, provides improved combustion. The air/fuel supply needed for combustion is fed to the engine through a hose which connects the deceleration valve to the deceleration section of the carburetor.

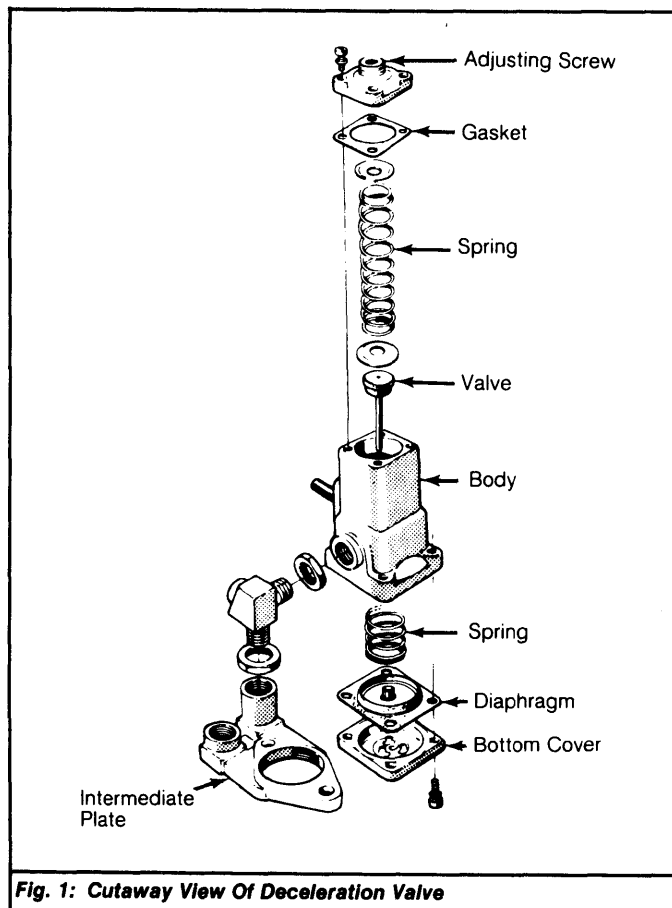


Fig. 1: Cutaway View Of Deceleration Valve

TESTING

NOTE: To avoid faulty reading caused by radiator fan cutting in while performing test, disconnect thermal switch wires while test is being performed.

- 1) With engine at normal operating temperature, disconnect hose between carburetor and deceleration valve and check for vacuum passing through valve. If vacuum is present, the adjusting screw on the deceleration valve has to be screwed in further until the valve is closed. Reconnect hose between carburetor and deceleration valve.
- 2) Connect a tachometer and adjust idle speed to 900 RPM. Open throttle to obtain 3000 RPM. Release throttle and measure time required for engine speed to drop from 3000 RPM to idle. If deceleration valve is correctly adjusted, time should be between 7-8 seconds. If not, valve must be adjusted.

ADJUSTMENT

DECELERATION VALVE

1974 Models - If time required for engine to decelerate from 3000 RPM to idle is more than 7-8 seconds deceleration valve adjusting screw should be turned clockwise. If time required is less than 7-8 seconds, adjusting screw should be turned counterclockwise until desired time is reached.

1975-76 Models - 1) Remove rubber bellows between airflow sensor and throttle valve housing. Loosen lock nut on valve screw and turn adjustment screw the number of turns specified on adjustment graph. See Fig. 2.

2) For example, testing valve determines time as 3 seconds. Consult graph and trace across 3 second line until it intersects curve and read off horizontal adjustment value, in this case, 1 1/3 turns clockwise. Turn adjustment screw 1 1/3 turns clockwise. After adjustment, reinstall rubber bellows and recheck valve using test procedure.

1977-79 Models - 1) With engine at normal operating temperature, connect a tachometer. Loosen deceleration valve adjusting screw until the valve closes completely.

2) Tighten adjusting screw until engine speed is 1600 RPM, then back out adjusting screw 2 turns. Reset idle speed to specifications, then check deceleration time and make any necessary adjustments.

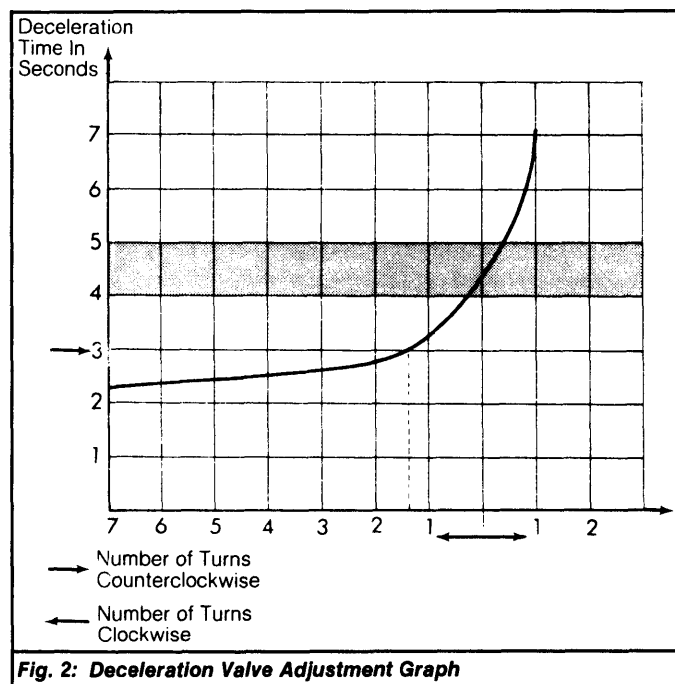


Fig. 2: Deceleration Valve Adjustment Graph

MAINTENANCE

Every 15,000 miles, check deceleration valve operation, adjust if necessary.