## PEUGEOT DECELERATION CONTROL SYSTEM

**505 (Gasoline)**
**604**

### DESCRIPTION

This system is used to reduce emission levels during deceleration. The valve is activated by intake manifold vacuum and positions the throttle plate to prevent an overly rich mixture. The system is composed of a deceleration (Solex) valve, a vacuum unit, and 3 connecting hoses.

The deceleration valve contains a check ball, a vacuum diaphragm, a barometic compensating bellows, and 3 ports. The vacuum unit is simply an adjustable diaphragm with linkage to the carburetor throttle flap.

### OPERATION

During normal operation, engine vacuum is applied at port 2 of the deceleration valve. It also passes to the vacuum unit, which pulls a link, opening the throttle plate. Since the throttle is already open, the slotted link has no effect on engine operation.

When the throttle suddenly closes, vacuum is present at port 1 of the deceleration valve. The bellows expands, unseating the check ball and allowing the vacuum also present at port 2 to pass through port 3, holding the throttle open and advancing spark timing. *See Fig. 2.*

As manifold vacuum decreases, the bellows contracts, allowing the check ball to close off port 1 from 2 and 3. The vacuum holding the throttle plate and timing is bled off through the restrictor above the throttle plate. Timing returns to normal and the throttle plate closes.

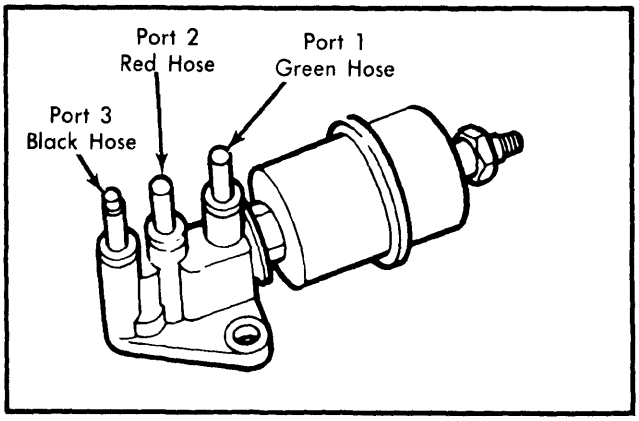


***Fig. 1 Deceleration Control Valve***

### TESTING

**1)** Connect tachometer to engine and raise speed to 3000 RPM several times. Engine speed should delay for several seconds at 1500 RPM, then return to idle at 900-950 RPM.

**2)** If engine speed remains high for more than 2-3 seconds or does not return to idle, disconnect vacuum line from vacuum unit. If RPM is still high, check for binding linkage from vacuum unit or accelerator pedal. Adjust vacuum unit or carburetor if necessary.

**3)** If engine speed returns to idle with hose off, check vacuum hose routing and adjust deceleration valve. If problem is not corrected, replace valve.

**4)** If engine does not delay before returning to idle, check vacuum routing and condition of hoses. Disconnect vacuum hose (green stripe) from vacuum tee and connect to deceleration vacuum unit. If linkage does not move, replace vacuum unit. If linkage moves, adjust deceleration valve. If adjustment does not correct problem, replace valve.

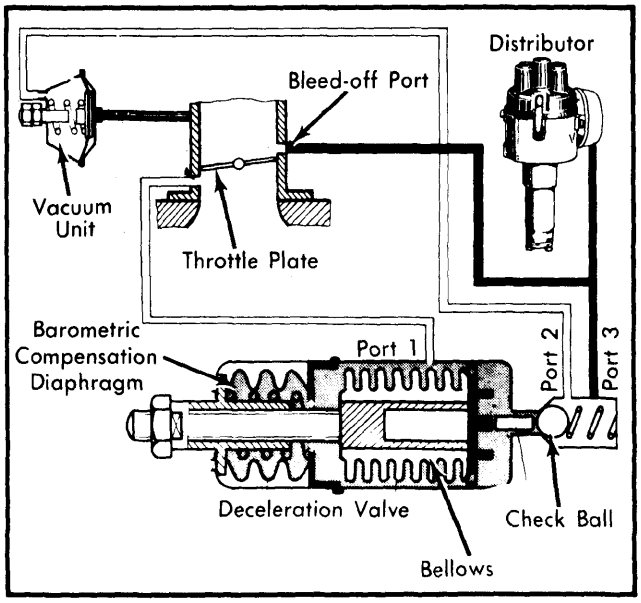


***Fig. 2 Deceleration Control System At Idle (604 Shown, 505 Similar)***

### ADJUSTMENT

**Deceleration Unit** – **1)** Warm engine and adjust idle to 900-950 RPM. Stop engine and disconnect hose at vacuum unit. On

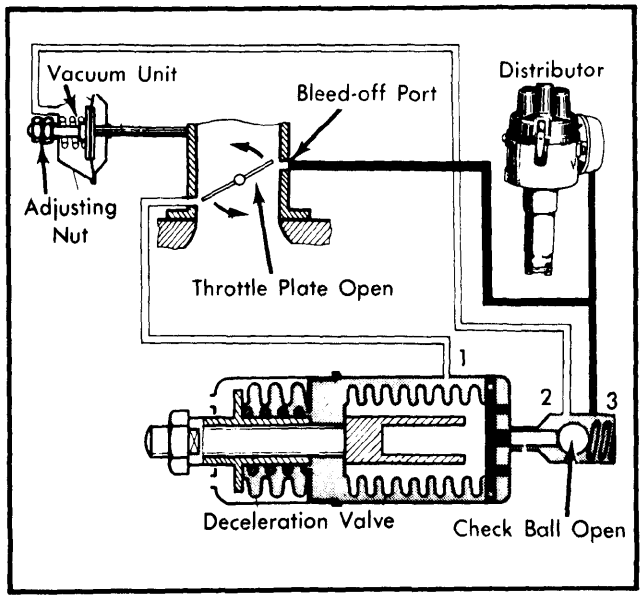


***Fig. 3 Deceleration Control System During Deceleration (604 Shown, 505 Similar)***

## PEUGEOT DECELERATION CONTROL SYSTEM (Cont.)

604, measure clearance between high idle adjusting screw and vacuum unit lever. Adjust with lever screw to .040" (1 mm).

**2)** Remove vacuum unit outer nut and gasket. Disconnect vacuum hose (green stripe) from vacuum tee and connect to unit. Turn adjusting screw to obtain idle speed of 1450-1500 RPM.

**3)** Stop engine and reconnect hoses. Install vacuum unit gasket and outer nut, then retest deceleration system.

**Deceleration Valve – 1)** Connect tachometer, warm engine to normal operating temperature, and adjust idle speed to 900-950 RPM. Accelerate engine to 3000 RPM and release throttle. Speed should drop to 1500, pause for 2-3 seconds, then return to idle. If so, system is adjusted correctly.

**2)** If deceleration system is not operating properly, adjust valve. Hold diaphragm sleeve with 10 mm wrench. Loosen locknut on adjusting rod with 13 mm wrench.

CAUTION – *If sleeve is not held stationary with 10 mm wrench, internal diaphragm will be damaged.*

**3)** Turn adjusting rod clockwise until speed rises to 1500-1550 RPM. Accelerate engine several time and ensure that speed remains at 1500 RPM. Turn adjusting rod counterclockwise until idle speed returns to 900-950 RPM. Accelerate engine several times and recheck idle speed.

**4)** Accelerate engine to 3000 RPM and release throttle. Speed should pause 2-3 seconds at 1500 RPM, then return to idle. If so, turn adjusting rod counterclockwise ½ turn more and tighten locknut.

**5)** If engine speed does not pause or return to idle, repeat adjustment procedure. If correct results cannot be obtained, replace valve and readjust.