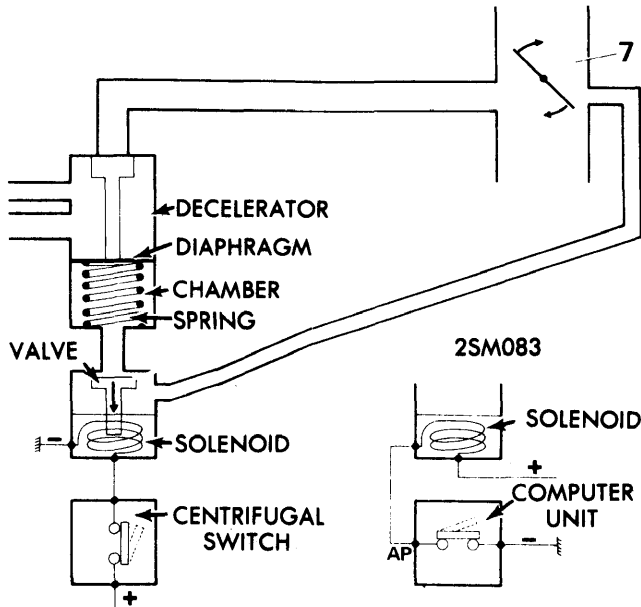


## RENAULT R12 ENGINE MODIFICATION

R12 (1972)

### DESCRIPTION

System consists of either a centrifugal switch (manual transmission) or special computer unit (automatic transmission) in addition to a decelerator device which is connected to the carburetor and operated by a solenoid flap valve.

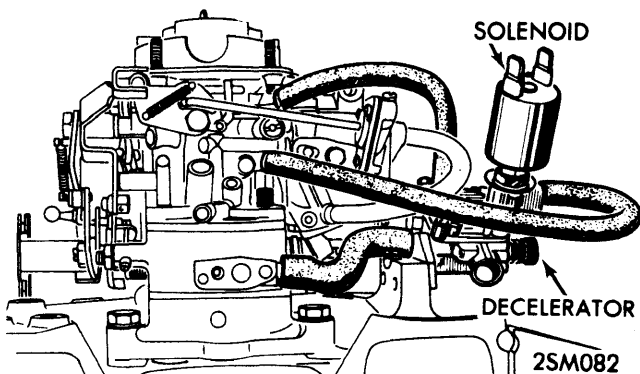


FAST IDLE SYSTEM SCHEMATIC

### OPERATION

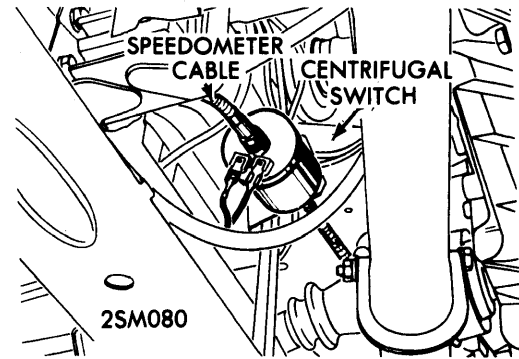
**Acceleration** - When vehicle speed reaches 20 MPH (manual transmission) or 20.5 MPH (automatic transmission), contact points on the centrifugal switch (manual transmission) or the computer (automatic transmission) close. Current is directed to the solenoid flap valve and its valve opens a direct line between the decelerator diaphragm and the carburetor body. The vacuum is not strong enough to move the diaphragm as it is held by spring pressure.

**Deceleration** - When throttle is released and the butterfly throttle valve closes, the vacuum becomes strong enough to move the diaphragm on the decelerator and open the decelerator valve. This allows decelerator to be supplied with



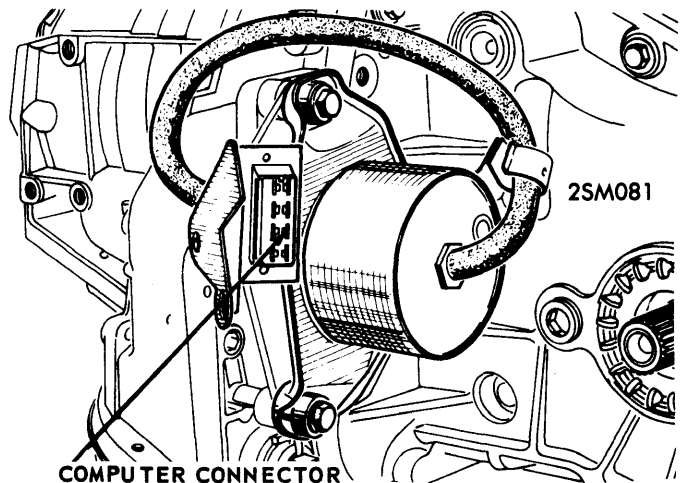
DECCELERATOR

fuel and air through metered orifices. The resulting mixture is drawn into the carburetor below the throttle valve. This additional mixture causes a higher engine speed than would normally be the case. This is the "Fast Idling Position".



CENTRIFUGAL SWITCH (MANUAL TRANSMISSION)

**Fast Idling Cut-Off** - When vehicle speed reaches 16 MPH (manual transmission) or 15 MPH (automatic transmission), the contacts on the centrifugal switch or the computer open. The feed to the solenoid flap valve is cut off and the vacuum no longer has any effect on the diaphragm. The spring pressure then closes the valve and the additional mixture can no longer be drawn into the intake manifold.



COMPUTER (AUTOMATIC TRANSMISSION)

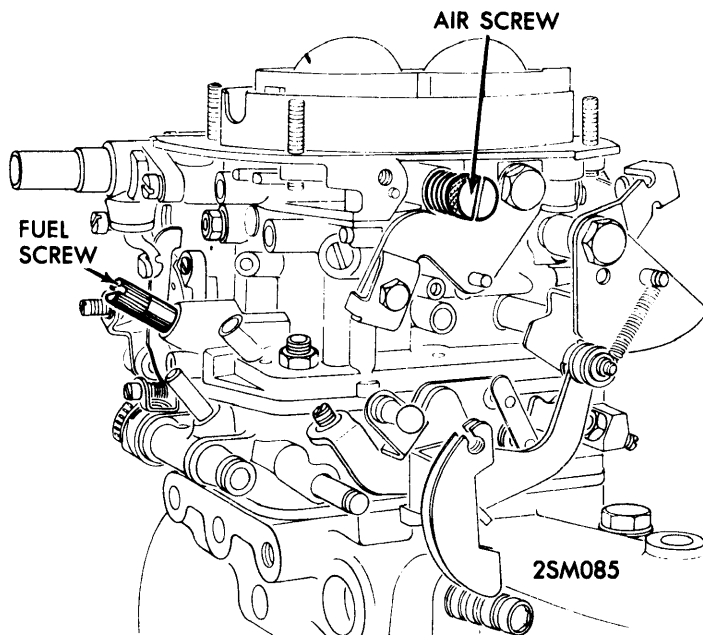
### SERVICE PROCEDURES

Correct carburetor adjustment and correct mixtures are important to maintaining permissible emission limits and to the working of the anti-pollution system. For idle speeds and tune-up specifications see Tune-Up Charts.

**Carburetor Idle Speed Adjustment** - With engine at normal operating temperature, turn air screw to obtain 700 RPM (manual transmission) or 625 RPM (automatic transmission).

# Exhaust Emission Systems

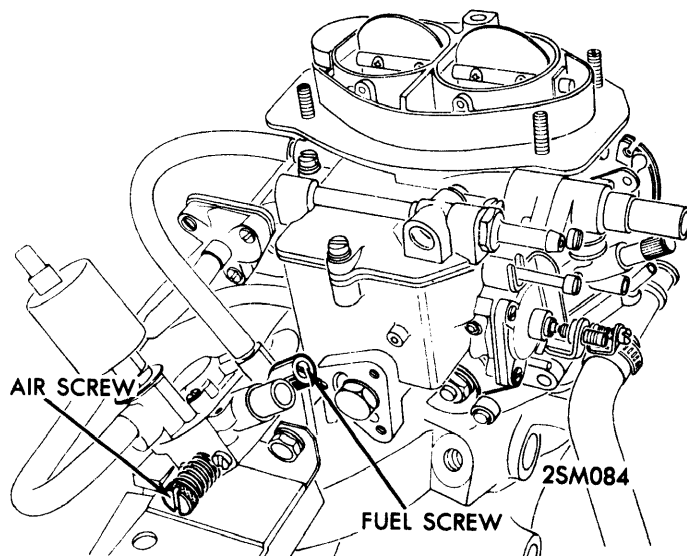
## RENAULT R12 ENGINE MODIFICATION (Cont.)



**IDLE ADJUSTMENT SCREWS**

Then turn fuel screw to obtain highest RPM. Repeat operations until maximum RPM when turning fuel screw, is 700-725 RPM (manual transmission) or 625-650 RPM (automatic transmission). Now turn fuel screw in (leaning mixture) until a reduction in RPM of 20-25 RPM is obtained. Check that idle is smooth at this speed and that CO level is 2%.

**NOTE** - Before attempting to adjust fast idling system, the regular idle adjustment procedures must be completed.



**DECCELERATOR ADJUSTMENT SCREWS**

**Fast Idle Adjustment - 1)** The decelerator is fitted with an air screw and fuel screw. The solenoid flap valve must be electrically actuated to allow decelerator to operate before further adjustments are made.

**2)** On manual transmission, disconnect grey wire (+) on solenoid flap valve and tape the connector. Connect a jumper wire between the terminal and the (+) terminal of the ignition coil.

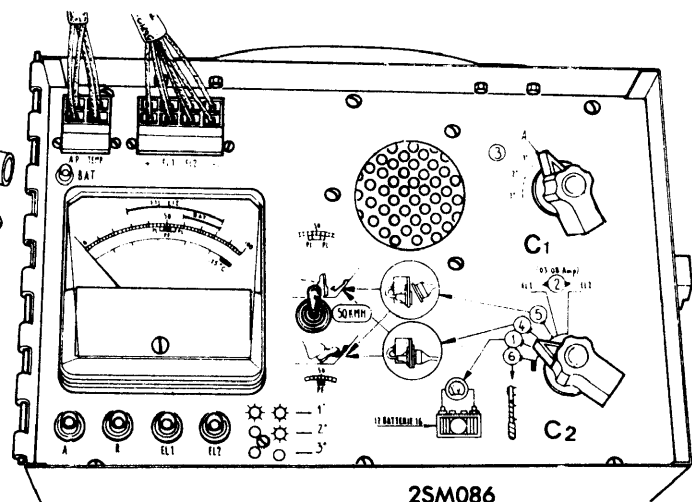
**3)** On automatic transmission, disconnect pink (-) wire on solenoid flap valve and then connect jumper wire between pink wire and ground.

**4)** With solenoid flap valve actuated, turn air screw to obtain an engine speed of 1400-1500 RPM. Check that CO level is 2%. If CO level incorrect, turn fuel screw to achieve specified RPM and CO level.

**Fast Idle Cut-Off (Manual Transmission)** - Pull grey wire (+) partially back to allow connection of test lead. Connect a test bulb between test lead and ground. Place test bulb in a place visible to driver. Drive vehicle up to about 25 MPH (in second gear), test light should light up. Release accelerator and allow vehicle to decelerate. When vehicle speed reaches 16 MPH the test lamp should go out.

**NOTE** - Do not allow test bulb lead to contact the solenoid flap valve or damage could result to the switch when ignition is switched on.

**Fast Idle Cut-Off (Automatic Transmission)** **NOTE** - This test requires special Renault tester B. Vi. 454-06. Turn switch C1 to position "A" (automatic) and switch C2 to position "4" (computer unit connected). Connect special tester to vehicle and drive car at about 25 MPH. Green warning lamp should go out. Release accelerator pedal and allow vehicle to decelerate. When vehicle speed reaches 15 MPH, the warning light should come on.



**SPECIAL TESTER B. Vi.454-06**