SOLEX 32 DIDTA & 32 TDID-2

Opel, All Models (1971-73)

DESCRIPTION

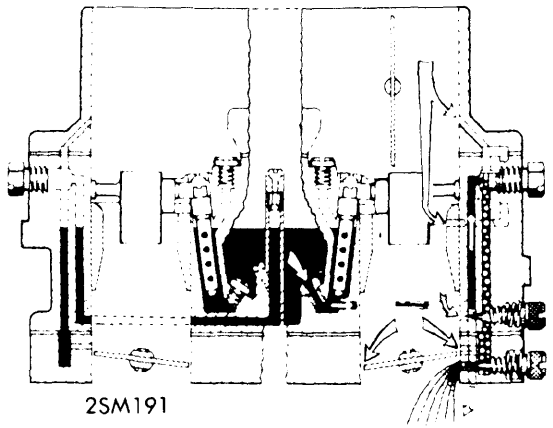
The carburetor used on all Opel models is a downdraft 2-barrel type carburetor. It incorporates an automatic choke and a vacuum actuated secondary on all models except Opel GT. On GT models, the secondary throttle valve is operated by linkage from primary throttle valve. A diaphragm type accelerator pump is utilized on primary circuit only.

OPERATION

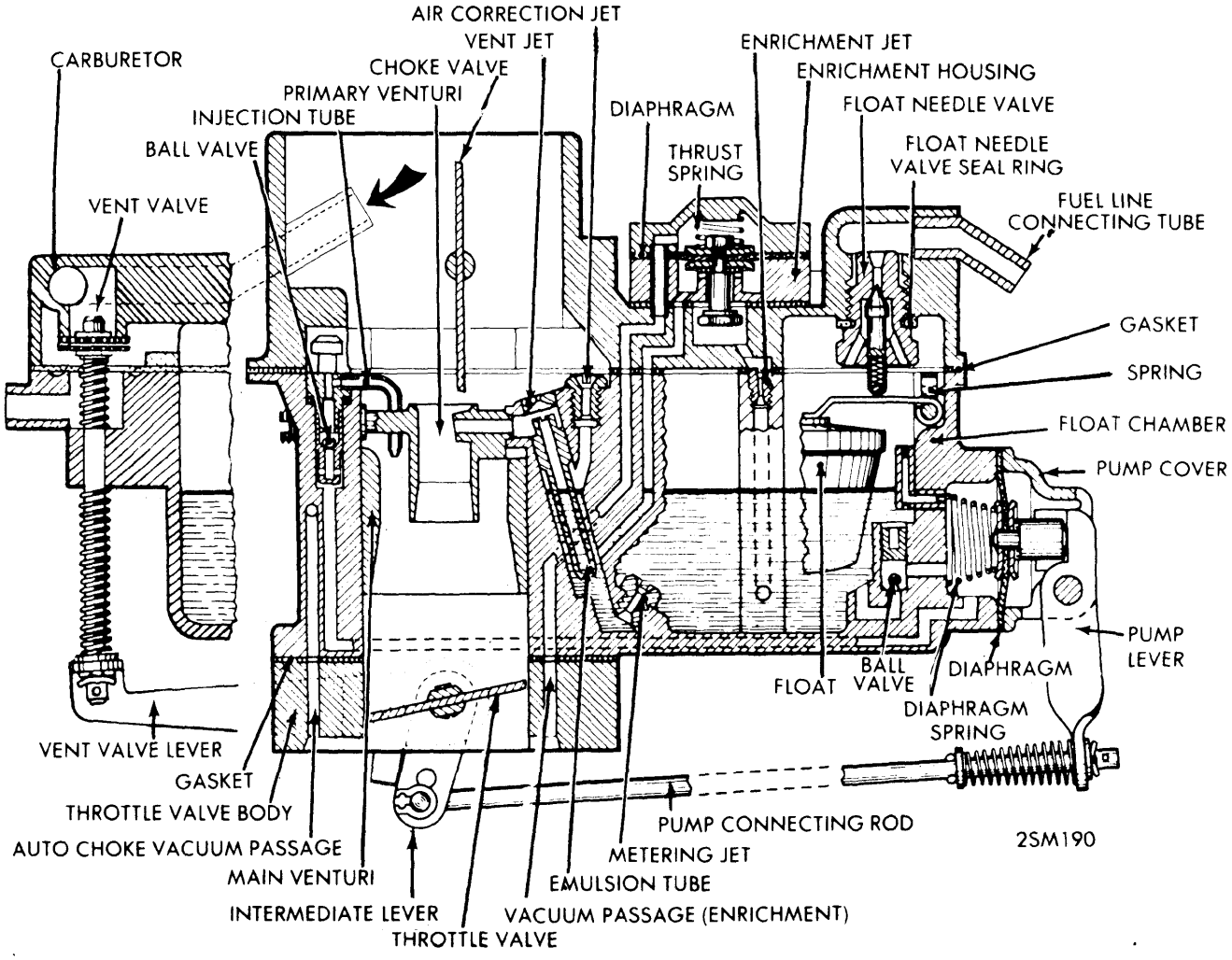
COLD START SYSTEM

1) Choke is operated by a bi-metal spring and the choke valve is offset so that choke valve opening increases as air flow increases.

2) If choke valve is closed, the throttle valve is opened slightly to provide a fast idle speed. With rising engine temperature, the choke valve gradually opens and the mixture becomes leaner. When engine reaches normal operating temperature, choke valve is in wide open position and throttle valve is in slow idle position.



IDLE SYSTEM



CARBURETOR SECTIONAL VIEW

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IDLE SYSTEM

At idle, fuel is drawn in (controlled by the idle jet) and mixed with air from the idle air bleeds and ports in the throttle body. The mixture is drawn downward to the ports near the throttle valve. When throttle valve is closed, mixture is drawn from the lowest port and mixed with air by-passing the throttle valve to form the idle mixture. If throttle valve is opened, mixture is also drawn from upper ports. This provides good transfer from idle system to main system.

MAIN METERING JET SYSTEM

During high speed operation, fuel is drawn through main metering jet into emulsion tube. Vacuum in primary venturi draws fuel from main nozzle. Air from high speed air jet enters emulsion tube and mixes with fuel. The secondary valve is operated either by vacuum or by mechanical linkage (GT). With primary throttle valve almost completely open and engine speed at about ½ of maximum, the vacuum or mechanical linkage causes secondary throttle valve to start opening.

TRANSITION SYSTEM

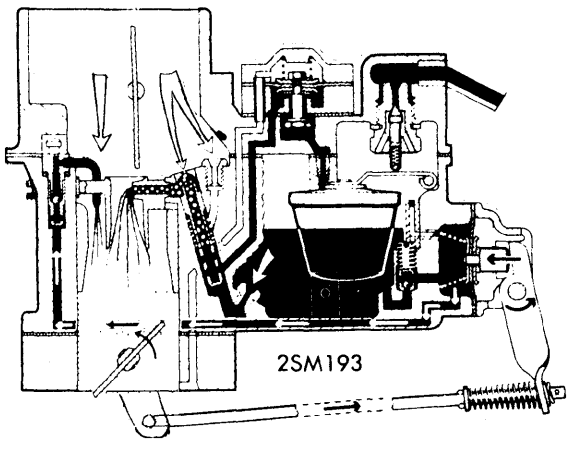
Provides for smooth transition between primary and secondary throttles. When secondary begins to open, two ports (normally just aboved closed valve) are uncovered, causing fuel to feed into secondary bore just before secondary nozzle starts feeding. This provides for an additional enrichment of air/fuel mixture at beginning of full throttle operation.

FULL THROTTLE ENRICHMENT

If secondary valve is fully opened, the vacuum in the throttle valve area is reduced and the transition ports stop feeding. Vacuum increases in the secondary venturi area and fuel is fed continuously into the secondary venturi area during full throttle operation. Amount of fuel is determined by an enrichment jet.

ACCELERATION SYSTEM

When throttle is closed, suction stroke of diaphragm pump causes fuel to enter pump chamber. When throttle is opened, the diaphragm is moved inward and fuel is injected into the primary bore through an injection tube. Amount of fuel is determined by the pump stroke.



ACCELERATION SYSTEM

ADJUSTMENT

IDLE ADJUSTMENT (1971-72 MODELS)

1) Idle speed and mixture adjustment should not be attempted until spark plugs, distributor points, dwell, timing, ignition, and compression are in good order. Make adjustments with engine at normal operating temperature, choke valve wide open, air cleaner installed, and tachometer attached.

2) Start engine and run briefly at fast idle, make sure parking brake is on and air conditioning is off. Remove carburetor-to-charcoal canister hose (disconnect at canister). Plug hose. Using a suitable tool (J-23951), check calibration of throttle plates to insure vacuum from carburetor is 1-8" of water.

3) Adjust idle air speed screw and mixture screw to obtain best idle at 820-870 RPM (Auto. Trans.) or 870-920 RPM (Man. Trans.). Make final adjustment by turning mixture screw in until 20-50 RPM idle drop is obtained. Reconnect charcoal canister hose.

IDLE ADJUSTMENT (1973 MODELS)

1) To correctly adjust idle RPM, valve adjustment, dwell angle, ignition timing, spark plugs and EGR valve must all be correctly adjusted or in correct working order.

2) With engine at normal operating temperature and air cleaner installed, remove plastic limiting caps from idle mixture screw and air correction screw.

3) Using a suitable tachometer, check idle RPM. If RPM is not to specification, turn air speed screw either direction to obtain correct idle RPM.

4) Adjust idle mixture screw until highest RPM is obtained. Alternately adjust both screws until reading is 50 RPM higher than specified idle RPM. Turn idle mixture screw clockwise (leaner) until specified RPM is obtained. Install new red limiter caps over air speed and idle mixture screw.

FAST IDLE ADJUSTMENT

1) With engine off, but at operating temperature, set fast idle cam and choke valve by actuating linkage so that throttle valve is approximately ½ open. With other hand, completely close choke valve. Release linkage and then choke valve. Choke now rests on highest step of cam and throttle valve is slightly open.

2) Start engine. *NOTE — Do not touch accelerator pedal or linkage.* In this throttle valve position the engine speed should be 2700±200 RPM. If adjustment needed, turn nuts on throttle connecting link. Shorten linkage to decrease RPM, lengthen linkage to increase RPM.

OVERHAUL

CARBURETOR DISASSEMBLY

1) Remove outer nut from end of throttle lever to choke link. Pry off vacuum case connecting lever and unscrew carburetor cover. Screw float needle valve out of carburetor cover and take off copper seal ring.

2) Remove vacuum diaphragm cover and enrichment system cover. Unscrew retaining ring from automatic choke body. Unscrew vacuum diaphragm case from carburetor cover and remove reduction jet.

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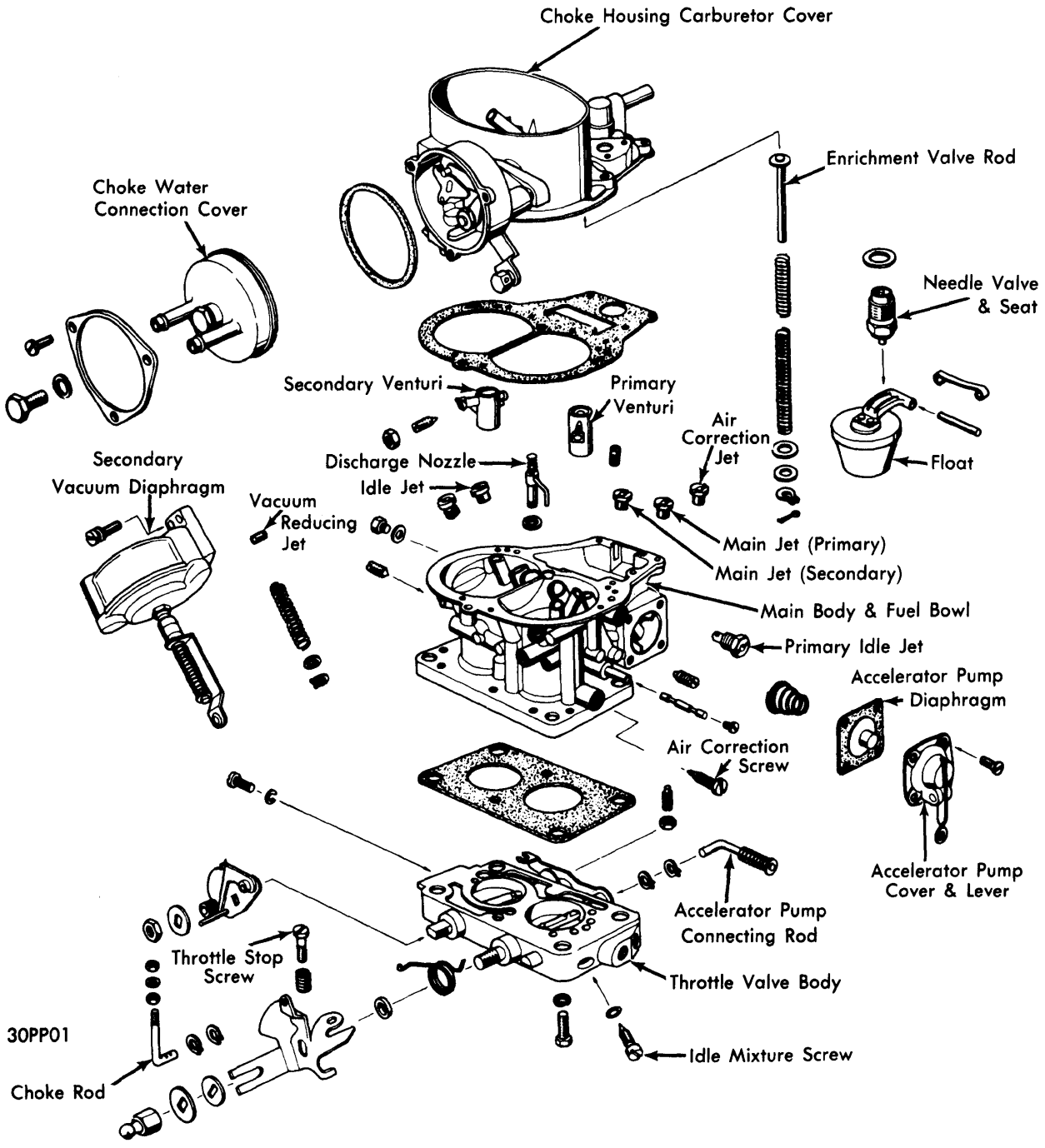
3) Remove accelerator pump discharge nozzle assembly. *NOTE — Nozzle is press fit.* Remove float together with spindle and leaf spring.

4) Remove primary idle jets, secondary high speed air jets, and primary and secondary main metering jets.

5) Remove cotter pin from pump connecting rod, and remove accelerator pump. Remove idle mixture adjusting screw from throttle valve body, and remove idle air adjusting screw from float chamber.

REASSEMBLY

To reassemble, reverse disassembly procedure. Check all parts for proper condition and operation before reinstalling. Replace gaskets and seal rings.



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