

D. (USA) model year 1974 Federal
Differences as compared with model year 1973 Federal

The carburetor (USA) 1974 Federal is similar to (USA) 1973 Federal.

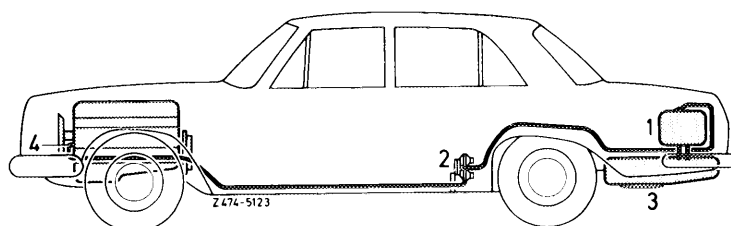
The following components of the emission control system are new:

- fuel evaporation control system
- flame arrester coil

Fuel evaporation control system

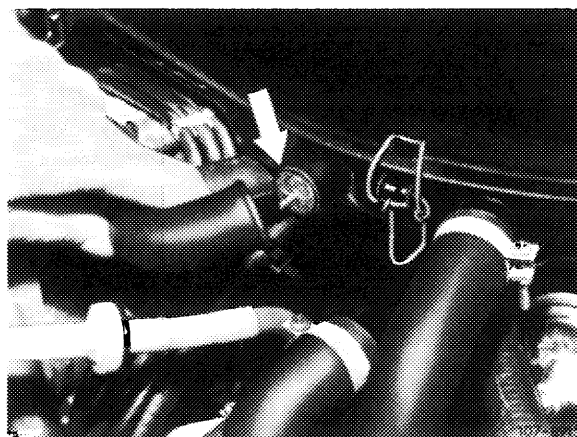
In the USA, starting model 1974, the fuel evaporation vapors from the fuel tank may no longer be discharged into the atmosphere. For this reason, they are guided through lines and a valve system into the crankcase, from where they will be flowing into the intake pipe via the engine venting system.

- 1 Expansion tank
- 2 Valve system
- 3 Fuel tank
- 4 Connection on crankcase



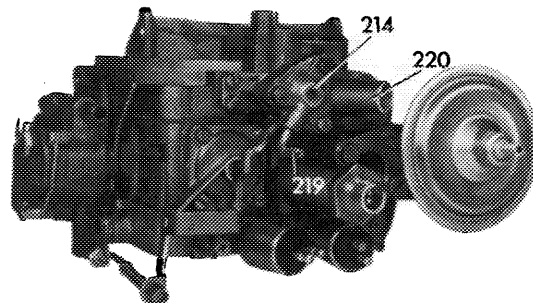
Flame arrester coil

To prevent flames from reaching the cylinder head cover in the event of a backfiring engine, a flame arrester coil (arrow) is installed in air filter.



E. (USA) model year 1974 California
Differences as compared with model year 1973 Federal

- Float chamber vent valve
- Draw-off connection for fuel evaporation control system
- New insulating flange
- Choke cover-stepped heater
- Jet line-up

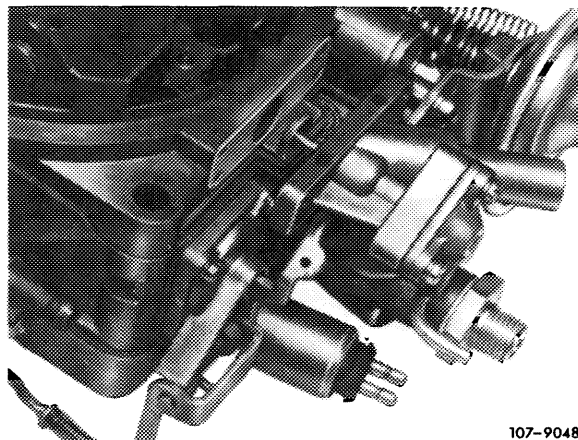


214 Float chamber vent valve
219 Vacuum connection
220 Vent connection

107-8977

Float chamber vent valve

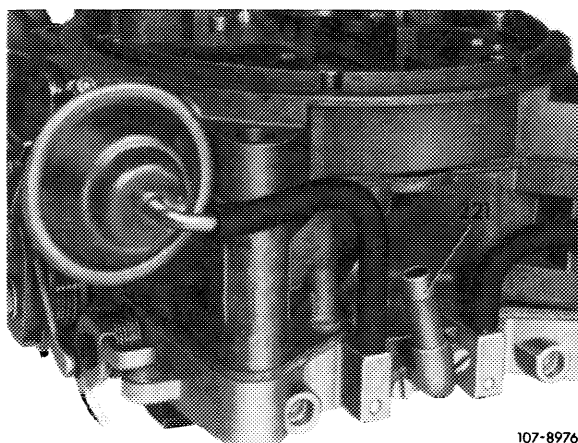
The float chamber vent valve opens with the engine switched off, so that the gases can escape toward charcoal canister.



107-9048

Draw-off connection for fuel evaporation control system

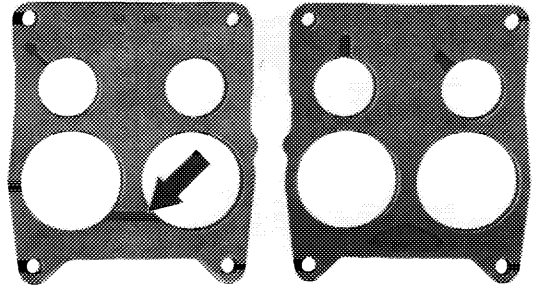
The fuel evaporation vapors from fuel tank and from float chamber are stored in charcoal canister and are drawn-off from canister via draw-off connection (221) by means of the engine vacuum.



107-8976

Insulating flange

As a result of the fuel evaporation vapors drawn off into stage II, the insulating flange is provided with a groove (arrow) between carburetor and intake pipe.



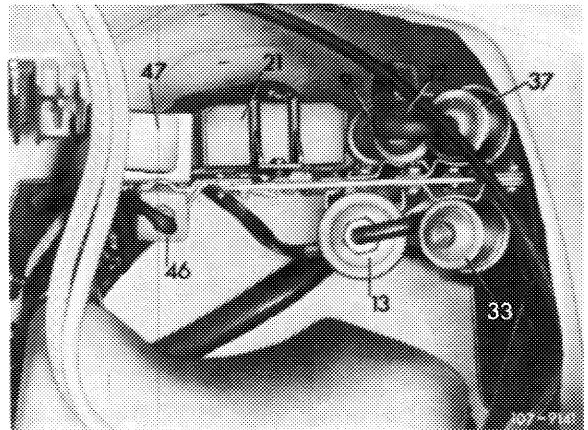
Left = top
Right = bottom

107-8916

Choke cover-stepped heater

To improve warming-up characteristics, the choke cover is heated in two steps. Below 17 °C oil temperature at reduced capacity by way of a resistor. Above 17 °C oil temperature the choke cover is heated directly (functional description 07.2-090).

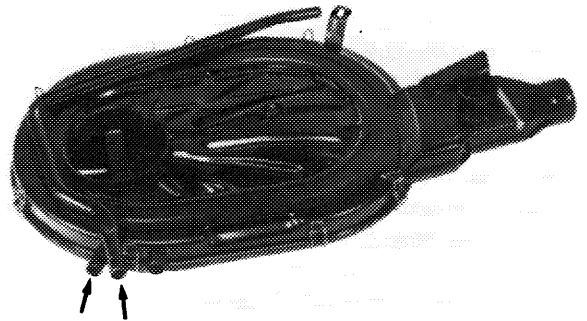
46 Pre-resistor for choke cover-stepped heater



Air filter

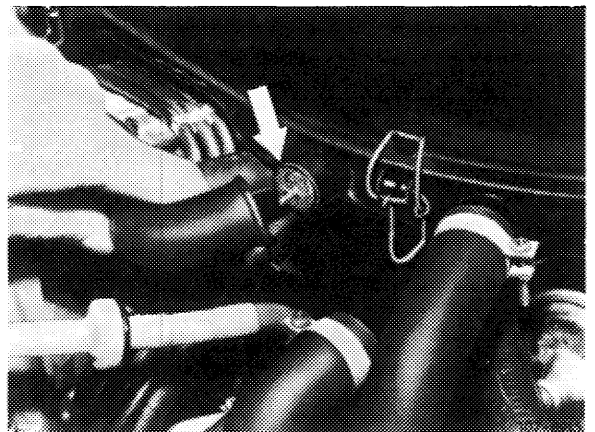
The air filter is provided with an additional hose connection for air relief (air discharge).

For reasons of available space, the air injection line is attached below on filter.



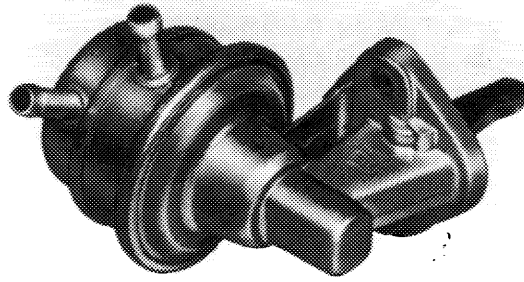
109-8972

The air filter is provided with a flame arrester coil (arrow). The coil prevents flames from reaching the cylinder head cover in the event of a backfiring engine.



Fuel pump

Lack of space caused by the installation of the air pump for air injection, required the use of an angle drive for fuel pump.



107-9099

Modifications in model year 1974 (Federal and California)

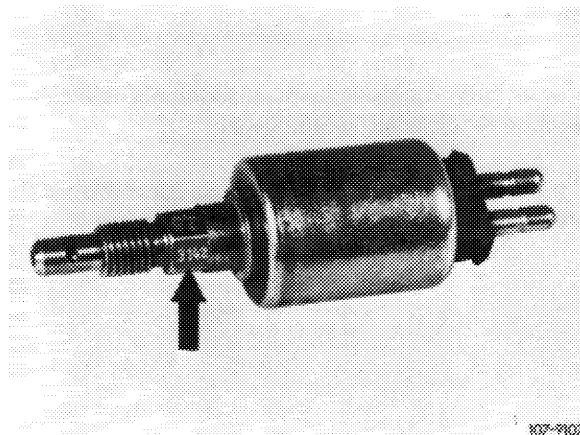
Idle air shutoff valve

The idle air shutoff valves were modified in electrical section and by increasing the shutoff voltage to approx. 3 volts.

The installation of this idle speed shutoff valves prevents afterrunning of the engine. Idle speed shutoff valves installed up to now can be exchanged for modified version, including model year 1973.

Production code number

3 = Production year 1973
142 = Production day (consecutive calendar day)



107-9107

Identification

New version starting production code number **3142**.

Start of production: August 1973

Model	Starting chassis end no.
114.060	101 343
114.073	100 355

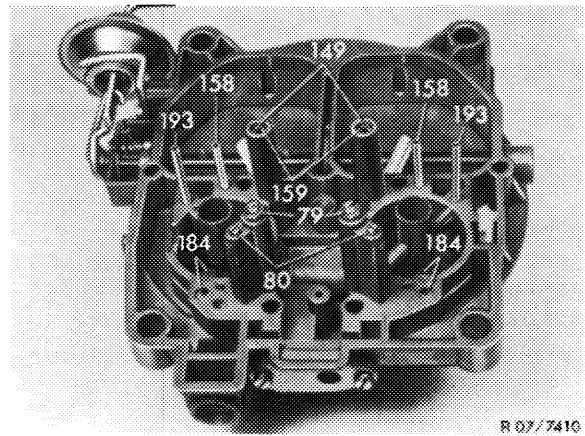
Riser pipes for bypass system stage II

The ID of the riser pipes (158) has been reduced to 1.0 mm (formerly 1.8 mm).

As a result, improved bypass characteristics during sudden full throttle acceleration of the stopped vehicle or from low engine speed.

Start of production: January 1974

Subsequent conversion of riser pipes for stage II, also for model year 1973 (for conversion refer to programmed repairs at "Bypass faults during acceleration from carburetor stage I to II").

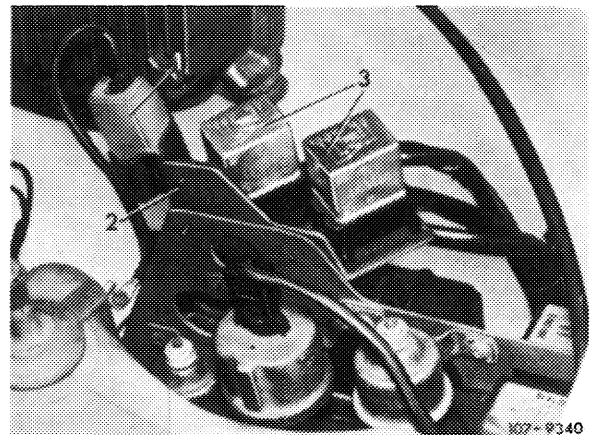


8 07/7410

Choke cover-stepped heater

(For Federal emission control only, for California emission control installed from start of series).

- 1 Pre-resistor
- 2 Auxiliary mounting bracket
- 3 Relay



8 07-9340

The choke cover is heated in two steps:

Up to + 17 °C engine oil temperature reduced by adding a pre-resistor (1), **above + 17 °C engine oil temperature normally heated**.

As a result, improved riding characteristics during warming-up stage in temperature range from $-5\text{ }^{\circ}\text{C}$ to $+5\text{ }^{\circ}\text{C}$.

Identification

Externally visible by pre-resistor (1).

Start of production: January 1974

Model	Starting chassis end no.
114.060	106 145
114.073	101 989

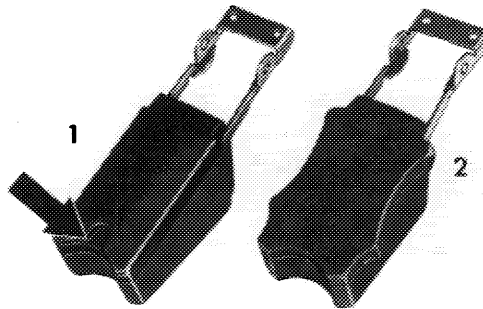
Repair instruction

Subsequent installation of choke cover-stepped heater also for model year 1973 (refer to 07.2–147). Simultaneously install a choke cover with code number 104 (formerly 89).

New float

Weight and shape of float has been changed. New float weight 6.8 g (formerly 8.7 g).

As a result, higher buoyancy, as a result of which the closing force of float needle is increased. Former float can be exchanged for new version, also model year 1973.



Arrow = measuring point for float level

- 1 New version
- 2 Former version

107-9844

Simultaneously, the former fuel level checkup has been replaced by the float level checkup or adjustment (07.2.2–180).

Identification

Externally recognized by hip roof shape with measuring point for float level (arrow).

Start of production: January 1974

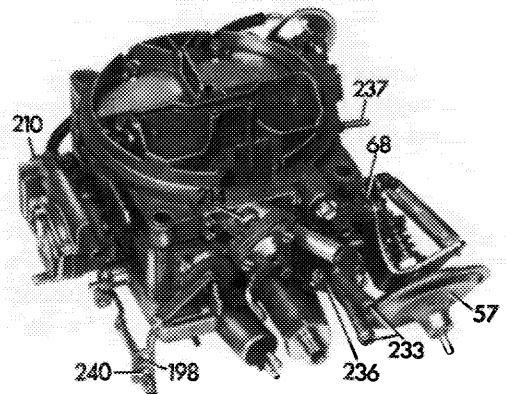
Model	Starting chassis end no.
114.060	104 986
114.073	101 671

F.  model year 1975

Differences as compared with model year 1974 Federal

- Carburetor cover with raised centering flange for air filter
- Idle speed combination jet
- Vacuum connection (237) for vacuum booster of EGR (Venturi connection)
- Actuating lever for accelerating pump
- Seal for choke valve adjusting screw
- Thermostatically controlled bypass choke (TN choke)
- Float chamber vent valve
- Draw-off connection for fuel evaporation control system
- Modified insulating flange

57	Vacuum governor	236	Thermostatically controlled bypass choke
198	Actuating lever for accelerating pump	237	Vacuum connection for vacuum booster of EGR (venturi connection)
210	Pulldown cover	240	Plastic guide piece
214	Float chamber vent valve		
233	Coolant connection for thermostatically controlled bypass choke		

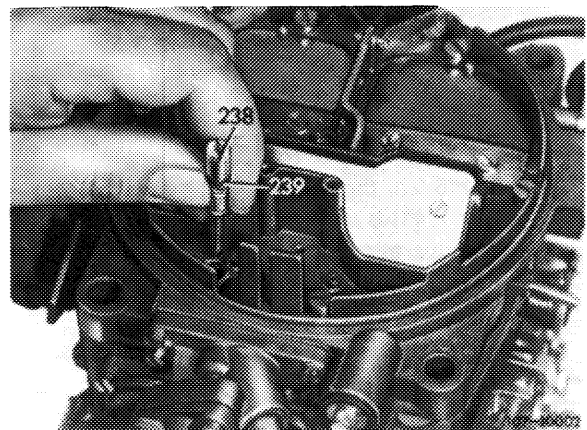


107-10018

Idle speed combination jet

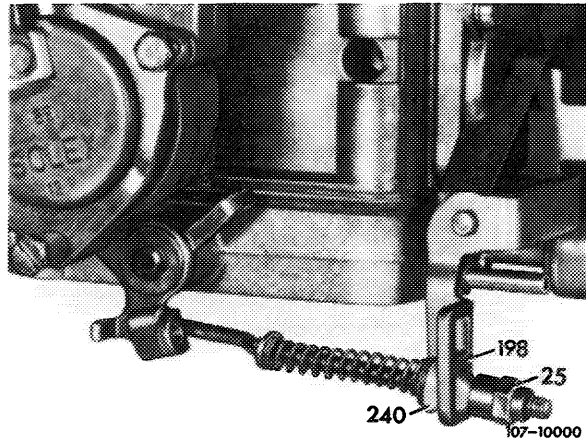
The idle speed fuel jet and the idle speed air jet are combined into a combination jet (238).

To improve access this jet is screwed into carburetor cover from above. Sealing is by means of a rubber sealing ring (239).



Actuating lever for accelerating pump

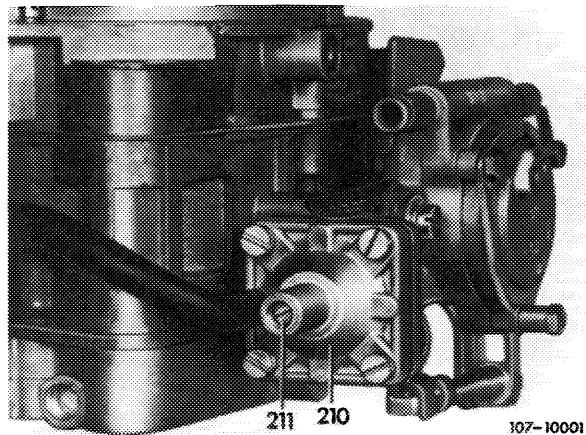
To improve guiding of actuating rod for accelerating pump, the actuating rod is provided with a plastic guide piece (240). The shape of the actuating lever (198) has been changed to hold the plastic guide piece.



Sealing of choke valve gap adjusting screw

The sealing of the adjusting screw (211) has been improved and is now effected by means of an exchangeable rubber sealing ring.

The shape of the pulldown cover (210) has been changed to mount the modified adjusting screw.

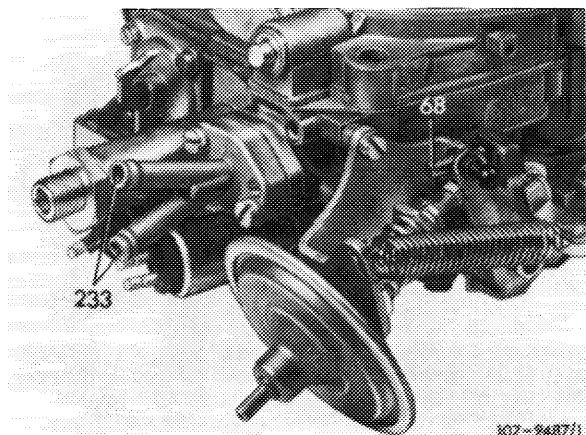


Thermostatically controlled bypass choke (TN choke)

The carburetor has an additional choke with its own jet and control system carrying the designation of TN choke (TN = thermostatically controlled bypass choke).

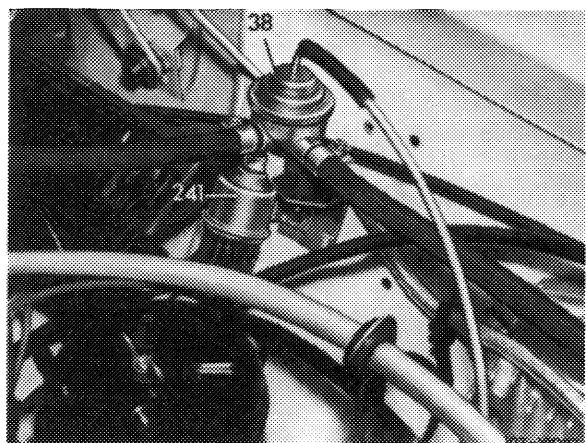
By means of this choke the warming-up mixture is guided into intake pipe in dependence of the coolant temperature while bypassing (shunt connection) the throttle valve (functional description 07.2-090).

233 Coolant connection for TN choke



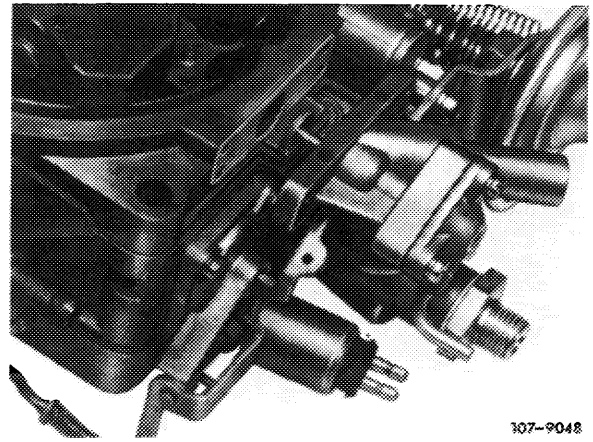
A switchover valve (241) is additionally installed, so that the vacuum chamber in choke housing (pulldown) is not provided with a vacuum during starting operation. This will prevent the choke valve from opening ahead of time.

On model 116.020 the switchover valve for the automatic choke (241) is screwed to holder at front left in engine compartment.



Float chamber vent valve

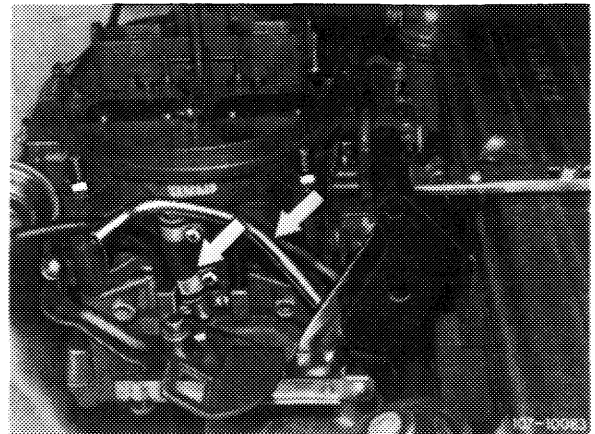
The float chamber vent valve opens with the engine stopped, so that the vapors can escape toward charcoal canister.



107-9048

Draw-off connection for fuel evaporation control system

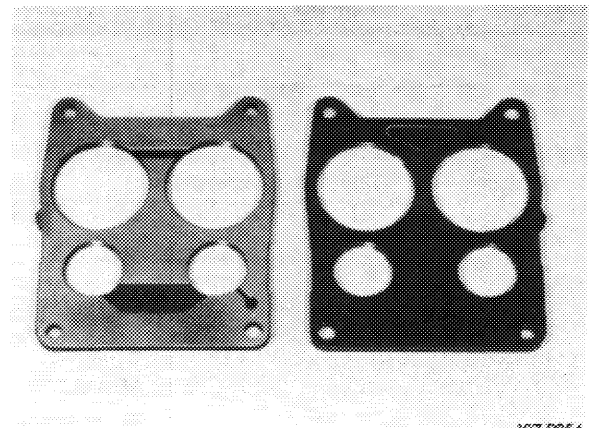
A connection (arrow) is mounted at the rear on carburetor for drawing off fuel evaporation vapors.



Insulating flange

To guide the cold start warming-up mixture from TN choke into intake pipe, the insulating flange has been provided with a groove between stages I.

The fuel vapors are drawn off in stage II by way of a groove.



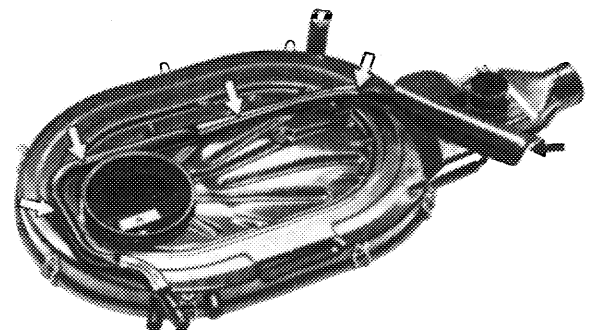
Left = top
Right = bottom

107-9854

Air filter

The installation of the catalyst required a rerouting of the air injection line. As a result, the line layout on air filter has also been changed.

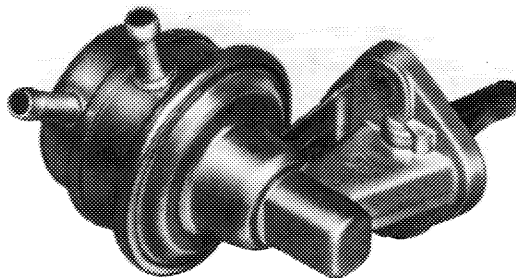
The air filters of model years 1974 and 1975/76 are not exchangeable.



107-10005

Fuel pump

Lack of space caused by the installation of the air pump for air injection required the use of an angle drive for fuel pump.



107-9099

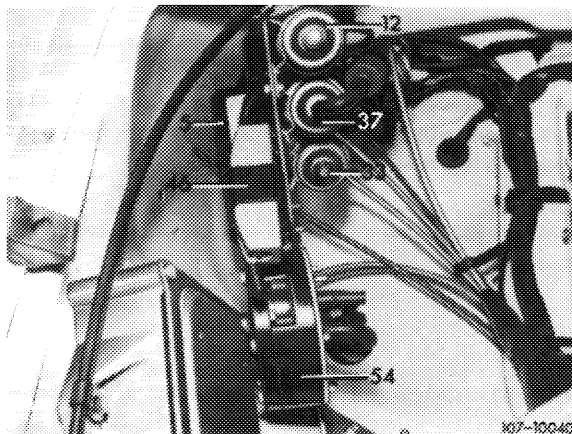
Modifications in model year 1975

Choke cover-stepped heater

There is one diode less in relay box (5).

As a result, elimination of reduced heating of choke cover above + 65 °C coolant temperature.

Model 114
5 Relay box



107-10043

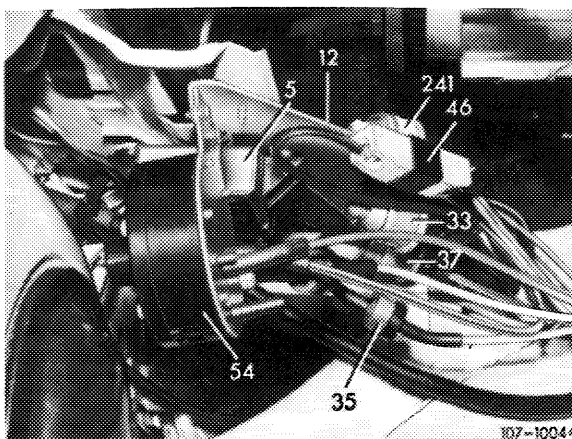
Identification

Externally recognized by spare part number on sticker on relay box (5). From now on, install this relay box only.

New part no. 001 542 30 19 (formerly 001 542 26 19).

Start of production: July 1975

Model 116
5 Relay box



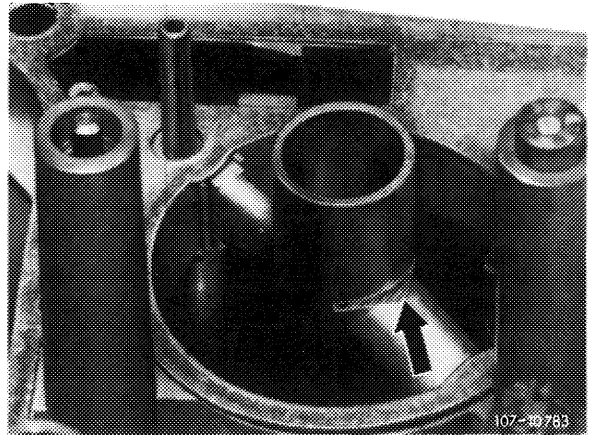
107-10044

G. (USA) model year 1976
Differences as compared with model year 1975

- Pre-atomizer, main jet
- Expanding element for TN choke
- Fuel pump

Pre-atomizer, main jet

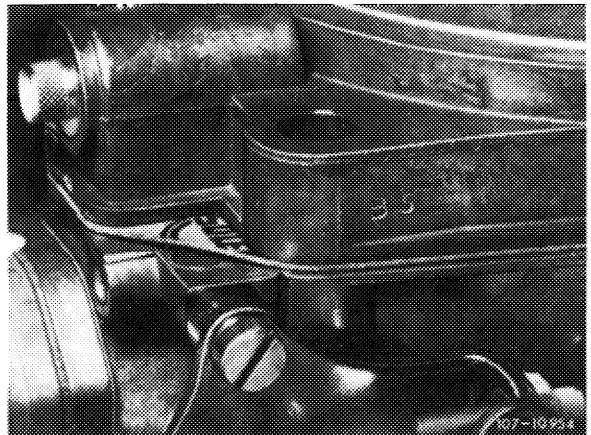
The pre-atomizer is provided with a milled slot (arrow).
As a result, the main jet had to be increased to **X 105**
(formerly X 100).



Identification

Externally recognized by carburetor cover code
number **B 5** (formerly B 1).

The pre-atomizer with slot can be installed only in
combination with the large main jet (X 105) in the
event of repairs.



Carburetor code number

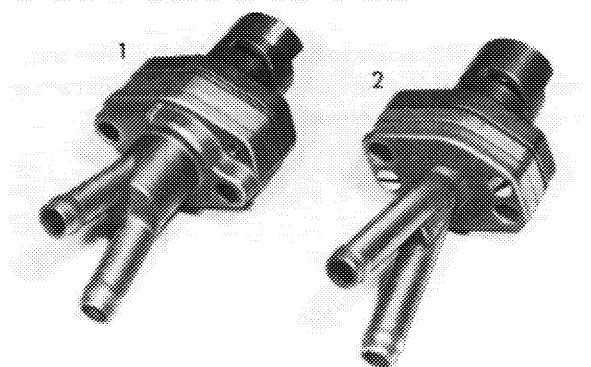
Expanding element for TN choke

Expanding element and housing are larger.

Identification

Externally recognized by larger dimension.

In the event of repairs, the new expanding element
can be installed as a complete TN unit only as a re-
placement for the former version.



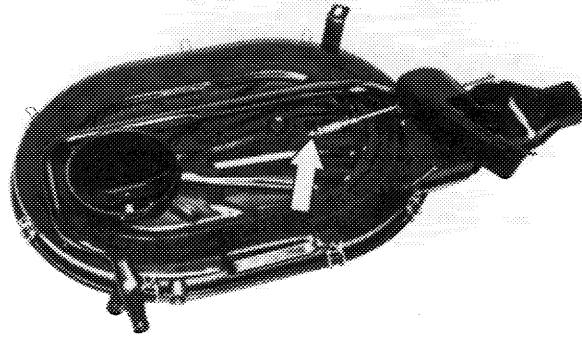
- 1 New version
- 2 Former version

107-10971

Air filter

The expanding element (arrow) for control of intake air preheater has been moved to inside of air filter.

In the event of repairs, this air filter can be installed as a replacement for the former filter of model year 1975.



109-10802/1

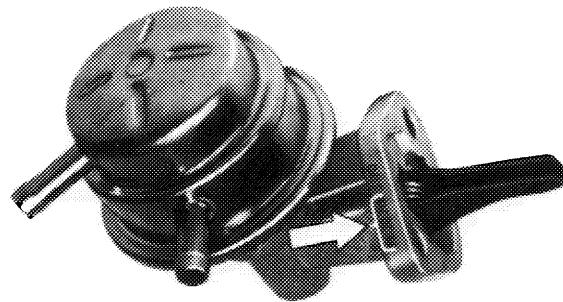
Fuel pump

Due to the new safety rule (roll-over test) the fuel pump has been provided with a **diaphragm-controlled fuel shutoff valve**, which is closed when the engine is stopped.

This will prevent fuel from fuel tank flowing outside via fuel pump and carburetor following an accident.

Identification

The closing cap of this fuel pump is brazed to housing and can no longer be disassembled. In addition, the index **PE 20 215** is punched into pump flange (arrow).



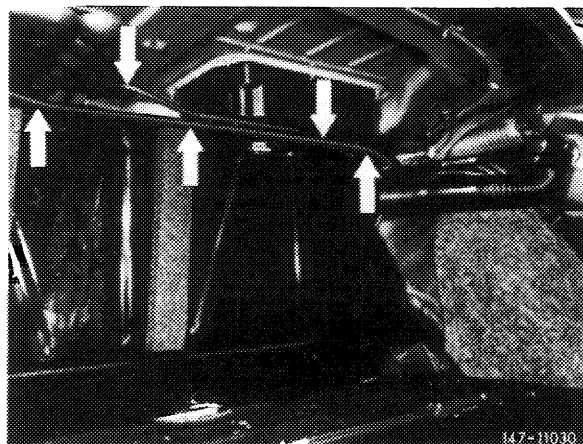
107-10 953

Repair instruction

In the event of repairs, the new fuel pump can be installed to replace the former version.

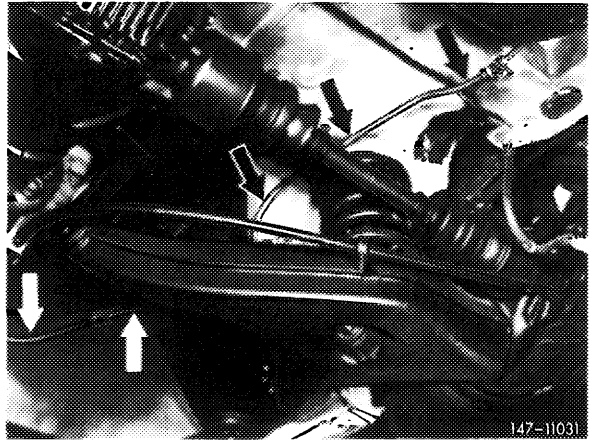
Fuel system

As a result of the new safety regulation (rollover test) the line layout for the fuel evaporation control system has been modified (arrows).



Line layout

147-11030



Line layout