

47-800 Fuel evaporation control system

A. (AUS) starting October 1974, (J) starting January 1973, (USA) 1973 and 1974 Federal emission control system

The fuel tank will be heated by high outside temperatures and the self-heating effects of the returning fuel. In some countries it is legally not permitted to let the resulting fuel vapours escape into the atmosphere.

For this reason, the vapours are drawn from fuel tank through the crankcase venting system into the combustion chambers while the engine is running, and they are stored in crankcase when the engine is stopped.

On model 107.04 five lines are leading from fuel tank to expansion tank.

These lines serve as venting, overflow or drain lines in dependence of fuel level in fuel tank, of fuel quantity and of the temperature.

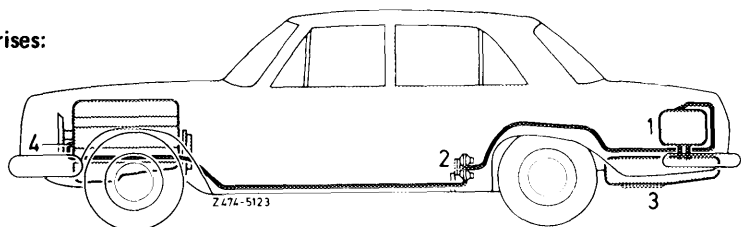
On model 107.04 the expansion tank is located above fuel tank.

At the highest point of the expansion tank is the connection for the positive and negative venting line (breathing line) to valve system (2).

On models 107.02 and 116 the expansion tank is located in fuel tank. Only one line leads to valve system.

The fuel evaporation control system comprises:

- Fuel expansion tank (1)
- Valve system (2)
- Fuel tank (3)
- Draw-off connection on crankcase (4)



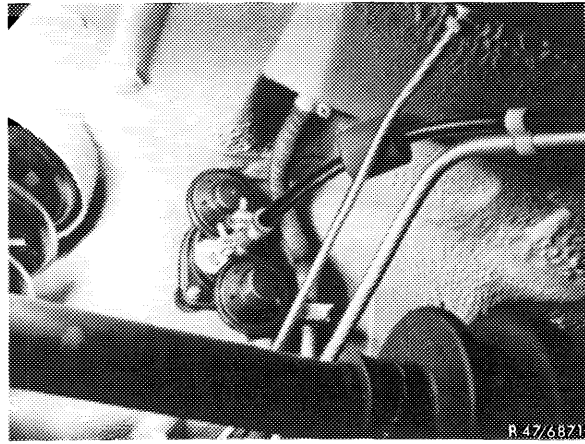
Valve system

The valve system is located underneath vehicle at level of rear legroom.

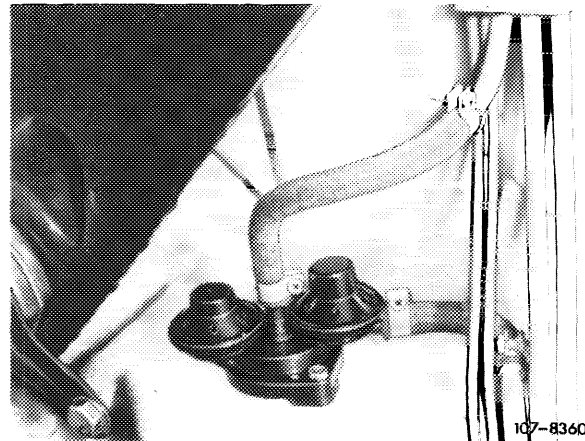
The valve system comprises three valves:

1. Negative venting valve
2. Pressure relief valve
3. Positive venting valve

Model 107



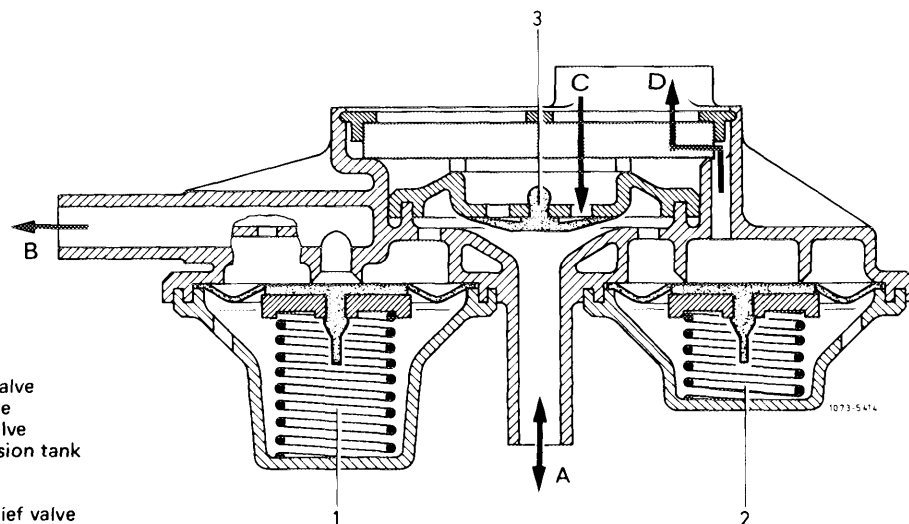
Model 116



The **negative venting valve (1)** opens at a slight overpressure. The evaporation vapours will flow via negative venting valve (1) (direction B) in a line toward engine. The line enters the crankcase at the respective connection.

The **pressure relief valve (2)** is a safety valve and opens when the fuel evaporation control system is subject to overpressure. The fuel vapours are vented (discharged) directly into the atmosphere.

The **positive venting valve (3)** opens when cooling down of fuel tank results in underpressure.

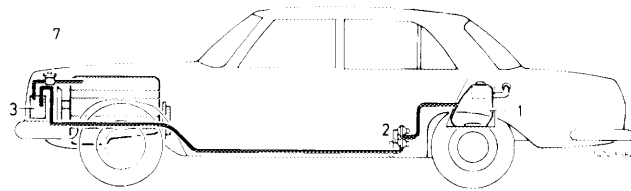


- 1 Negative venting valve
 - 2 Pressure relief valve
 - 3 Positive venting valve
- A To valve/to expansion tank
B To crankcase
C Fresh air inlet
D Outlet pressure relief valve

B. (USA) 1974 California emission control system, (USA) 1975

Layout

- 1 Fuel tank with expansion tank
- 2 Valve system
- 3 Charcoal canister
- 7 Purge valve

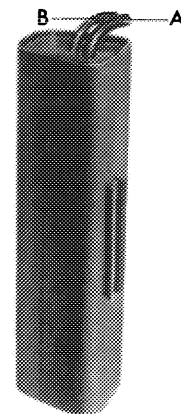


The fuel evaporation control system comprises the fuel tank with expansion tank, the valve system, the charcoal canister, the purge valve and the purge (draw-off) connection on intake pipe.

The fuel tank with fuel expansion tank and the valve system are similar to the version already known.

Charcoal canister

The fuel evaporation vapours from fuel tank are stored in charcoal canister and drawn-off again when vehicle is operated.

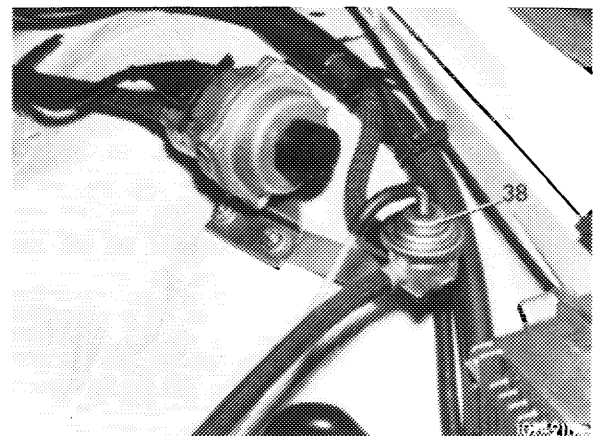


- A Connection tank venting system
- B Connection purge valve

107-9128

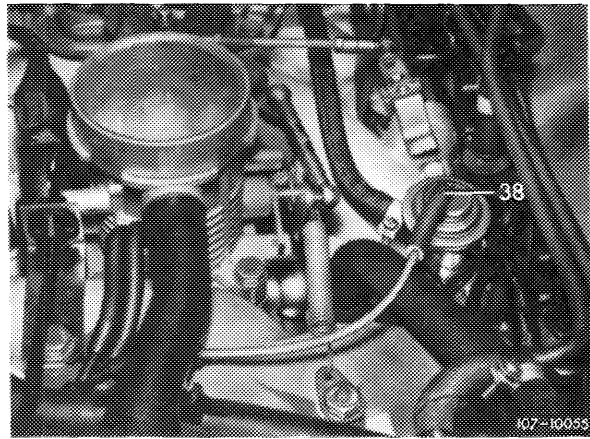
Purge valve (draw-off valve)

The purge valve is controlled by the vacuum of the throttle valve. If the diaphragm is under vacuum control, the valve opens and the vapours can be drawn from charcoal canister.



- Layout model year 1974
- 38 Purge valve (draw-off valve)

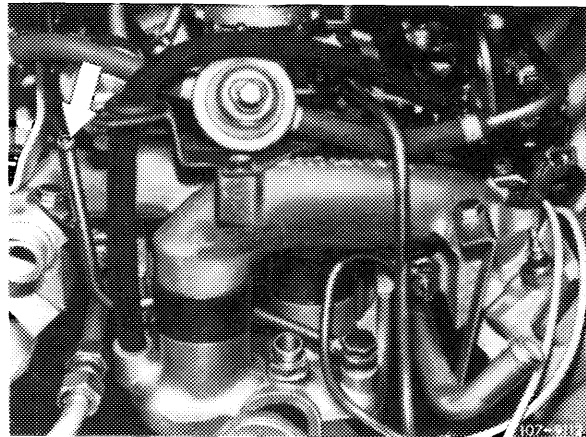
Layout model year 1975
38 Purge valve (draw-off valve)



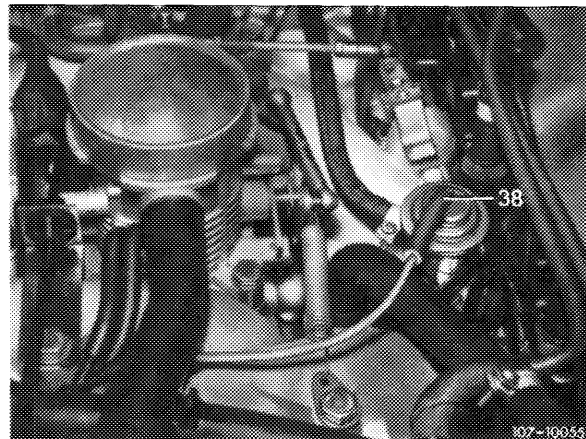
Intake pipe

The intake pipe is provided with a connection for drawing fuel evaporation vapours from charcoal canister.

Draw-off connection intake pipe model year 1974



Layout model year 1975
38 Purge valve (draw-off valve)



Operation

With the engine stopped, the fuel evaporation vapours from the fuel tank are stored in charcoal canister, with the engine running they are drawn from charcoal canister depending on intake pipe vacuum.

When the throttle valve opens, the diaphragm of the purge valve (draw-off valve) is activated by the vacuum and the valve is opened.

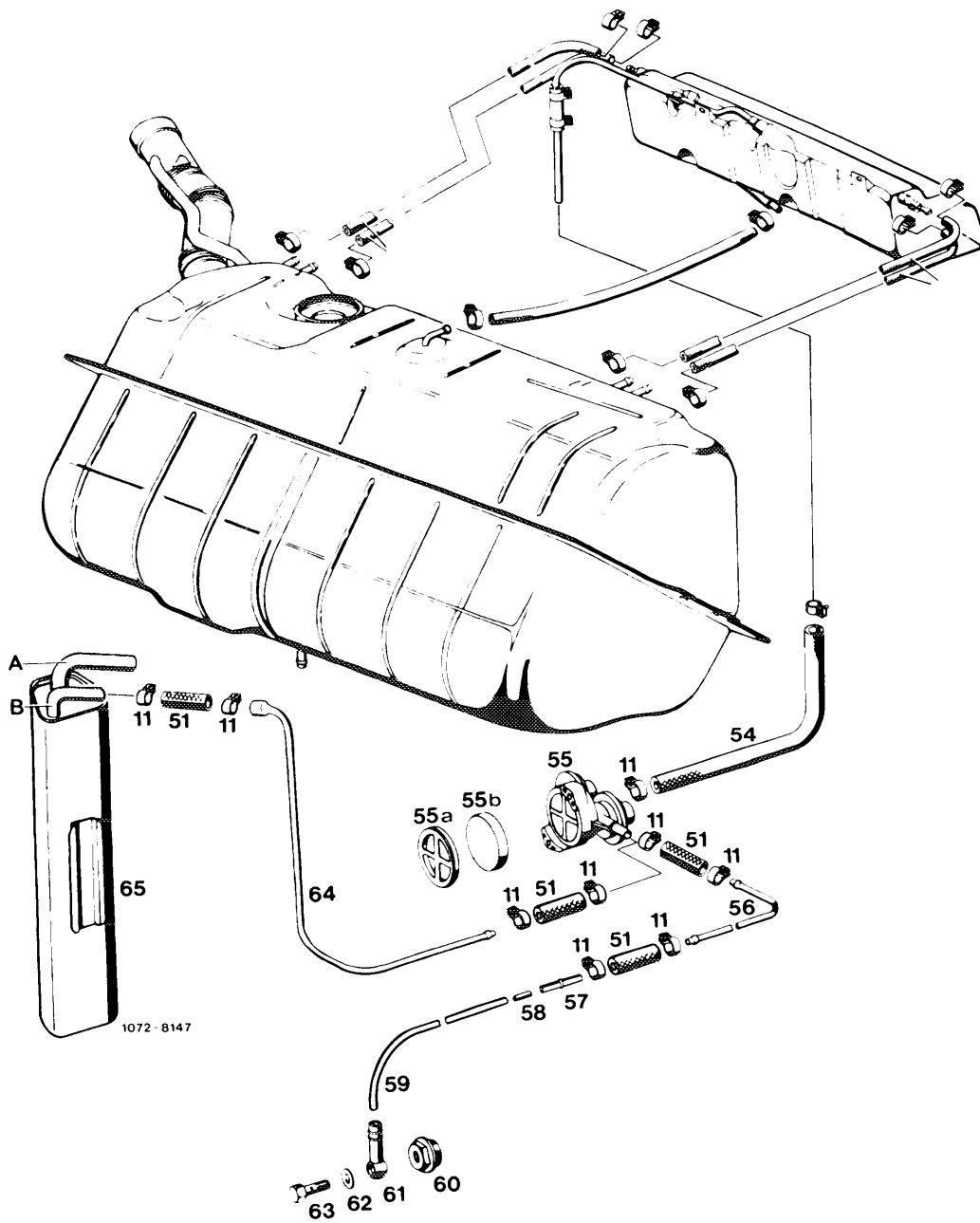
The intake pipe vacuum will draw the stored vapours from charcoal canister.

For checking system refer to:

Model year 1974 07.6–100

Model year 1975 07.6–100

Fuel evaporation system model 107.04 (AUS) (J) (USA)



- 11 Hose clip
- 51 Fuel hose
- 54 Fuel hose
- 55 Valve system
- 55a Cover
- 55b Filter
- 56 Negative venting line

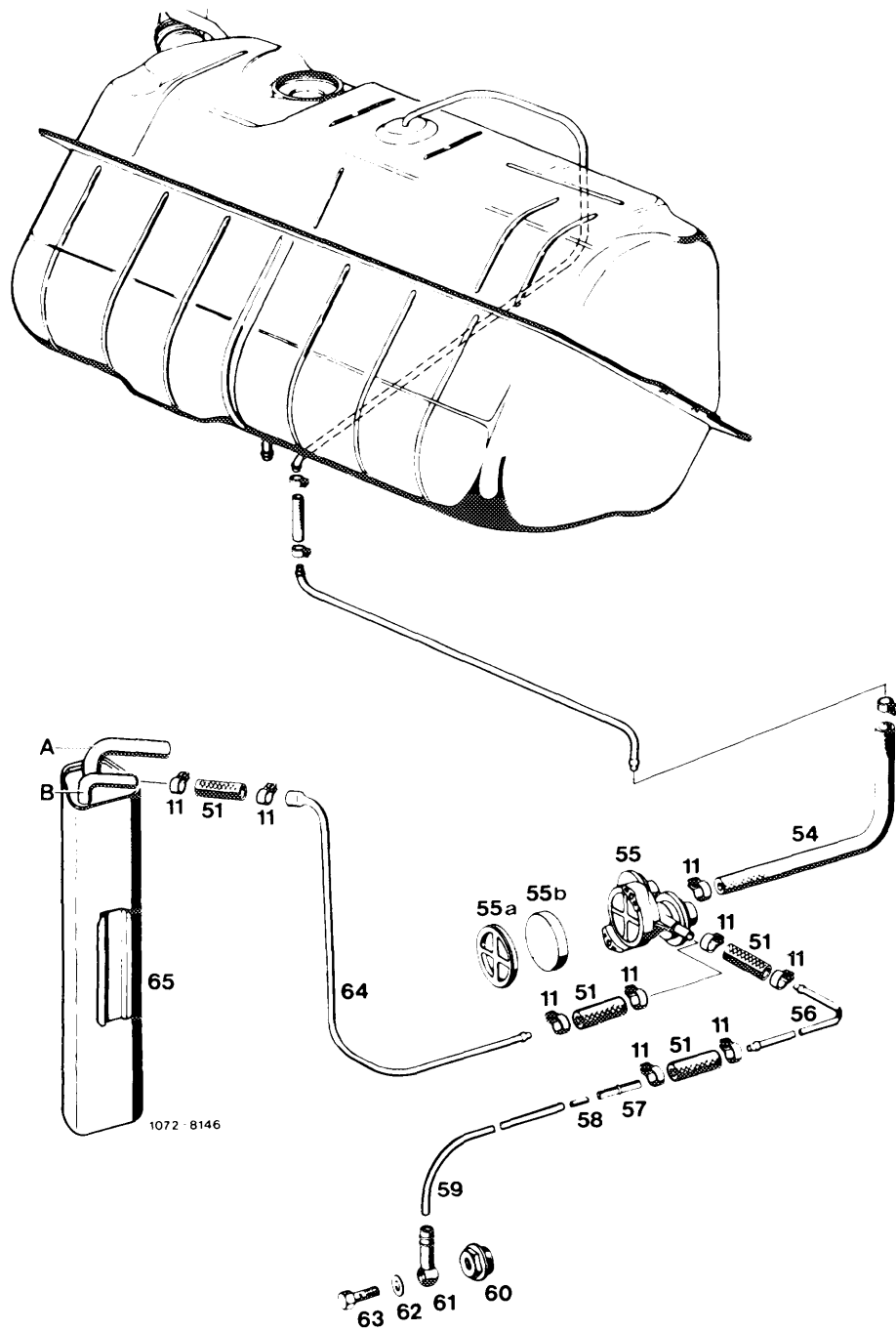
- (AUS) starting October 1974
- (J) starting January 1973
- (USA) 1973 and 1974 Federal
- 57 Connecting pipe
- 58 Throttle
- 59 Negative venting line
- 60 Closing plug
- 61 Ring fitting
- 62 Sealing ring
- 63 Hollow screw

- (USA) 1974 California
- (USA) 1975 Federal and California

- 64 Negative venting line
- 65 Charcoal canister

- Connections on charcoal canister
- A Draw-off line to purge valve (draw-off valve)
 - B Fuel tank venting system

Fuel evaporation control system model 107.02, 116 (AUS) (J) (USA)



- 11 Hose clip
- 51 Fuel hose
- 54 Fuel hose
- 55 Valve system
- 55a Cover
- 55b Filter
- 56 Negative venting line

- (AUS) starting October 1974
- (J) starting January 1973
- (USA) 1973 and 1974 Federal
- 57 Connecting pipe
- 58 Throttle
- 59 Negative venting line
- 60 Closing plug
- 61 Ring fitting
- 62 Sealing ring
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- (USA) 1974 California
- (USA) 1975 Federal and California

- 64 Negative venting line
- 65 Charcoal canister

- Connections on charcoal canister
- A Draw-off line to purge valve (draw-off valve)
- B Fuel tank venting system