14–100 Test program

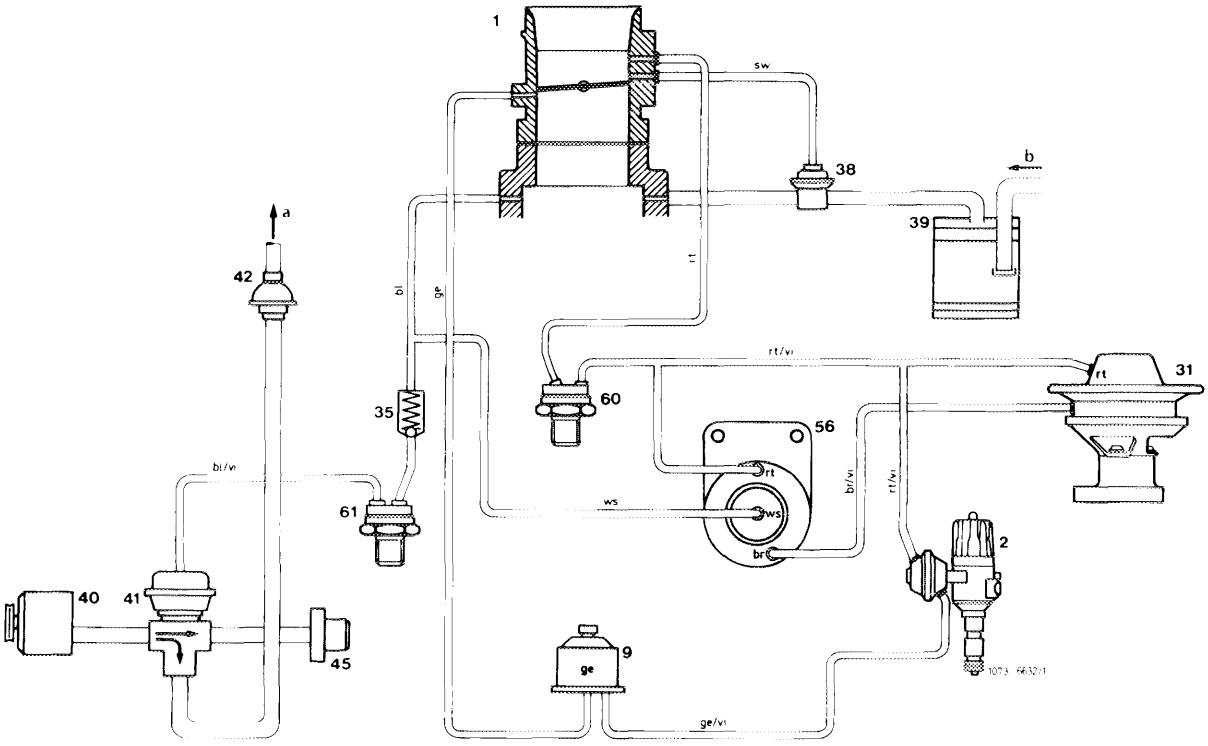
Federal and California version model year 1976

For complaints such as: Poor warming-up characteristics of engine, poor idle speed, engine not accelerating or splashing during acceleration, check emission control system for function.

Test conditions: Engine at operating temperature, run engine at idle speed.

Test the following: Ignition switchover, EGR, air injection and fuel evaporation control system.

Function diagram

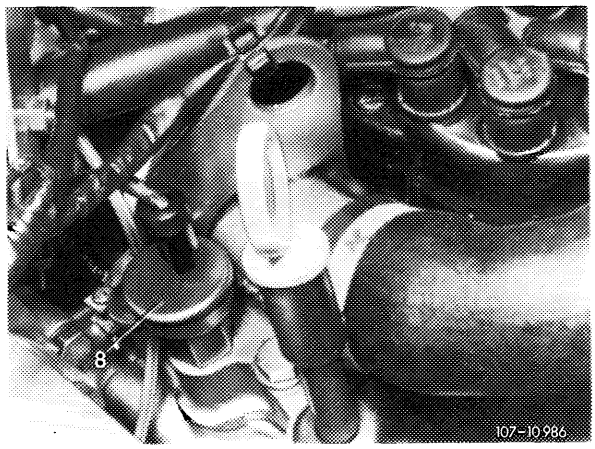


1	Throttle valve housing	41	Diverter valve	bl	= blue
2	Ignition distributor	42	Check valve air injection	br	= brown
9	Switchover valve ignition retard	45	Air filter for silencing	ge	= yellow
31	EGR valve	56	Vacuum switch	rt	= red
35	Check valve	60	Thermovalve 40 °C (black)	sw	= black
38	Purge valve	61	Thermovalve 17 °C (blue)	vi	= purple
39	Charcoal canister	a	Air injection line to cylinder head	ws	= white
40	Air pump	b	Connection tank vent		

Testing ignition switchover

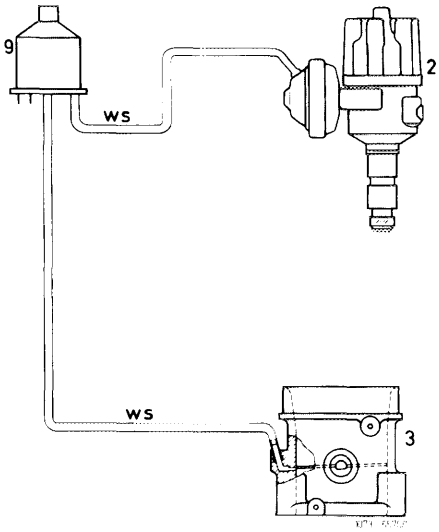
Pull plug from temperature switch 100 °C (8) and connect to ground.

Engine speed increasing.	Engine speed not increasing.



Testing vacuum lines

The vacuum line from throttle valve housing (3) leads to center connection of switchover valve (9), that of vacuum control unit of ignition distributor (2) to outer connection of switchover valve (9).



Testing vacuum

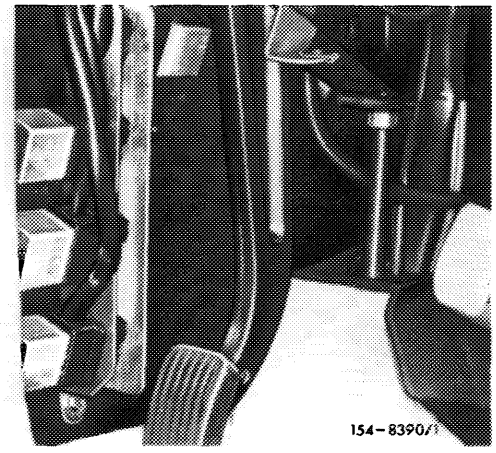
Pull vacuum line from center connection of switchover valve (9) and keep closed with finger. If vacuum is evident, plug vacuum line in again. If no vacuum is evident, blow out vacuum draw-off connection on throttle valve housing with compressed air.

Testing relay (code number 5) for switchover valve

Connect test lamp to connecting plug of switchover valve (9) and plug of temperature switch (8) to ground. Relay is in order if test lamp lights up.

Replace switchover valve (9).

If test lamp is not lighting up, replace relay.

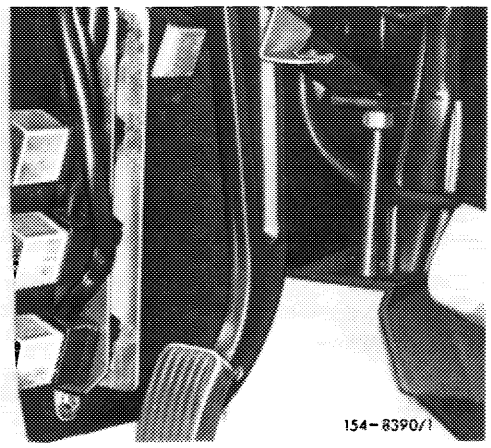


Testing ignition switchover

Switch on air conditioning system.

Engine speed increasing.	Engine speed not increasing.

Replace relay (code number 5) if clutch of refrigerant compressor is attracted.

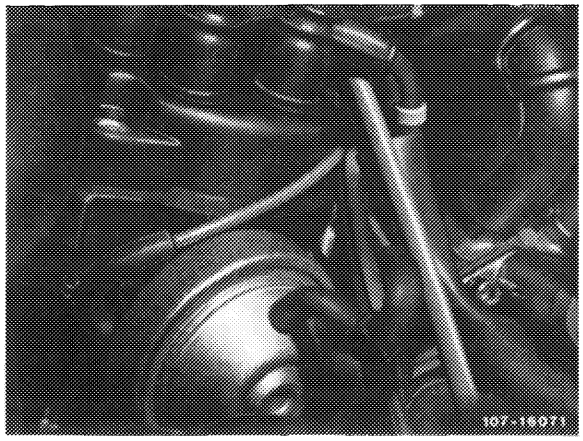


Testing ignition switchover

Pull both vacuum lines from ignition distributor (cancellation of ignition retard).

Engine speed slightly increasing.	Engine speed not increasing.

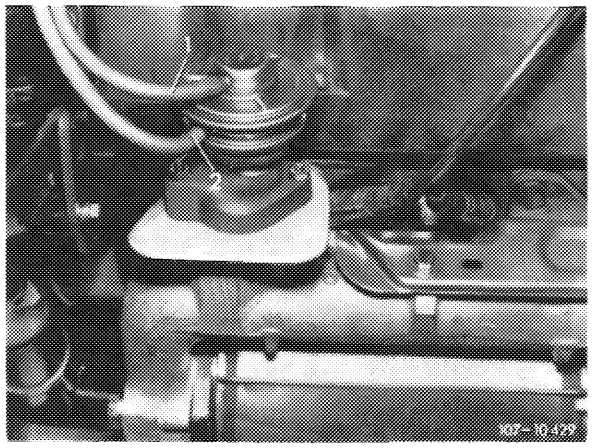
Replace double vacuum unit on ignition distributor.



Testing EGR

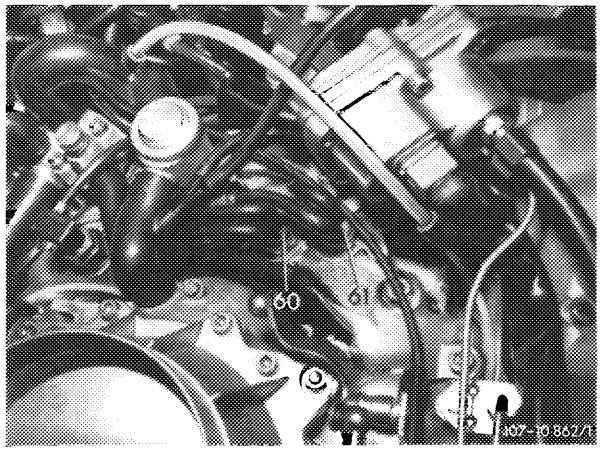
Pull red/purple vacuum line from EGR valve. Connect vacuum gauge to red/purple line and to red connection of EGR valve. Increase engine speed to approx. 2500/min.

No vacuum at idle, increasing vacuum with increasing speed.	Vacuum not increasing with increasing speed.



Testing vacuum lines

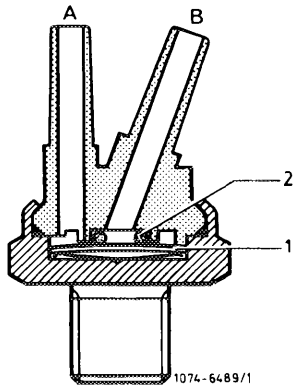
The red vacuum line of red connection on throttle valve housing should be connected to diagonal connection of thermovalve (60), the red/purple line to straight connection of thermovalve (60), to red connection of vacuum switch and to red connection of EGR valve.



Testing thermovalve 40 °C (60)

The thermovalve should open when heated to above 40 °C ambient temperature and should close again when cooling down to approx. 30 °C.

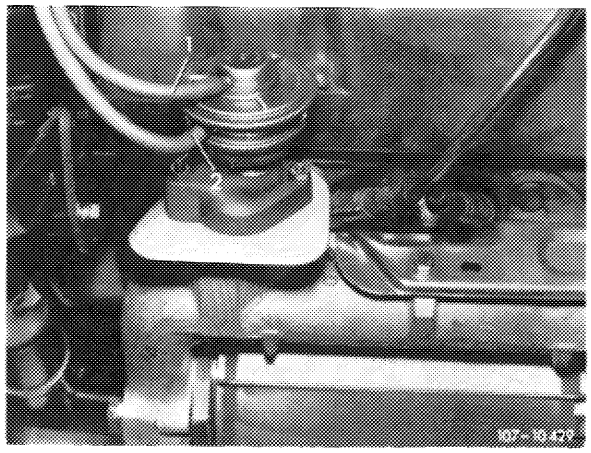
If no fault shows up, check vacuum tapping bore on throttle valve housing.



Testing EGR

Pull brown/purple vacuum line from EGR valve. Plug vacuum gauge to brown/purple line and to EGR valve bottom connection. Increase engine speed to approx. 2500/min.

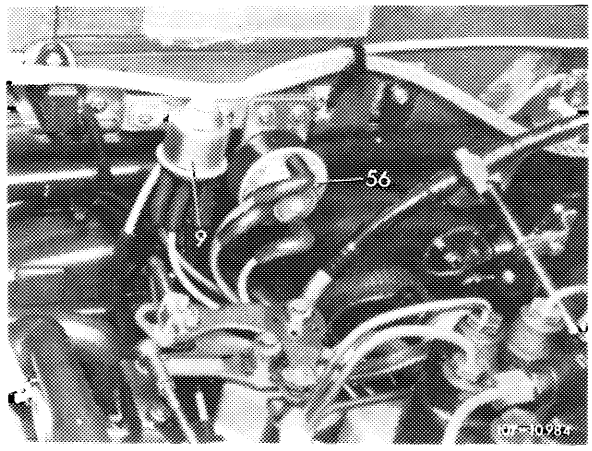
No vacuum at idle, increasing vacuum with increasing speed.	Vacuum not increasing with increasing apeed.



Testing vacuum lines

The red/purple vacuum line should be plugged to red connection of vacuum switch, the white vacuum line to center connection and the brown/purple vacuum line to brown connection of vacuum switch.

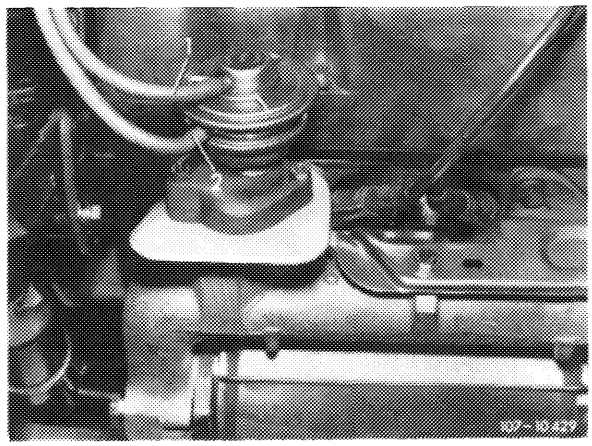
If no vacuum is measured in spite of correct connection of vacuum line, replace vacuum switch (56).



Testing EGR

Pull yellow/purple vacuum line from ignition distributor. Pull both vacuum lines from EGR valve. Connect yellow/purple vacuum line with upper or lower connection of EGR valve by means of test line.

Engine runs irregularly in both stages or comes to a stop.	Operation of engine not changing.

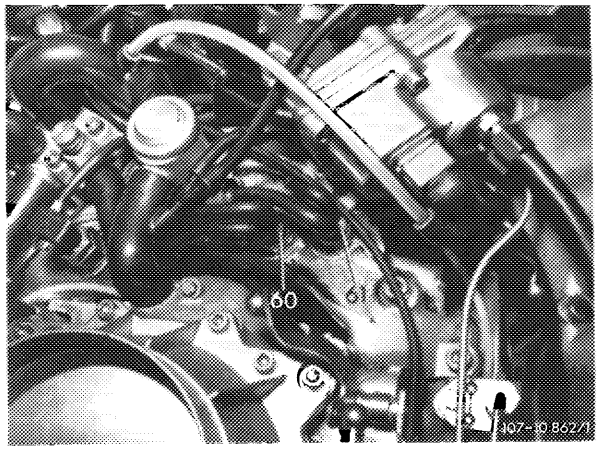


Replace EGR valve.

Testing EGR

Connect CO measuring instrument and read exhaust gas value. Pull blue/purple vacuum line from blue thermovalve (61). Measure exhaust gas value (air injection is switched off).

CO value noticeably changing.	CO value not changing.



Testing vacuum lines

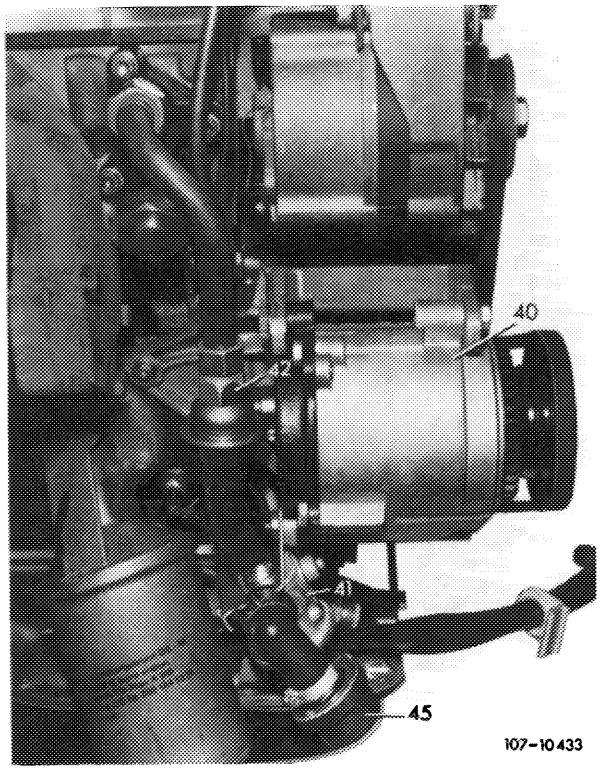
The blue vacuum line should be connected to diagonal connection of blue thermovalve (61), the blue/purple line to straight connection.

Testing diverter valve (41)

Unscrew damper filter (45) on diverter valve (41). Pull blue/purple vacuum line from blue thermovalve (61).

Air should flow out of diverter valve.

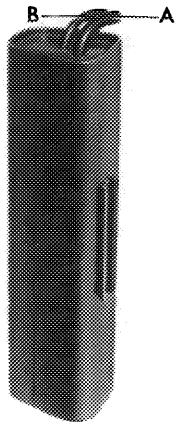
If no air flows out, replace diverter valve and repeat test. Test air pump or V-belt tension, if required.



Testing fuel evaporation control system

Pull draw-off hose on connection "B" of charcoal canister and keep hose opening closed with finger. Slowly increase engine speed to above approx. 2000/min.

Low vacuum at idle, increasing vacuum with increasing speed.	No vacuum at idle, no vacuum increase at increasing speed.



Testing draw-off line to intake pipe

For this purpose, loosen hose to charcoal canister on purge valve (38) and blow out valve in direction of intake pipe with compressed air. Replace purge valve (38), if required.

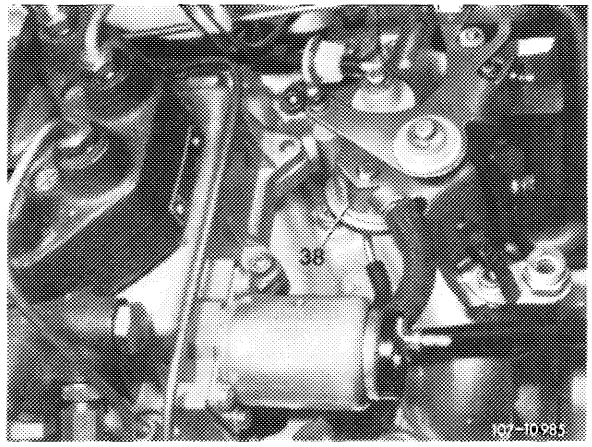
If vacuum is not increasing at higher speed:

Test vacuum at purge valve

Pull white vacuum line from purge valve (38). Connect vacuum gauge or keep hose opening closed with finger. Slowly increase engine speed. No vacuum should be available at idle. Increasing speed should result in increasing vacuum.

If vacuum is available, replace purge valve (38).

If no vacuum is available, clean vacuum tapping bore in throttle valve housing.



End of test.