

14-100 Test program

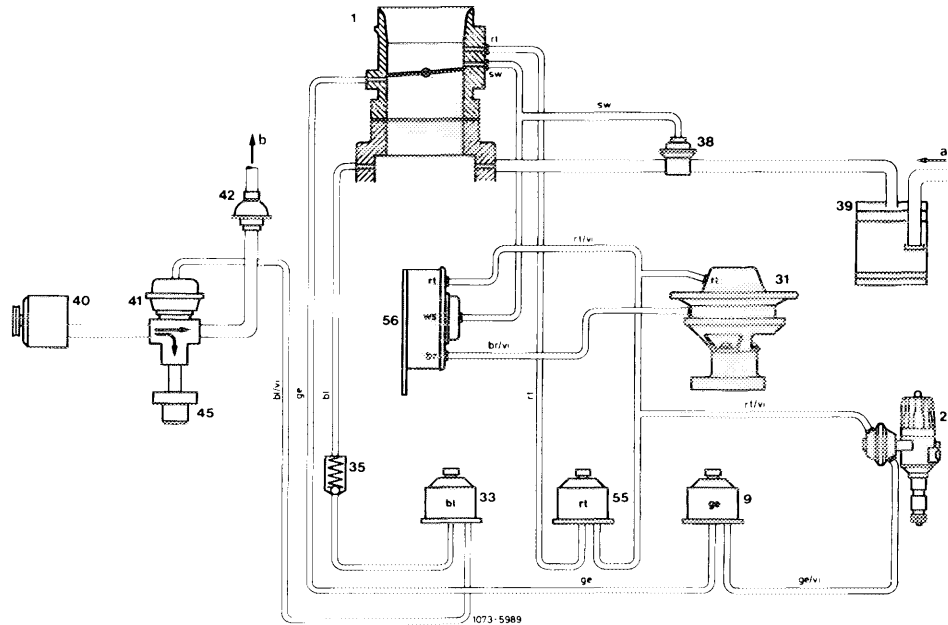
Federal and California version model year 1975

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: All fuses in order, 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
- 2 Ignition distributor
- 9 Switchover valve ignition retard
- 31 EGR valve
- 33 Switchover valve air injection
- 35 Check valve
- 38 Purge valve
- 39 Charcoal canister
- 40 Air pump

- 41 Diverter valve
- 42 Check valve air injection
- 45 Air filter for silencing
- 55 Switchover valve EGR/ignition advance
- 56 Vacuum switch

- bl = blue
- br = brown
- ge = yellow
- rt = red
- sw = black
- vi = purple
- ws = white

- a Connection tank vent
- b Air injection line to cylinder head

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

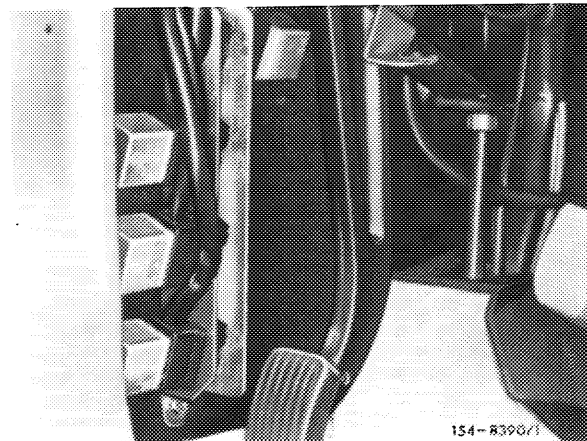
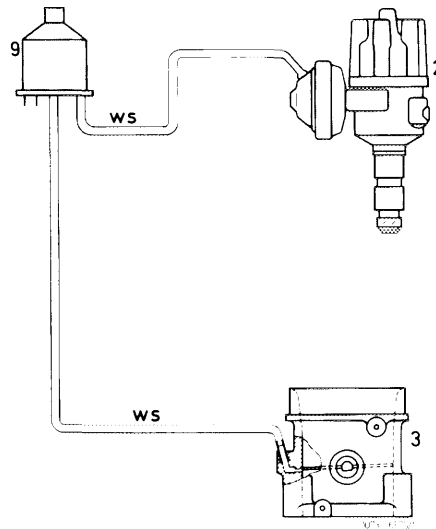
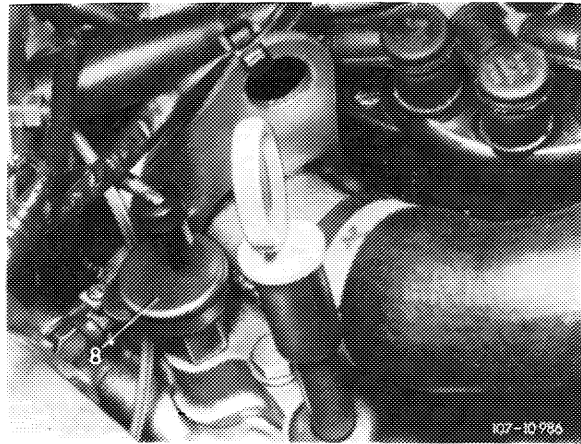
Pull vacuum line from center connection of switchover valve (9) and keep closed with finger. If vacuum is evident, plug vacuum line in again. If no vacuum is evident, blow out vacuum draw-off connection on throttle valve housing with compressed air.

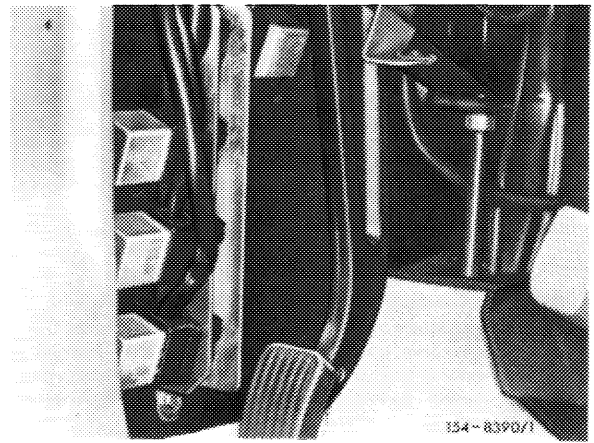
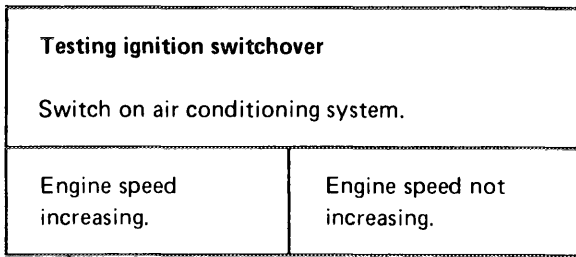
Testing relay (code number 5) for switchover valve

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.

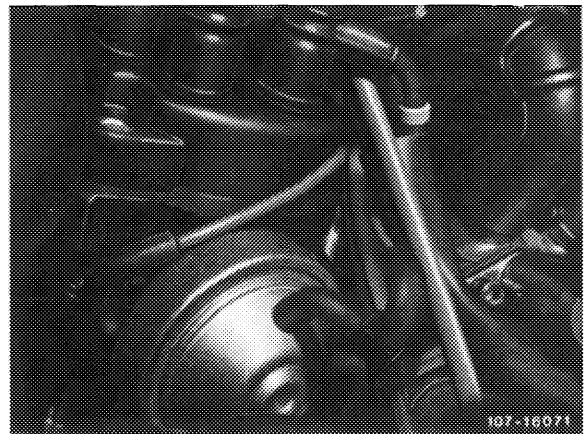
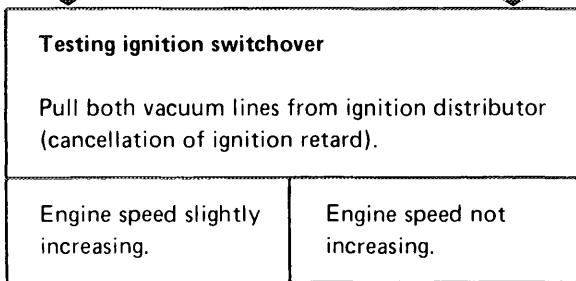
Replace switchover valve (9).

If test lamp is not lighting up, replace relay.





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



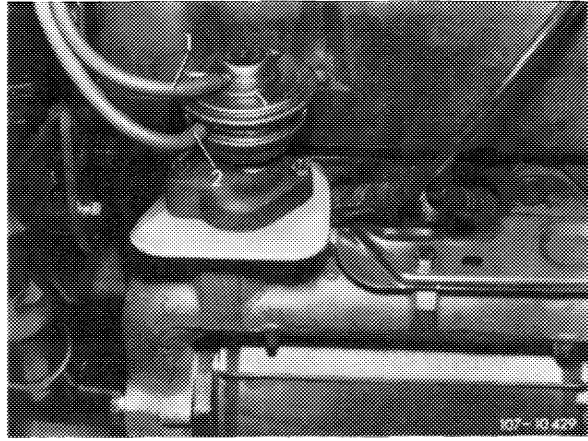
Replace double vacuum unit on ignition distributor.

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.

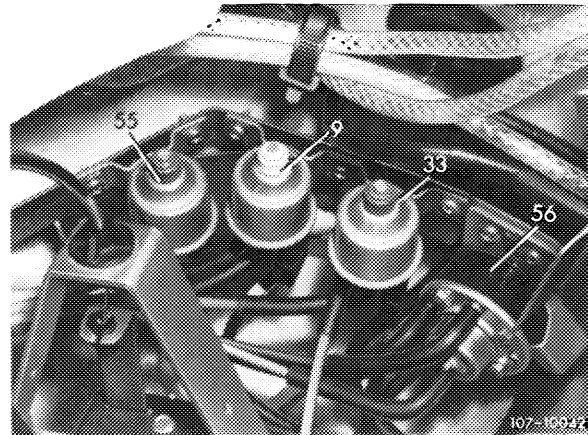
No vacuum at idle, increasing vacuum with increasing speed.

Vacuum not increasing with increasing speed.



Testing vacuum lines

The red vacuum line of red connection on throttle valve housing should be connected to center connection of switchover valve (55), the red/purple line to outer connection of switchover valve (55), to red connection of vacuum switch and to red connection of EGR valve.

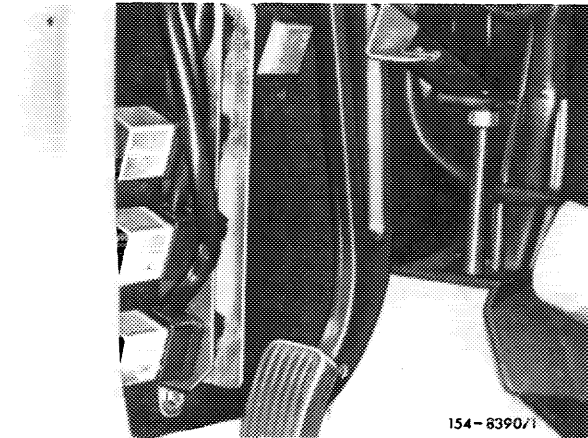


Testing red switchover valve (55)

Stop engine. Switch on ignition. Pull plug from temperature switch 40 °C. Switchover valve should switch audibly or noticeably on valve.

If valve is not switching, repeat test with a new valve.

If valve is not switching, replace relay (58) code number 19.

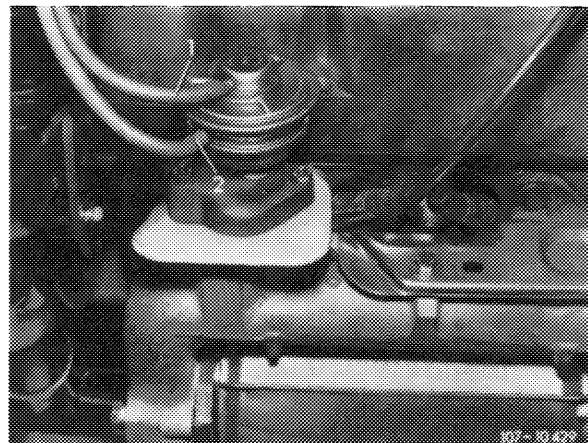


Testing EGR

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.

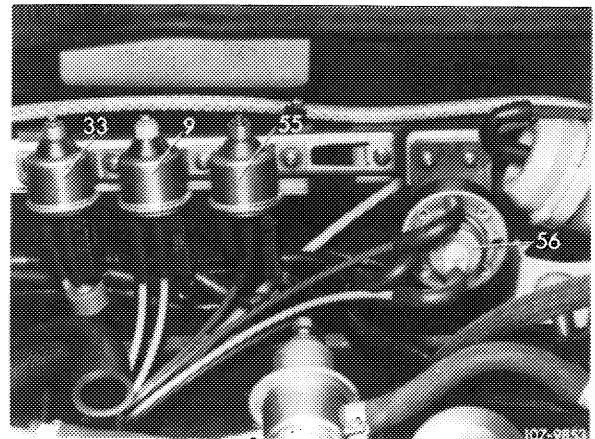
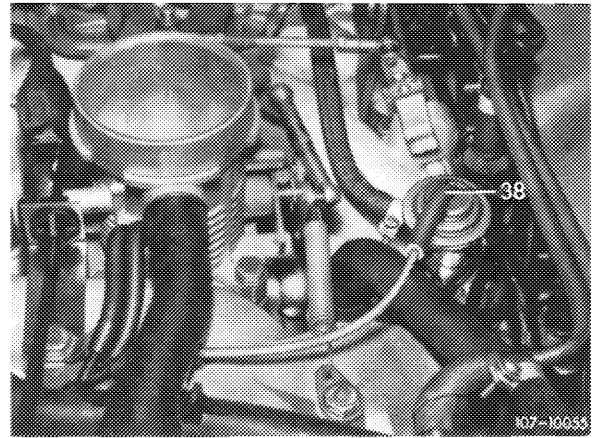
Vacuum not increasing with increasing speed.



Testing vacuum lines

The black vacuum line from black connection of throttle valve housing should be connected to purge via distributor, and that of distributor with a white vacuum line to white connection of vacuum switch. The brown/purple vacuum line should be connected to brown connection of vacuum switch and to bottom connection of EGR valve.

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



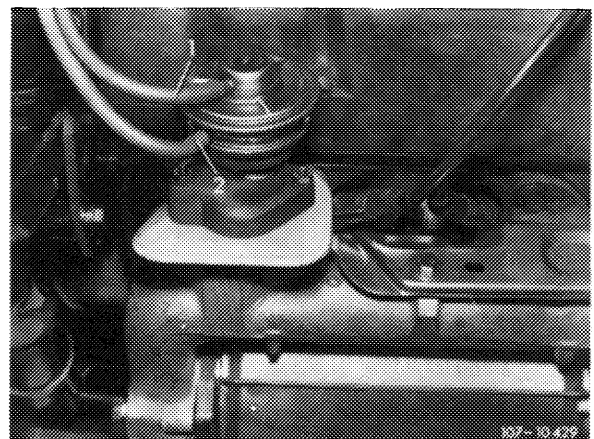
Testing EGR

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.

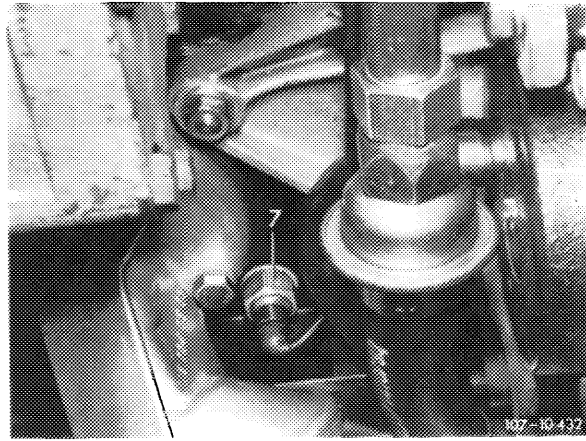


Testing EGR

Connect CO measuring instrument and read emission value. Loosen plug connection of temperature switch 17 °C (7) and connect to ground by means of test cable. Measure emission value (air injection switched off).

CO value noticeably changing.

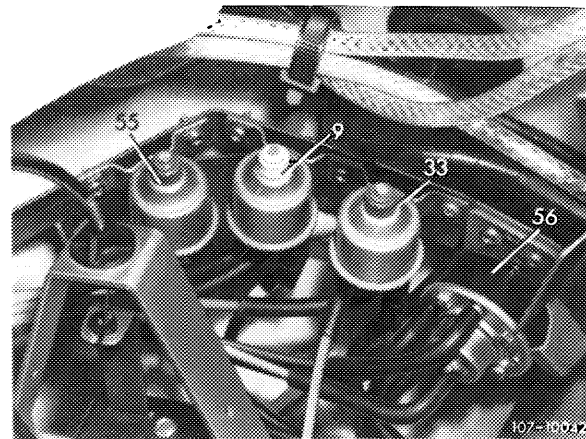
CO value not changing.



Place hand on blue switchover valve (33). Loosen plug connection of temperature switch 17 °C and connect to ground. Switchover valve should now switch. If valve is not switching, replace switchover valve (33).

Unscrew damper filter (45) on diverter valve (41). Loosen plug connection of temperature switch 17 °C and connect to ground by means of test cable. Air should come out at diverter valve.

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

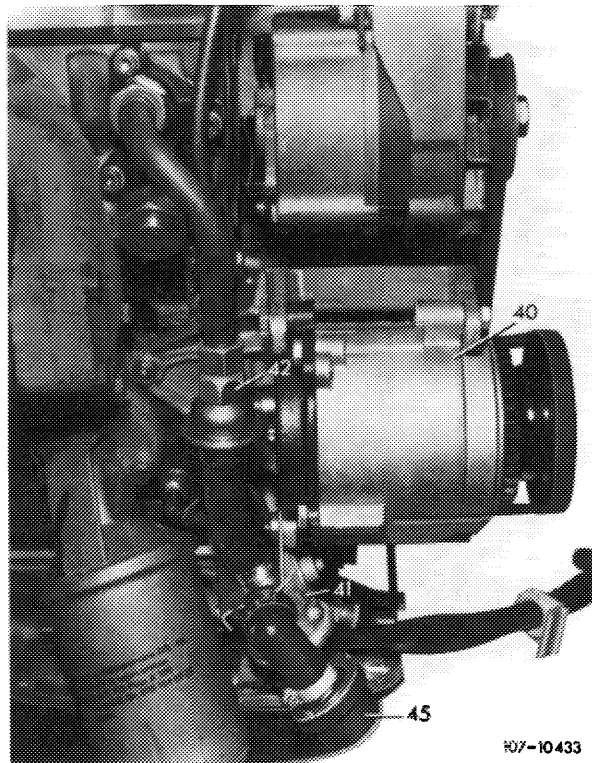


Testing fuel evaporation control system

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.

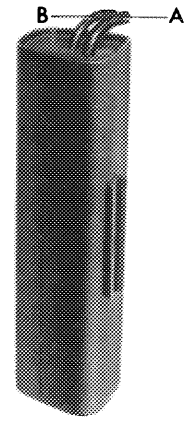
If vacuum is not increasing at higher speed:

Test vacuum at purge valve

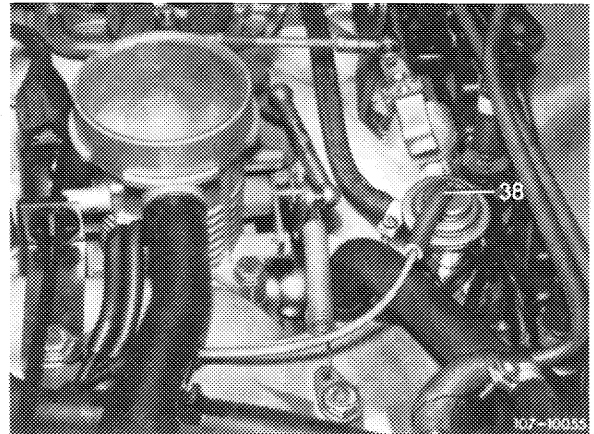
Pull white vacuum line from purge valve (38). Connect vacuum gauge or keep hose opening closed with finger. Slowly increase engine speed. No vacuum should be available at idle. Increasing speed should result in increasing vacuum.

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

If no vacuum is available, blow out vacuum tapping bore in throttle valve housing with compressed air. Clean throttle valve housing, if required.



107-9128



End of test.