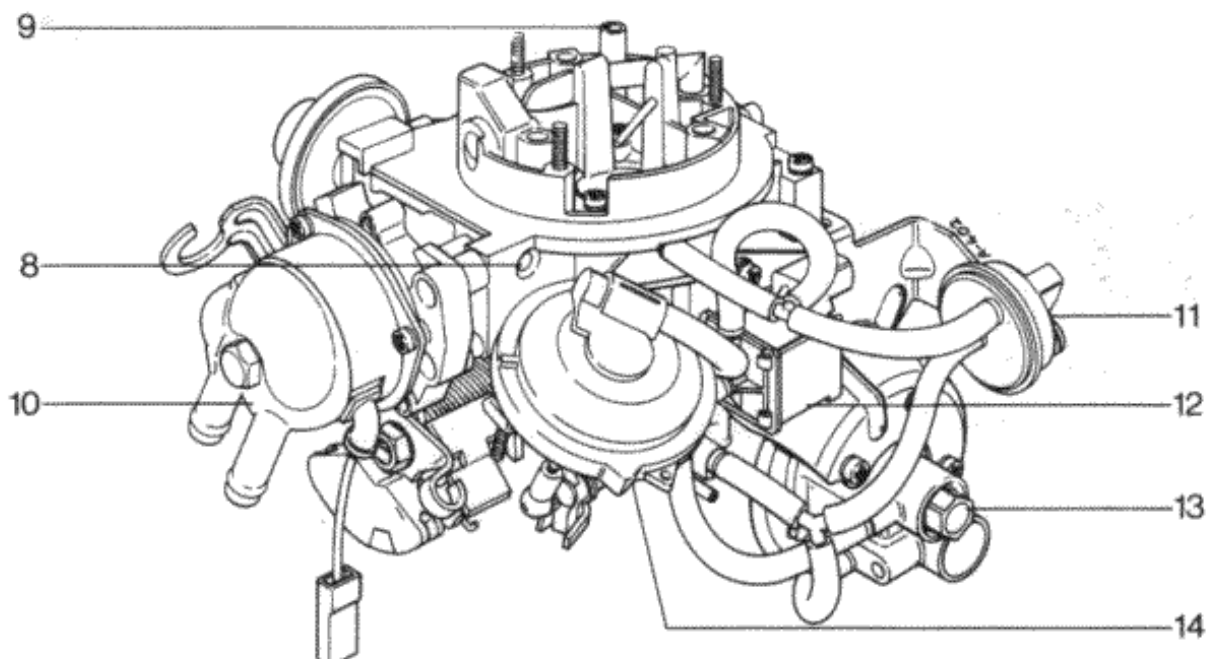


- 1 Part load enrichment
- 2 Throttle plate actuator
- 3 Abutment screw
- 4 Accelerator pump
- 5 Wax element
- 6 Pull-down bellows
- 7 Adjusting screw for choke plate gap (small)

- 8 Adjusting screw for choke plate gap (large)
- 9 Idle air control screw (exhaust emission adjustment)
- 10 Starter cover
- 11 thermo time switch
- 12 Electric switch valve
- 13 Idle speed control valve
- 14 Depression bellows stage II



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Maintenance  
Repair  
Note

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## MAINTENANCE

If necessary, check idle setting and, if necessary, correct.

If a setting as specified is not possible or in case of a complaint check carburetter according to the trouble shooting table. If necessary, remove and repair.

Note: After the engine has been washed, spray-protect the carburetter against corrosion e.g. by WD 40 or Uni-spray Termal.

## REPAIR

Remove carburetter, clean externally and disassemble. Clean castings and steel parts in special cleaning bath and wash with test fuel DIN 51 632. Before the cleaning operation remove filter in the fuel inlet, see chapter A.6. Blow out drillings and channels by compressed air. Use a repair kit for the assembly which may be purchased from the carburetter service outlets. Make sure that all moving parts move freely.

Tightening torque for carburetter mounting: 7 Nm.

### NOTE:

Screws protected by tamper-proof caps or protective lacquer may not be adjusted. Should these screws have been maladjusted, they have to be reset according to the corresponding chapters in this manual. After setting, replace the protection.

Setting data, if not shown in this manual, have to be taken from the corresponding model sheets (spare parts lists) or the table on page 15.

### A. SETTINGS, carburetter mounted

#### 1. IDLE CORRECTION (fig. 1,2)

##### Conditions:

- flawless functioning of the engine
- oil temperature minimum 60°C
- ignition system in good working order
- intake system without any leakages
- clean air cleaner mounted
- intake air heating in good working order
- throttle control as specified
- electric consumers switched off
- choke plate completely open
- throttle plate actuator and deceleration cut off device in good working order (s. chapter A.3 - A.4)
- engine speed counter and CO-tester connected

##### a) Adjust idle rpm

on control valve (1) fig. 1a respectively 1b.

- Check idle emission value, if necessary, adjust.

##### b) Adjust idle emission value (fig. 2)

- Remove air cleaner cover and set by means of the idle air control screw (arrow)

##### c) Adjusting idle rpm with air conditioning on on control valve (2) fig. 1B.

## 2. STARTING DEVICE

### 2.1 Intake manifold preheating (fig. 3)

Conditions: good voltage supply, minimum 11.5 V  
Engine cold (ambient temperature 20°C)

- Check resistance between connecting cable and mass

Nominal value: 0.25 - 0.50  $\Omega$

### 2.2 Thermoswitch for intake manifold heater (fig. 4)

- Check passage with ohmmeter at the terminals (+) and (R).

Nominal value: below approx. 55°C = 0  $\Omega$   
above approx. 65°C =  $\infty$   $\Omega$

### 2.3 Thermoswitch for starter cover (fig. 5)

- Check passage with ohmmeter at the terminals (+) and (C).

Nominal value: below approx. 33°C = 0  $\Omega$   
above approx. 42°C =  $\infty$   $\Omega$

### 2.4 Starter cover marking (fig. 6)

- The markings (arrow) must be in line.

### 2.5 Bypass heating (fig. 7)

Condition: good mass cable between engine and chassis respectively to the carburettor.

- Connect test lamp on battery (+) and plug (2); test lamp must light up.
- If necessary, replace PTC-heating element (1).

### 2.6 Leakage test of pulldown device (fig. 8)

- Withdraw hose from the non-return-valve (2) and close the white side of the valve.
- Attach manual vacuum pump as shown.
- Create pressure differential (approx. 300 mbar) in pulldown bellows (1) and volume reservoir (3).
- In case of a pressure differential drop, remove leakages.

Note: The non-return-valve may only have passage in the direction of arrow.

### 2.7 Choke plate

Make sure that the choke plate completely closes in the starting position of the throttle plate. If necessary, check clearance "A" (fig. 9) and, if necessary, set.

#### a) Setting clearance "A" (fig. 9)

- Remove starter cover and push entrainment lever (1) in direction of arrow.
- Check clearance "A", if necessary, correct by bending lever (2).

Clearance "A": 0.2 - 1.0 mm

- b) Choke plate gap "a" (wide) (Fig. 10,11)
  - Create pressure differential in the pulldown device, see chapter A. 2.6
  - Push entrainment lever (1) in direction of arrow and check gap according to fig. 11.
  - Correct by means of the adjusting screw (2).

- c) Choke plate gap "a" (small)
  - Set on the removed carburetter, see chapter B.2.4

## 2.8 Wax element (fig. 12)

Attention: Do not pull out or forcefully push in the pin of the wax element (set in the manufacturing plant).

- Bring cooling water connecting stud to 20°C.
- Charge pin of wax element with approx. 30 N and check dimension (A).

Nominal value:  $A = 2.0 \pm 1 \text{ mm}$

- If necessary, replace cooling water connecting stud.

## 3. Throttle plate actuator leakage test (fig. 13, 14)

to fig. 13 and 14

A Deceleration position (plunger completely withdrawn)

B Idle position

C Position for air conditioning

D Starting position

1 Connection (brown)

2 Connection (yellow)

2a Control valve for idle position "B"  
(for setting the rpm)

3 Connection (pink)

3a Control valve for position for air conditioning "C"  
(for setting the rpm with operating air conditioning)

4 Abutment screw

- Close the connections (2 and 3) if provided.
- Connect vacuum tester or manual vacuum pump on connection (1) and create pressure differential (approx. 650 mbar)  
The plunger must be completely withdrawn (position "A") and at operating temperature of the cooling water there must be a clearance between the abutment screw (4) and the plunger.  
If this is not possible or in case of a pressure differential drop, replace actuator.
- Open connection (2).  
The plunger moves with a curk into position "B" and may not change the position. If necessary, replace actuator.
- Open connection (3)(only in case of air conditioning)  
The plunger moves further into position "C" and may not change the position. If necessary, replace actuator.

## 4. Deceleration cut off (fig. 15 - 17)

Condition: Throttle plate actuator in good condition.

- Operate engine.
- Withdraw plug from the electric switch over valve (1).  
If the engine stalls, the electric switch over valve is in good working order.  
If the engine continues to run and only stops  
the electric switch over valve (1), thermo-time-valve (2), the

current supply and the hoses have to be checked.

4.1

Electric switch over valve (fig. 16)

- Check the current supply with ignition switched on.
- Attach manual vacuum pump as shown and create pressure differential.

Ignition on = valve has passage

Ignition off = valve must be tight

- Replace, if necessary, electric switch over valve.

4.2

Thermo time valve (fig. 17)

- Check current supply.
- Attach manual vacuum pump as shown and create pressure differential.

Thermo time valve (2):

above + 15°C = valve tight

below + 4°C = valve has passage

- Connect ohmmeter as shown.

Nominal value: at 20 - 30 ° C =  $6 \pm 1.5 \Omega$

- If necessary, replace thermo time valve.

5.

Depression bellows stage II (fig. 18)

- Attach manual vacuum pump as shown and create pressure differential.
- In case of a pressure differential drop, depression hose or depression bellows defective.
- If necessary, replace.

6.

Filter in the fuel inlet (fig. 19)

Before the carburettor is cleaned, remove the filter (arrow).

The filter may be pulled out by screwing in a M3-screw by which it may be pulled out.

In principle the filter has to be replaced.

7.

Throttle control

7.1

For manual transmissions

- Adjust throttle cable so that the full load position of the throttle lever is just reached when the accelerator pedal is in the full load position (maximum clearance 1mm)

7.2

Automatic transmissions (fig. 20,21)

Conditions:

Cooling water at the wax element at operating temperature (pin of the wax element must be protruding).

- Completely pull back throttle plate actuator by means of manual vacuum pump. The throttle plate must be held in the deceleration position.
- Pull cable sheath (1) in direction of arrow till there is no clearance.
- Turn nut (2) without tension against the abutment (4) and tighten by means of counter-nut (3) with 10 Nm.

Check of setting

- Depress accelerator pedal till the full load pressure point is reached (no kick-down). The throttle lever (5) must contact the full load abutment of the carburettor body and the overtravel spring (6) may not be depressed.
- Depress accelerator pedal beyond the full load point till the abutment is reached (kickdown). The overtravel spring (6) must now be

depressed (a = approx. 8 mm).

Fig. 20 Deceleration position of the throttle lever

Fig. 21 Full load position of the throttle lever

A = Full load position of the throttle control cable

B = Kick-down position of the throttle control cable

a = Path of the throttle control cable from full load to kick-down position of the accelerator pedal

## 8. Intake air heating

According to the temperature of the temperature regulator (14) fig. 36 the warm air and cold air supply respectively in the air cleaner is open after the engine has started.

Cold air supply: above approx. 20°C

Warm air supply: below approx. 20°C

## B. SETTINGS, carburettor removed

Measuring and inspection devices referred to below may be purchased from the local general agents.

### 1. Basic setting of throttle plates

Attention: The throttle plate abutment screws (arrow) fig. 22 of stage I and II are provided as care off screws, so that no basic settings may be performed.

### 2. Starting device

#### 2.1 Warming up curve, control position (fig. 23,24)

The setting is only required if the paint blocking of the screw (3) is damaged or if the warming up curve (4) is visibly maladjusted.

- Completely withdraw throttle plate actuator by means of manual vacuum pump.
- Screw off cooling water connecting tube ( wax element) and attach the test tool (2) with a pin length 8.15 mm instead.  
Make sure the slide (1) has the correct position.
- Lightly untighten screw (3).
- Carefully push warming up curve (4) against the pin (5) by means of a screwdriver in order to counteract the tightening torque of screw (3).
- Tighten screw (3)
- Grease curve (arrow) fig. 24 with Molykote.

#### Check of the setting

- Slightly open throttle plate and slowly close again. The pin (5) must then automatically return to the initial position, see fig. 24.
- Screw in cooling water connecting tube.

#### 2.2 Throttle plate gap, warming up position (fig. 25 - 27)

The setting is only required if the setting screw (9) has visibly been maladjusted.

Condition: The warming up curve is correctly set, see chapter B.2.1.

- Completely withdraw throttle plate actuator by means of manual vacuum pump.
- Unscrew cooling water connecting tube (wax element) and screw on the test tool (2) with pin length 2,0 mm instead. Make sure the slide (1) is in the correct position.
- Check gap according to arrow fig. 27 and, if necessary, set as follows:
- Unscrew screw (6).
- Compress lever 7 and 8 and correct the gap according to fig. 27 by means of the adjusting screw (9).

Clockwise = smaller

Anti-clockwise = larger

- Compress levers 7 and 8 and tighten screw (6).
- Screw on cooling water connecting tube.

### 2.3 Leakage test of pulldown bellows (fig. 28,29)

Conditions:

Starter cover removed.

Vacuum tester (3) connected as shown in fig. 29, control valve (4) closed.

- Hold choke plate closed by depressing the lever (1) and create a pressure differential of 750 mbar (overpress pulldown).
- Release lever (1) and close connection (5) by cap (6).
- Create pressure differential of approx. 750 mbar.
- Cut off vacuum tester and perform leakage test. In case of a pressure differential drop, replace pulldown bellows.

### 2.4 Choke plate (fig. 28 - 30)

Conditions: see chapter B2.3, additional clearance "A" fig. 9 correct.

a) Gap "a" (wide)

- Close connection (5) by means of flap (6) and create pressure differential (approx. 750 mbar).
- Lightly push lever (1) into direction of arrow and check gap according to fig. 30. Correction by means of screw (2).

b) Gap "a" (small)

- Checking and setting only required if the protection (8) has been damaged or the pulldown bellows has been replaced.
- Remove cap (6) from connection (5) and switch on vacuum tester.
- Create pressure differential of  $200 \pm 50$  mbar by pushing the lever (1) into direction of arrow and check gap according to fig. 30. Correction by means of screw (7).
- Mount starter cover and align markings.

## 3. Accelerator pump

### 3.1 Spray direction (fig. 31)

- Remove carburettor cover.
- Pressfitt injector tube so that the fuel jet is directed to the recess (arrow).



### 3.2 Injection volume (fig. 32-34)

Condition:

The float chamber must have a normal fuel level during the measurement, i.e. fuel must replenish.

- Use carburetter testing device.
- Place a screw M8 (arrow) fig. 32 between lever and carburetter body.
- Close connections (1) and, if provided (2), fig. 33.
- Attach manual vacuum pump as shown in fig. 33 and create pressure differential (approx. 650 mbar); the throttle plate actuator must be completely retired.
- Uniformly and completely open and close throttle plate 10 times (approx. 1s/stroke). Wait for approx. 3 seconds between the strokes.
- Divide fuel quantity by 10 and compare with the nominal value.
- Correct injection volume by untightening the clamping screw (3) and turning the curve (4).
- In direction + increase of injection volume  
in direction - decrease of injection volume

Note: Make sure that the slide (1) fig. 25 is in the correct position.

- Remove screw (arrow) fig. 32.

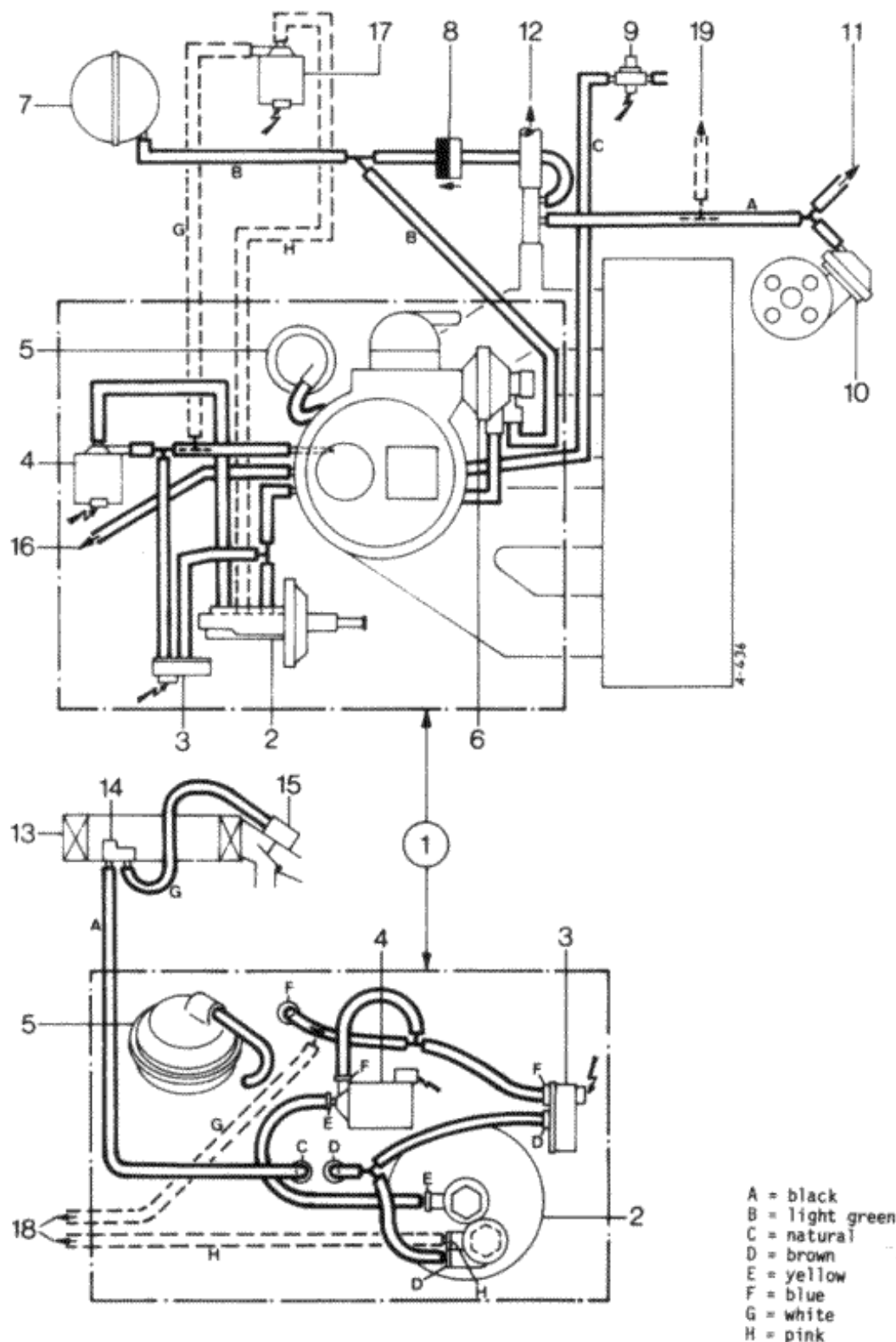
### 4. Release and positive closing of stage II (fig. 35)

Condition: Throttle plate stage I in idle position.

- Set the distances "Y" and "Z" by bending fork (1).

The measurement has to be effected at the narrowest location.

# C. CONNECTION SCHEDULE, DEPRESSION LINES



A = black  
 B = light green  
 C = natural  
 D = brown  
 E = yellow  
 F = blue  
 G = white  
 H = pink

Fig. 36

only when air-conditioning is installed

- 1 carburettor
- 2 throttle plate actuator
- 3 thermo-time valve
- 4 deceleration control valve
- 5 depression bellows stage II
- 6 pulldown bellows
- 7 volume reservoir
- 8 non-return valve
- 9 depression switch for gear-change indication (only manual transmission)

- 10 depression bellows, ignition distributor
- 11 to fuel consumption read out (ECON)
- 12 to brake servo
- 13 air cleaner
- 14 temperature regulator
- 15 depression bellows
- 16 to temperature regulator (14)
- 17 electric switch valve
- 18 to electric switch valve (17)
- 19 to air conditioning

## D. SETTING DATA

Note: These setting data are only valid till the model sheets are issued (spare parts lists).

Transmission		MT	AT
Carburetter no.		7.17852.00	7.17852.01
Idle speed (l/min.)		750 $\pm$ 50	750 $\pm$ 50
Idle emission value (vol.-% CO)		1,0 $\pm$ 0,5	1,0 $\pm$ 0,5
Choke plate gap (mm)	„a“	1,8 $\pm$ 0,15	1,8 $\pm$ 0,15
	„a'“	4,0 $\pm$ 0,2	3,9 $\pm$ 0,2
Throttle plate gap, warming up position		(mm) 0,45 bis 0,5	0,5 bis 0,55
Release and positive closing of stage II (mm)	„Y“	1,0 $\pm$ 0,3	1,0 $\pm$ 0,3
	„Z“	0,5 $\pm$ 0,3	0,5 $\pm$ 0,3
injection volume (cm <sup>3</sup> /stroke)		1,1 $\pm$ 0,2	1,1 $\pm$ 0,2

## TROUBLE SHOOTING TABLE -

AUDI/VW - 2 E 2

4/1 01-35.1 E

Complaints	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Cold starting (firing)	•	•																				
Stabilization of engine run (stalling after cold starting)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cold idle (engine speed too high/ too low)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Cold driveaway, cold progression (bad response, bucking)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Automatic starter does not completely cut off or too late	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Warming up (starting time of more than 5 s)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Idle (rough, too high, too low)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Idle speed or CO too high (may not be adjusted)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Progression during acceleration (bucking)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Progression at higher rpm (to stage II)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Detonations in the exhaust pipe during deceleration	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Power (too small, misfiring at full load)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Excessive fuel consumption	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Note:

The conditions for using this table are: good functioning of the engine (timing, valves etc.)  
 ignition system and its setting correct  
 intake system without leakages  
 exhaust system without any defects  
 correct control of the intake air preheating  
 clean air cleaner  
 fuel pressure to the carburettor correct

Cause

- 1 Choke plate does not completely close
- 2 Choke plate or linkage hardmoving or jamming
- 3 Choke plate gaps "a" and "a" incorrect
- 4 Pulldown device leaks or defective
- 5 Starter heating, intake manifold pre-heater and thermostat defective
- 6 Max element defective or cooling water passage disturbed
- 7 Throttle plate actuator or connecting hoses defective
- 8 Deceleration cut off incorrect
- 9 Bypass heating defective

Remedy

- 1 Set starting device / check bimetal spring  
Assure free movement
- 2 Set
- 3 Check, if necessary, replace parts  
Check heating coil, thermostat and contacts; check cooling water passage
- 4 Check, if necessary, replace
- 5 Check, if necessary, replace  
Check, if necessary, replace
- 6 Check, replace defective parts  
Check PTC heating element, if necessary, replace
- 7 Hold accelerator pedal in full load position an start / try different kind of fuel
- 8 Correct
- 9 Clean, if necessary, replace  
Check, if necessary, set  
Replace  
Clean valve, if necessary, replace needle
- 10 Replace float  
Replace gaskets  
Correct throttle control
- 11 Replace  
Replace jets  
Start according to instructions  
Consumption measurement:  
Explanation to customer
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22

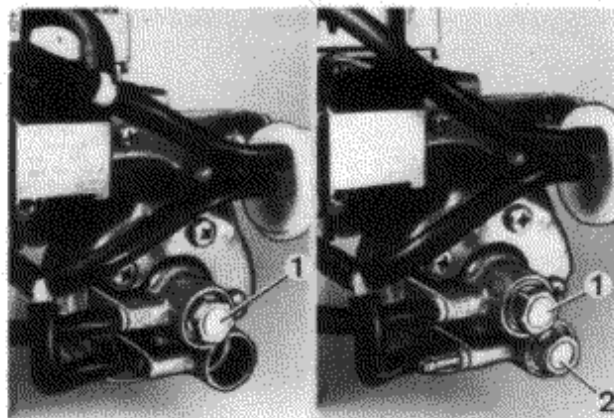


fig. 1a

fig. 1b

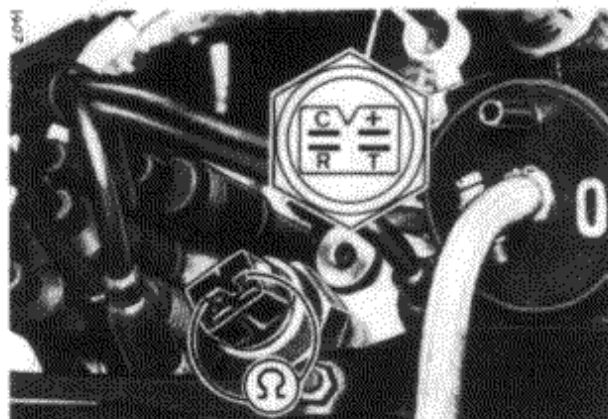


fig. 5

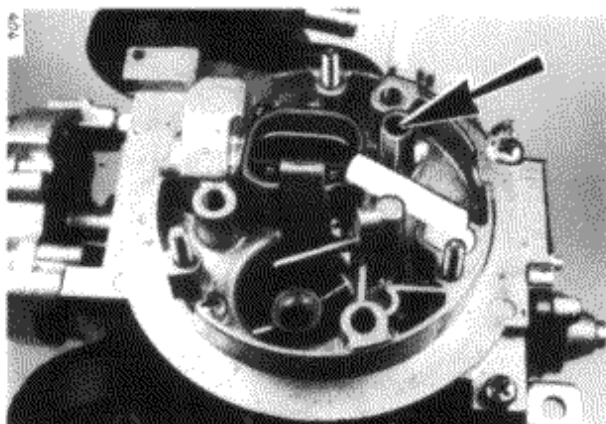


fig. 2

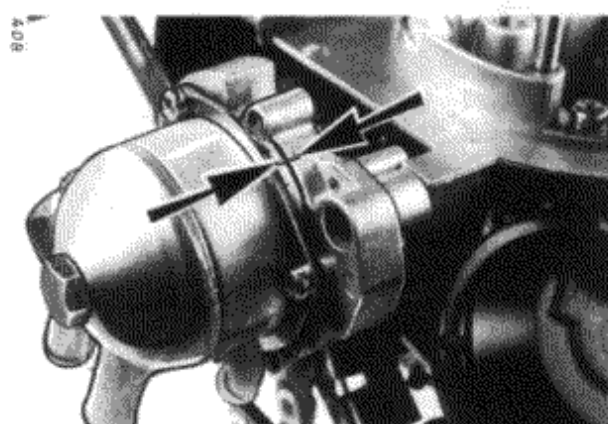


fig. 6

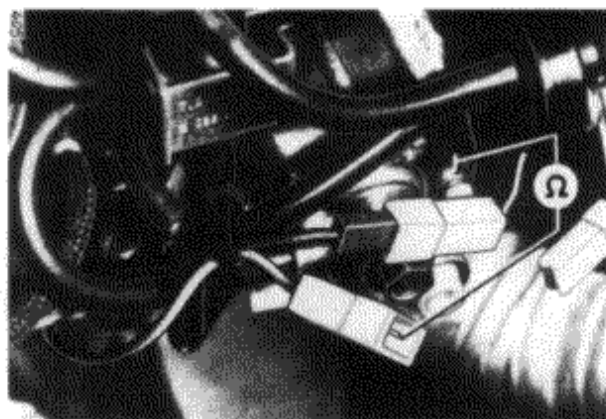


fig. 3

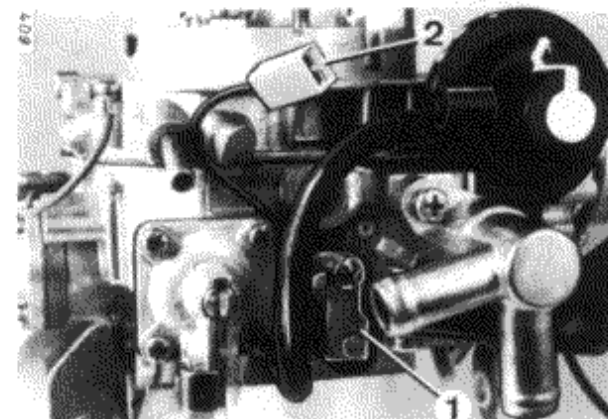


fig. 7

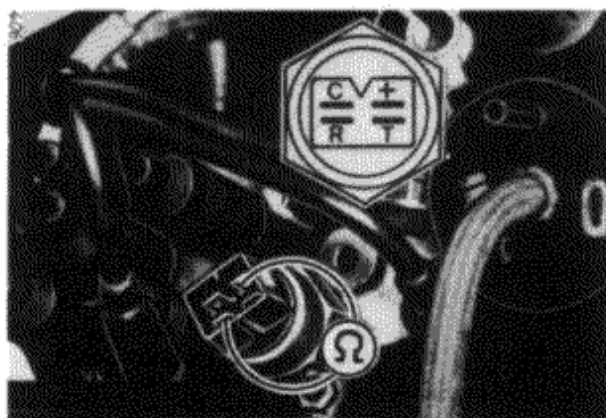


fig. 4

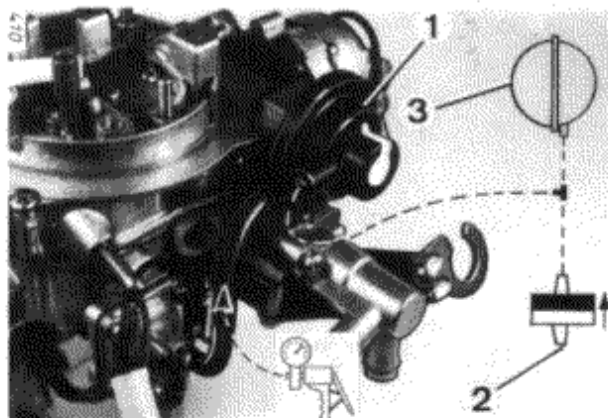


fig. 8

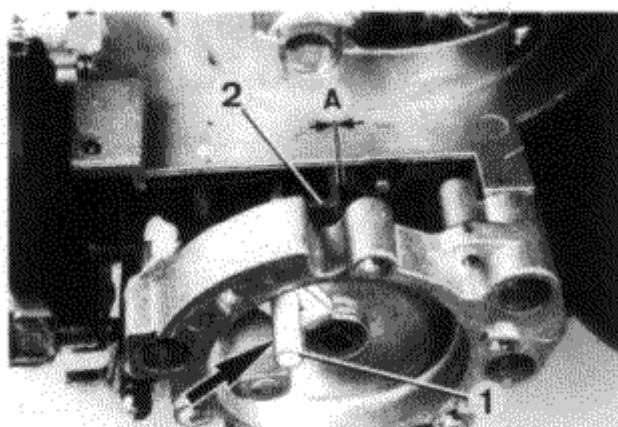


fig. 9

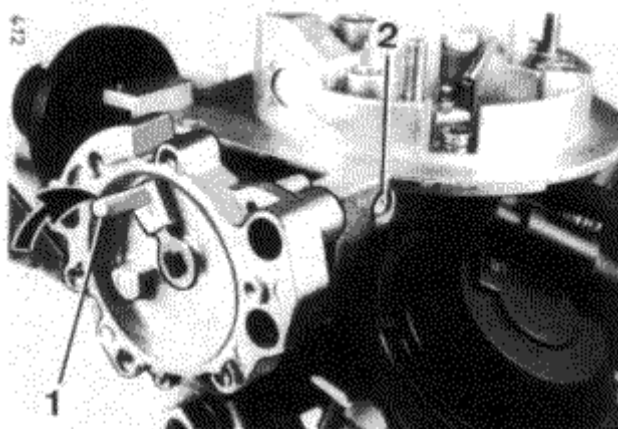


fig. 10

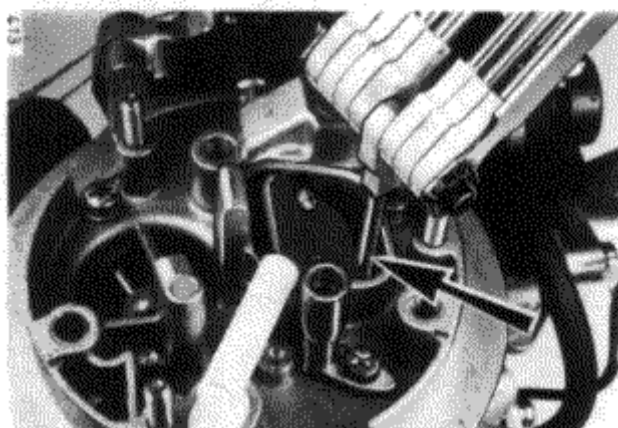


fig. 11

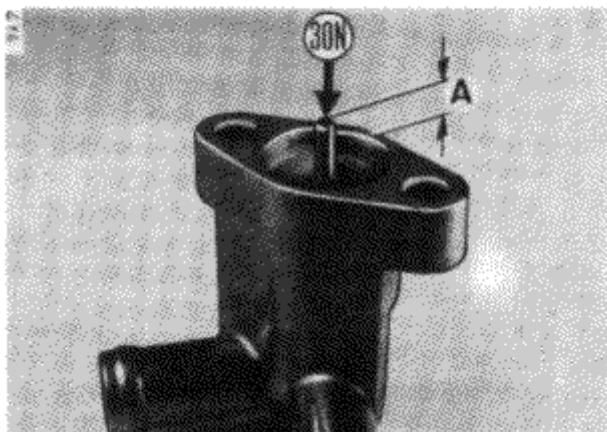


fig. 12

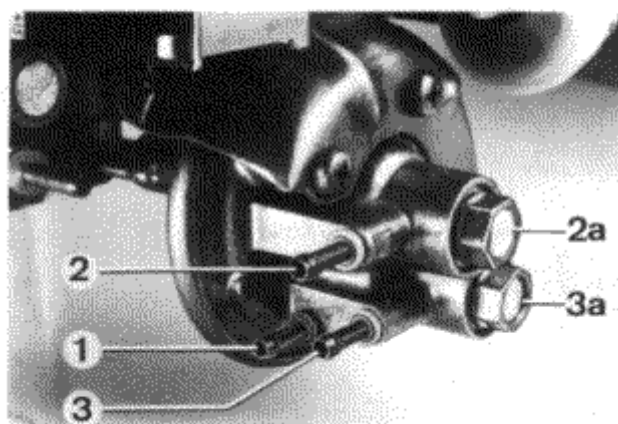


fig. 13

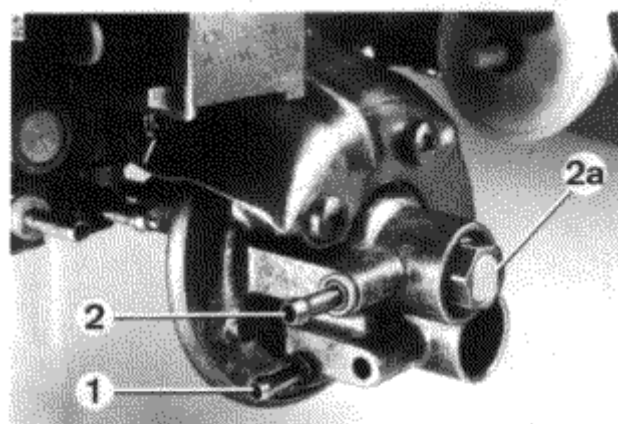
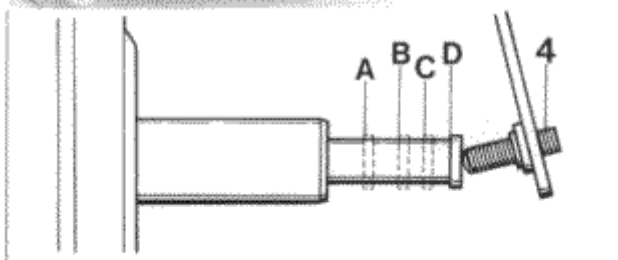
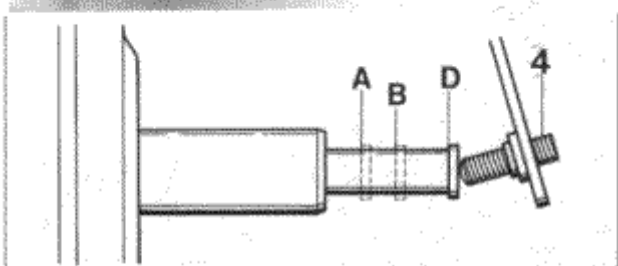


fig. 14





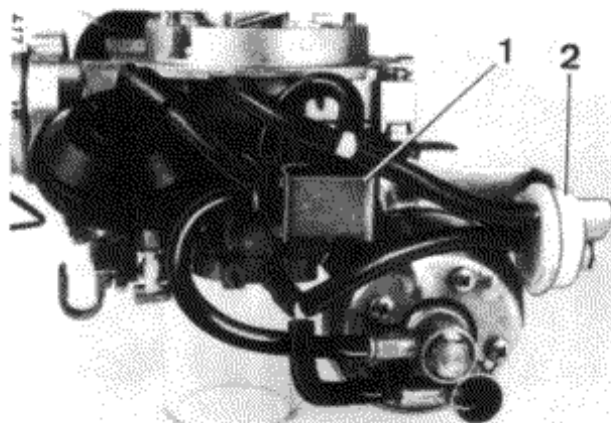


fig. 15

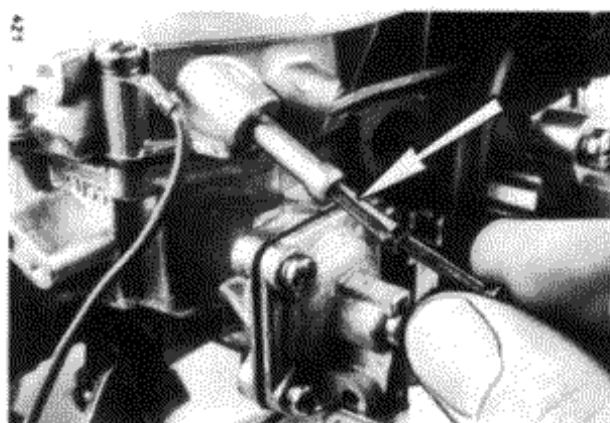


fig. 19

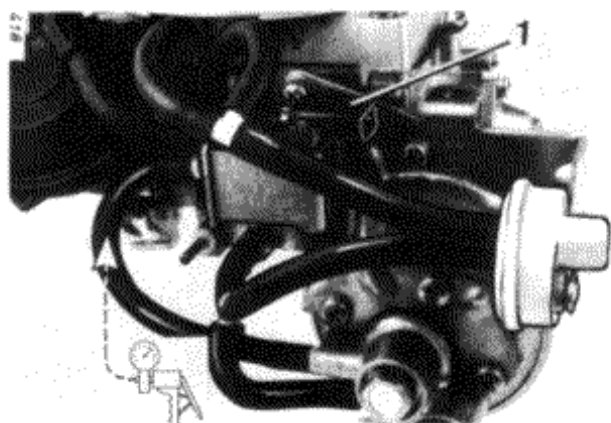


fig. 16

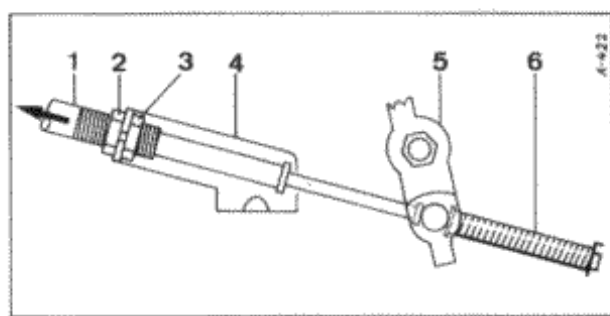


fig. 20

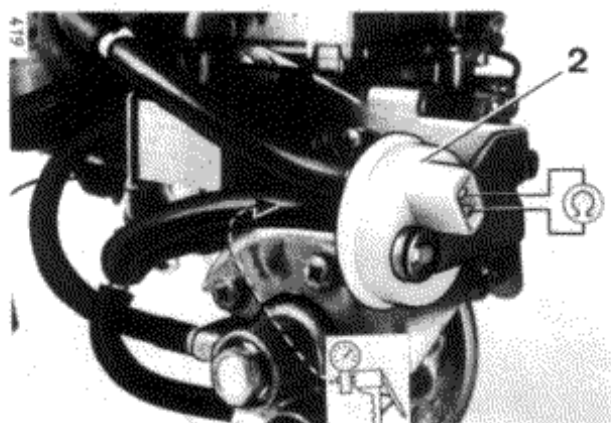


fig. 17

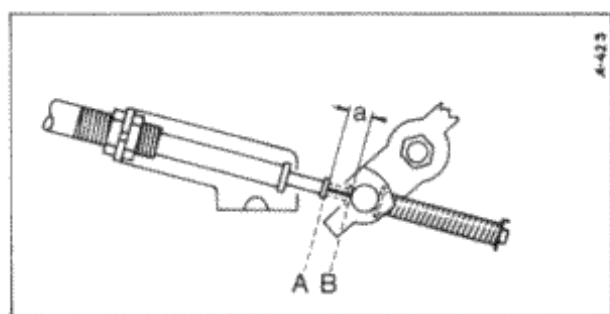


fig. 21

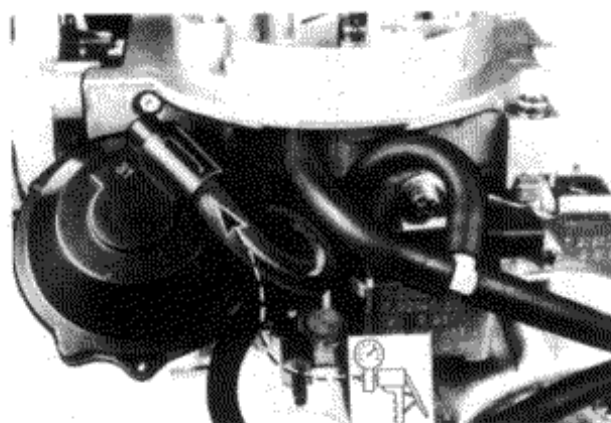


fig. 18

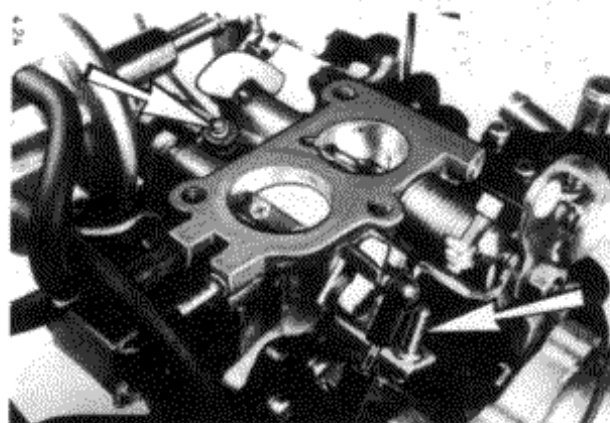


fig. 22

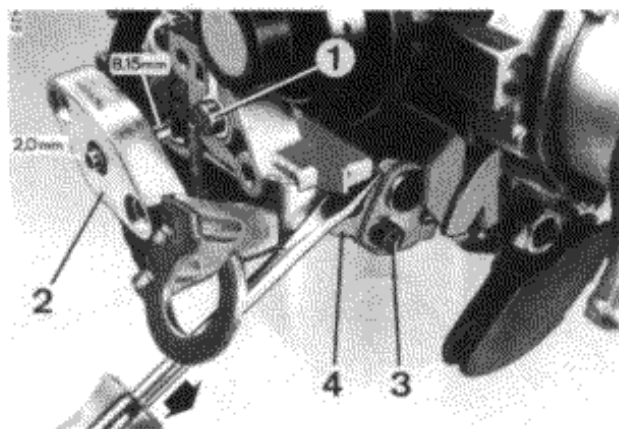


fig. 23

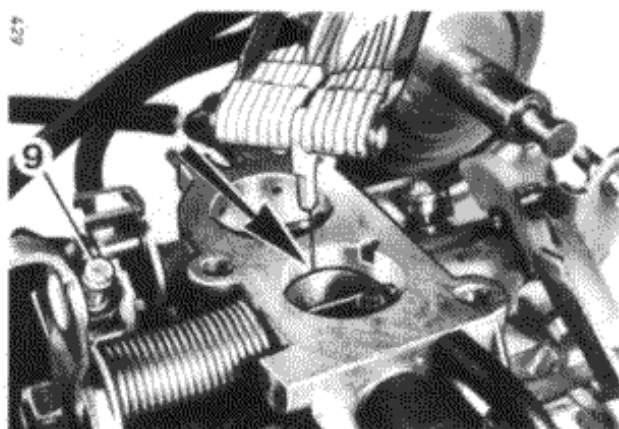


fig. 27

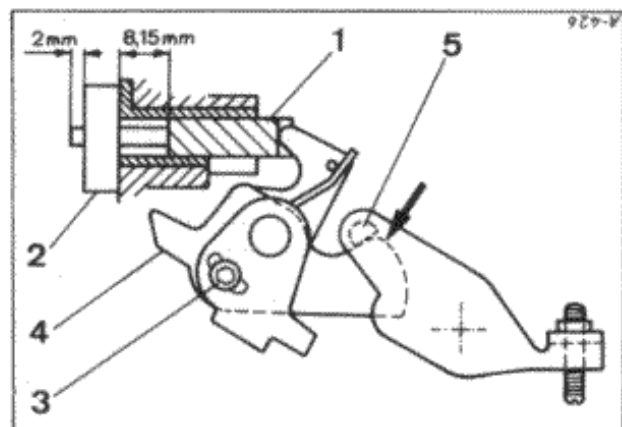


fig. 24

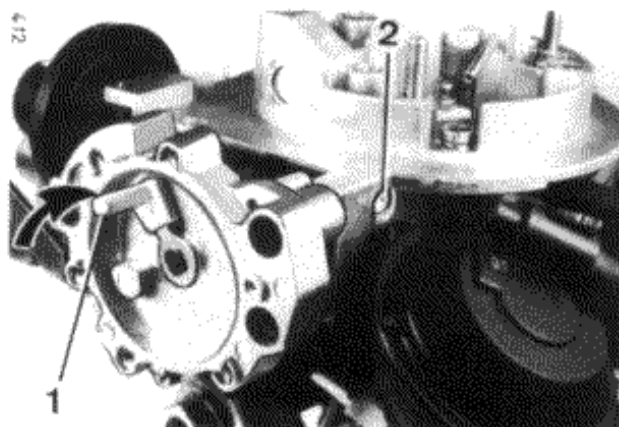


fig. 28

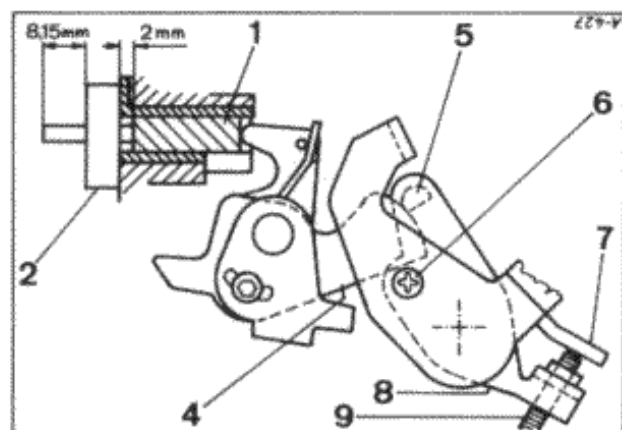


fig. 25

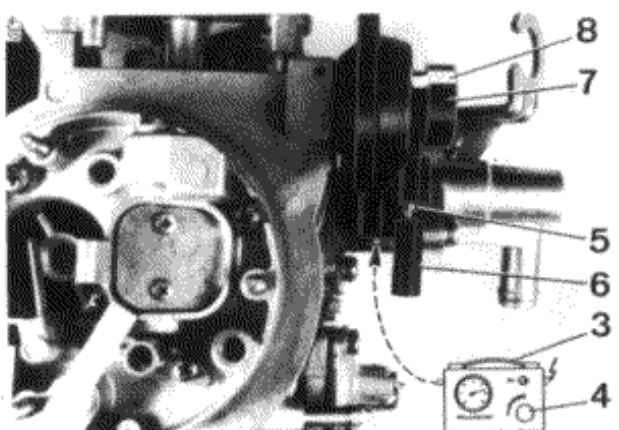


fig. 29

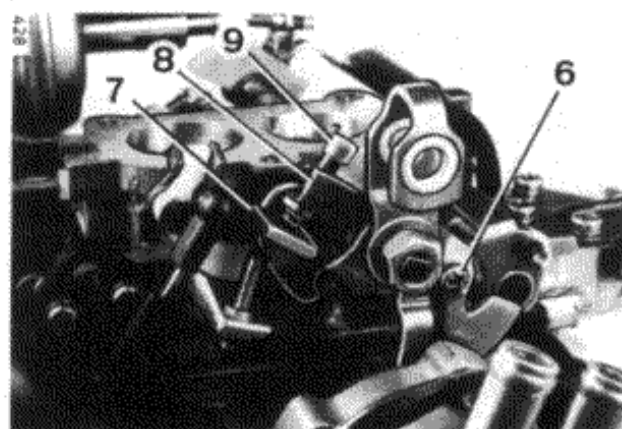


fig. 26

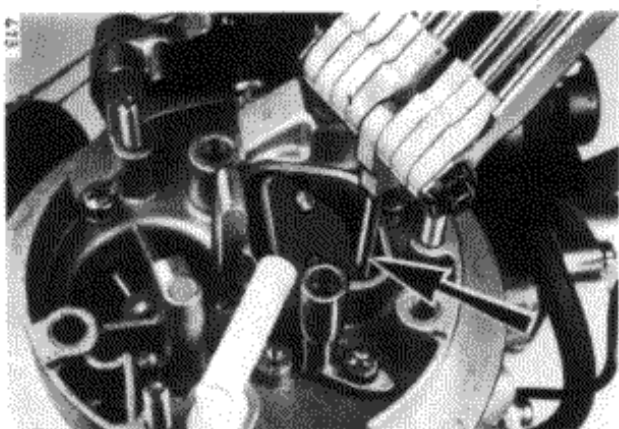


fig. 30



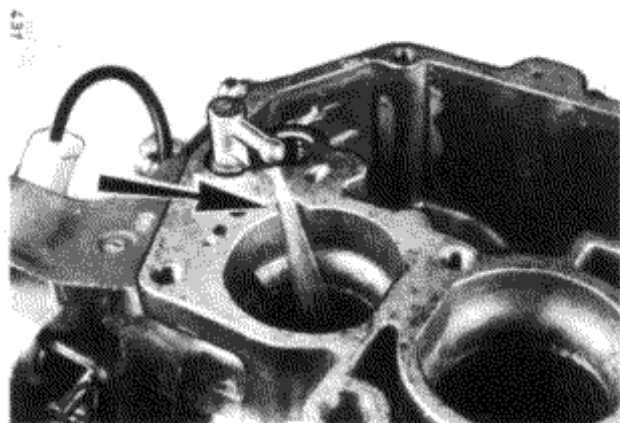


fig. 31

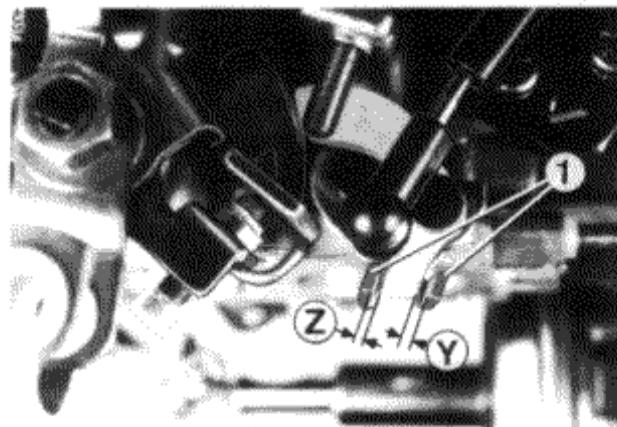


fig. 35

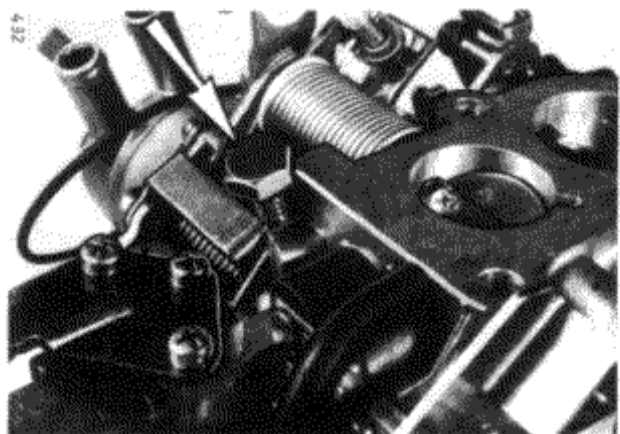


fig. 32

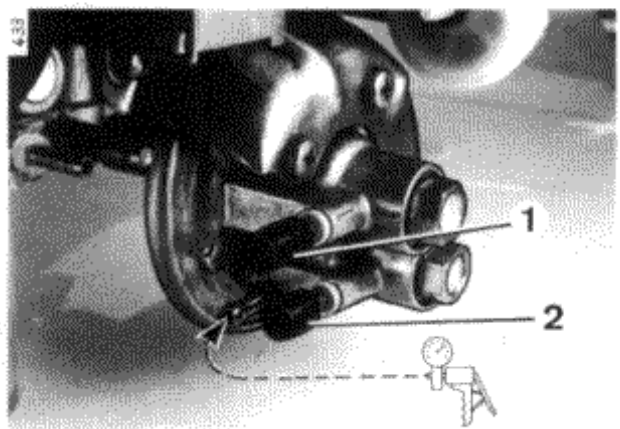


fig. 33

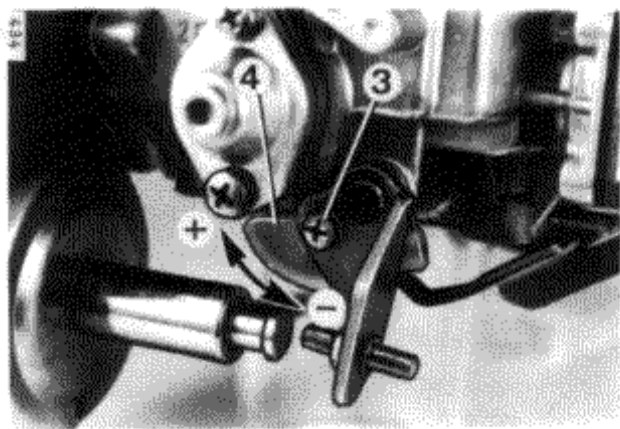


fig. 34

In conjunction with the service instruction and the corresponding model sheets (spare parts lists) this supplement forms a complete service document for all AUDI/VW vehicles equipped with 2E2 carburetters including the 1.6 l / 55 kW engines. The technical information TI 151 is no longer valid.

In the service instruction the following chapters have to be identified and the following modifications and additions respectively have to be considered.

A.1.b)	A.2.3	B.1
1.c)	2.8	5.
2.2	3.	C.
		D.

Furthermore the functions of the throttle plate actuator are described in a schematical representation.

#### A.1.b) Adjustment of idle emission value

For some vehicle models it is not necessary to remove the air cleaner.

After the cap (arrow) figure 1 on the air cleaner has been removed the idle air adjusting screw (arrow) figure 1a becomes accessible.

#### 1.c) Adjustment of fast idle speed

All vehicles equipped with air conditioning (AC):

- Switch on air conditioning and place control lever to maximum cooling and highest blower speed.
- Adjust control valve (2) figure 2.

Only Golf/Jetta NF (successor model) with automatic transmission (AT) without air conditioning (AC):

Important: Owing safety reasons care has to be taken so that nobody is in front of the vehicle during the test sequence.

- Switch on the rear window heating, the main beam and the maximum stage of the blower.
- Actuate foot brake.
- Engage gear selector lever.
- Adjust engine speed by means of the control valve (2) figure 2.

Engine speed data see setting data.

#### 2.2 and 2.3 Thermoswitch for intake manifold preheating and starter cover

The vehicles may be equipped with the combined thermoswitch, see service instruction, or with separate thermoswitches, see figure 3.

- Check passage directly on the contacts of the switch in question by means of an ohmmeter.

#### 2.2 Thermoswitch I for intake manifold preheating (transparent insulation of the contact tongues)

Nominal value: below approx. 55 °C = 0 Ω  
above approx. 65 °C = ∞ Ω

#### 2.3 Thermoswitch II for the starter cover (red insulation of the contact tongues)

Nominal value: below approx. 33 °C = 0 Ω  
above approx. 42 °C = ∞ Ω

## 2.8 Modified control of the wax element (figure 4)

Attention: The pin of the wax element shall not be pull out or forcibly pushed back (set in the manufacturing plant).

- Cool cooling water connecting stud with light pressure of the pin of below + 5 °C (e.g. by means of cold spray) and then raise the temperature to + 20 °C.
- Apply a load of approx. 40 N to the pin of the wax element and check measure (A).

Nominal value:  $A = 2.0 \pm 0.3 \text{ mm}$

- If necessary replace cooling water connecting stud.

## 3. THROTTLE PLATE ACTUATOR, leakage test (figure 13, 14 in the service instruction)

Except for vehicles with air conditioning the throttle plate actuator with the second control valve (3a) for the idle speed increase will also be used for the Golf/Jetta NF (successor model) with automatic transmission but without air conditioning.

To figure 13 and 14

C Idle speed increase (was position for air conditioning)

3a Control valve for idle speed increase "C" (to set the increase idle rpm)

Figure 13 in the service instruction shows the "version with control valve for idle speed increase" (was "version with air conditioning").

Figure 14 shows "version without control valve for idle speed increase" (was "version without air conditioning").

See also page 1.

## B.1. BASIC SETTING OF THE THROTTLE PLATES

The throttle plate of stage II may be adjusted (figure 5 and 6).

The basic setting is as follows:

- Unscrew throttle plate abutment screw (1) till it is no longer in contact.
- Place measuring device (2) in position and adjust measure "a" by means of the throttle plate abutment screw (1).

## 5. FLOAT/LEVEL

The fuel level may not be adjusted. It automatically results if a flawless float is used. During a general inspection the float weight and the float adjustment have to be checked.

## C. CONNECTION SCHEDULES, depression lines

For

Audi 80/Passat/Santana/Golf/Jetta/Scirocco 1.6 l, 55 kW engine with manual transmission and air conditioning as well as

Audi 100/Golf\*/Jetta\*/Scirocco 1.8 l, 66 kW engine with manual and automatic transmission and air conditioning

\* Not with automatic transmission

----- Only with air conditioning

- 1 Carburetter
- 2 Throttle plate actuator
- 3 Thermo time valve
- 4 Deceleration control valve
- 5 Depression bellows stage II
- 6 Pulldown bellows
- 7 Volume reservoir

- 8 Non-return valve
- 9 Depression switch for switch indicator (only manual transmission)
- 10 Depression bellows, ignition distributor
- 11 To fuel consumption indicator (ECON)
- 12 To brake servo
- 13 Air cleaner
- 14 Temperature regulator
- 15 Depression bellows
- 16 To temperature regulator (14)
- 17 Electro switch valve
- 18 To electro switch valve (17)
- 19 To air conditioning

A = black                      E = yellow  
 B = light green              F = blue  
 C = natural                   G = white  
 D = brown                    H = pink

For  
 Audi 80/Passat/Santana/Scirocco  
 1.6 l, 55 kW engine with automatic  
 transmission and air conditioning

Figure 8

For  
 Golf/Jetta  
 1.6 l, 55 kW and 1.8 l, 66 kW engine  
 with automatic transmission and air  
 conditioning

Figure 9

- ===== Only with air conditioning
- 1 Carburetter
  - 2 Throttle plate actuator
  - 3 Thermo time valve
  - 4 Deceleration control valve
  - 5 Depression bellows stage II
  - 6 Pulldown bellows
  - 7 Volume reservoir
  - 8 Non-return valve
  - \*8a Non-return valve
  - 10 Depression bellows, ignition distributor
  - 11 To fuel consumption indicator (ECON)
  - 12 To brake servo
  - 13 Air cleaner
  - 14 Temperature regulator
  - 15 Depression bellows
  - 16 To temperature regulator (14)
  - 17 Electro switch valve
  - 18 To electro switch valve (17)
  - 19 To air conditioning
  - \*20 Thermo valve  
     below + 30 °C closed  
     above + 46 °C open

A = black  
 B = light green  
 C = natural  
 D = brown  
 E = yellow  
 F = blue  
 G = white  
 H = pink

\* Not for 1.8 l, 66 kW engines

## D. SETTING DATA

The setting data on sheet 15 of the service instructions are no longer valid. Only the data shown in the corresponding model sheets shall be used.

### 1. IDLE RPM TABLE

Vehicles	Idle speed	Increased idle speed (with air conditioning)	Increased idle speed (with automatic transmission without air conditioning)
	1/min	1/min	1/min
Golf NF/Jetta NF (successor model)	950 ± 50	950 ± 50	800 - 950
Remainder	750 ± 50	950 ± 50	-

### 2. MODIFIED AIR CORRECTION JET

(Only for Audi 80 GLS + Coupe, Passat, Santana 1.8 l, 66 kW)



The following has to be given attention to when setting the choke plate gaps:

For carburettors with the modified air correction jet (also by replacement of the carburetter cover), see figure 10 and 11, generally the wider gaps have to be set, see model sheet.

Figure 10  
Air correction jet stage I,  
old version

Figure 11  
Air correction jet stage I,  
new version  
for 7.17852.00 with effect of production  
day 2 312  
for 7.17852.01 with effect of production  
day 2 333

## FUNCTIONS OF THE THROTTLE PLATE ACTUATOR

 = depression  
 = ventilation

### Cold starting (figure 12)

At temperatures below + 4 °C the thermo time valve (3) has passage. Therefore the pressure differential created below the throttle plate (5) during the starting procedure may not build up in the throttle plate actuator (1). The plunger (2) holds the throttle plate in starting position. When the ignition is switched on at the same time the thermo time valve (3) is heated, it closes at + 15 °C.

### Warming up (figure 13)

The thermo time valve (3) is closed. The electro switch valve (4) is closed respectively opened according to the warming up rpm. Below 1200 rpm voltage from the engine speed relay (central electric circuit) is applied, the electric switch valve is open. Above 1200 rpm the valve is closed (no current), see illustration. The pressure differential acts in the throttle plate actuator (1) withdrawing the plunger (2). The throttle plate (5) closes till the pin (6) rests on the warming up curve (7). The position of the warming up curve and, thereby, the position of the throttle plate are determined by the wax element (8) i.e. by the cooling water temperature.

#### Idle (figure 14)

Below 1200 rpm voltage is applied to the electro switch valve (4). The valve is open and ventilates (arrow) the control valve (9). The plunger (2) and, thereby, the throttle plate (5) move into the idle position.

#### Deceleration and engine cut-off (figure 15)

During deceleration at engine speed of above 1200 rpm the electro switch valve (4) is closed (without current), the control valve (9) is not vented. The plunger (2) and thereby the throttle plate (5) take the deceleration position, the mixture discharge is stopped.

When the engine is cold the throttle plate (5) only closes as permitted by the wax element and thereby the warming up curve.

If the engine speed decreases below 1200 rpm during deceleration the electro switch valve (4) opens and ventilates the control valve (9), the mixture discharge is again opened, see idle.

When cutting-off the engine the electro switch valve (4) is closed (without current). By means of the still turning engine the plunger (2) and thereby the throttle plate (5) move into the deceleration position for short time. Hereby a post-combustion is avoided.

When the engine is at standstill the throttle plate actuator is ventilated and the plunger and the throttle plate take the start position.

#### Increased idle speed (figure 16)

For some vehicles with automatic transmission and vehicles with air conditioning respectively a further control valve (10) and an electro switch valve (11) is required.

When selecting a gear and when switching on the air conditioning respectively during idle voltage is applied to the electro switch valve (11), the valve opens ventilating the control valve (10). The plunger (2) and hereby the throttle plate (5) move to the position for increased idle rpm.

During deceleration the two electro switch valves (4 and 11) are closed (without current).

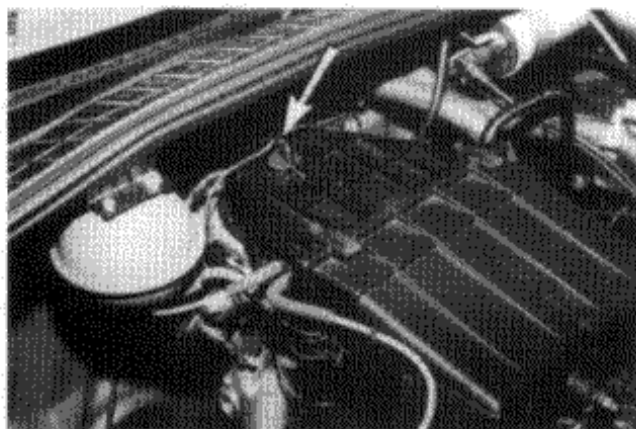


figure 1

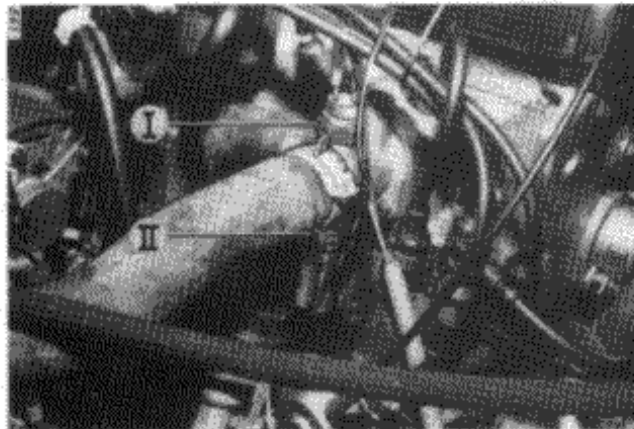


figure 3

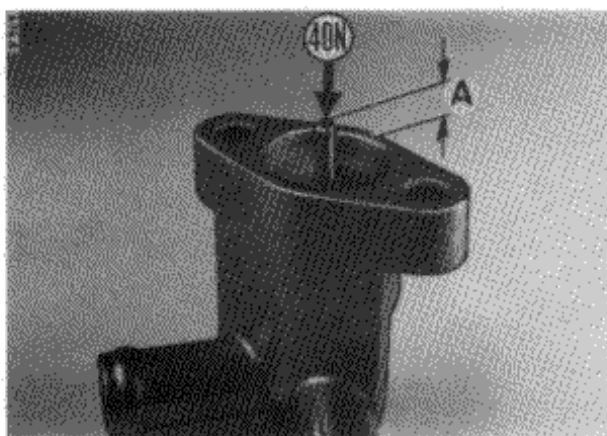


figure 1a

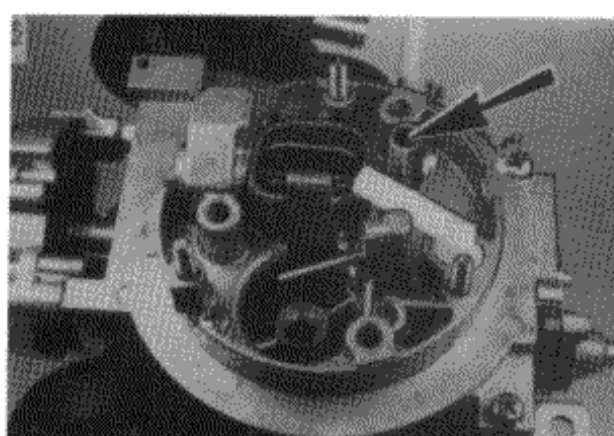


figure 4

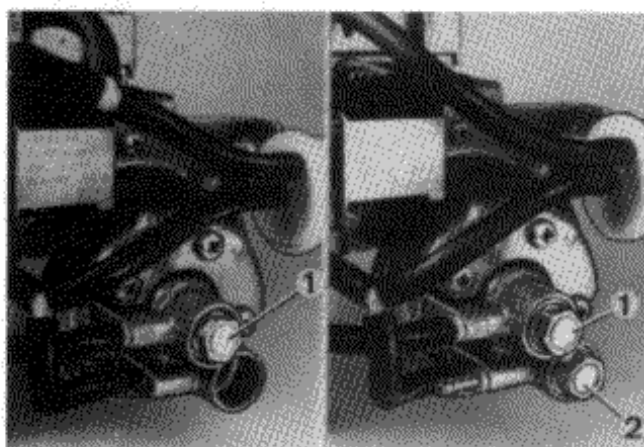


figure 2

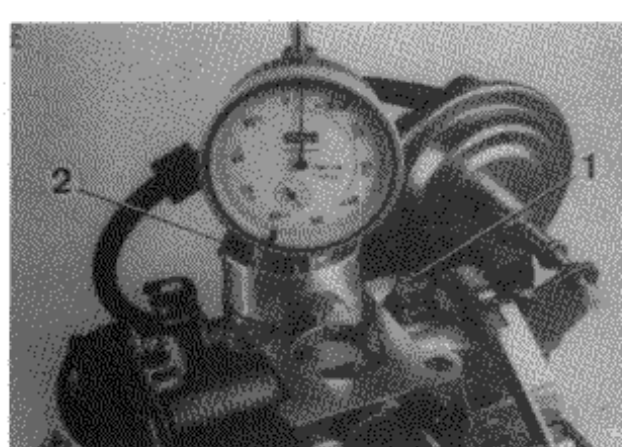


figure 5

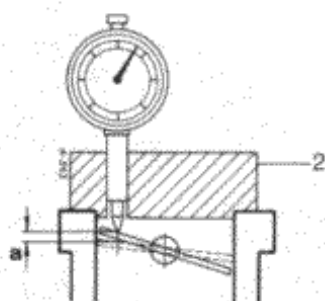


figure 6



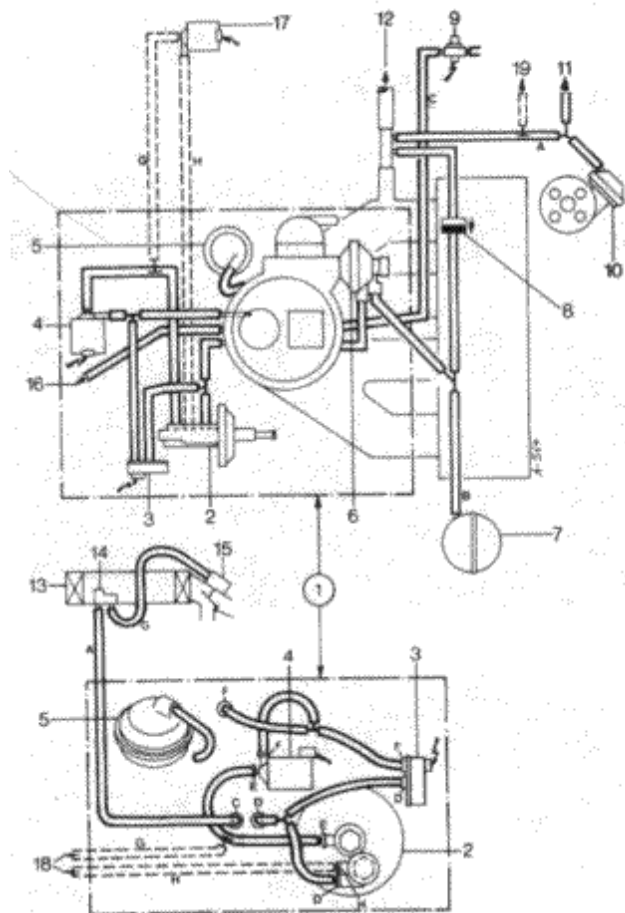


Figure 7

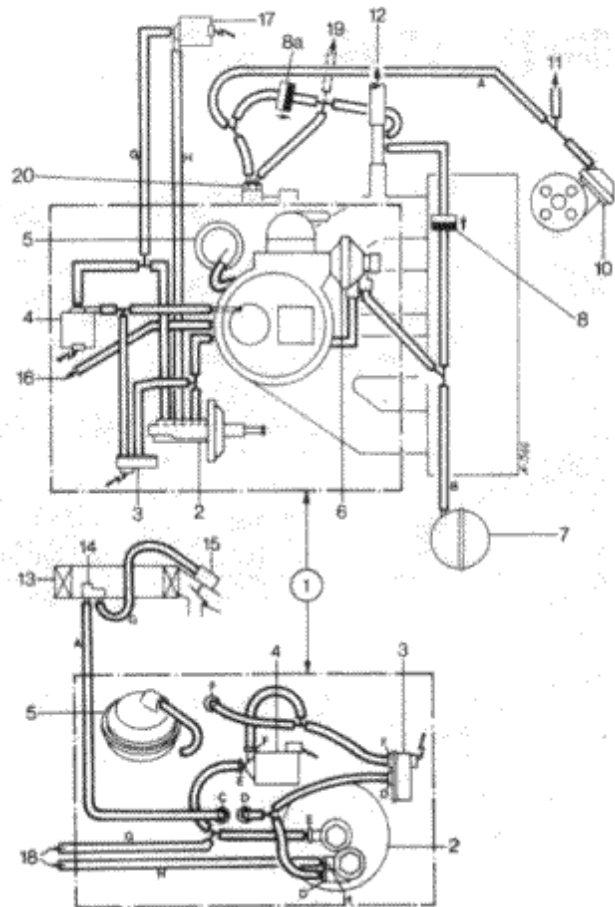


figure 9

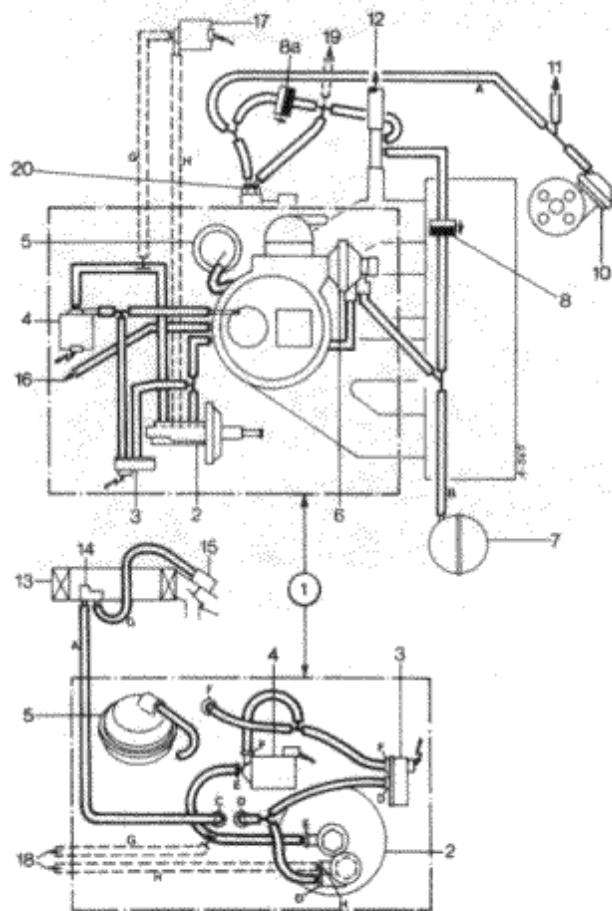


Figure 8

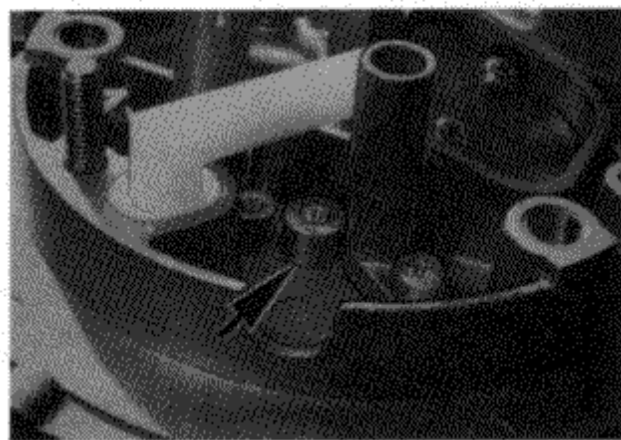


figure 10

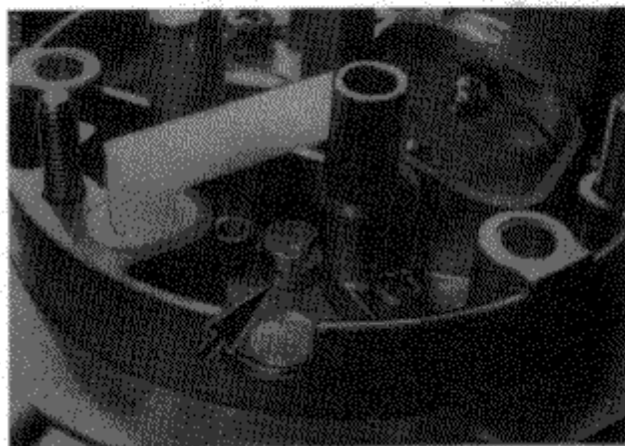


figure 11



figure 12

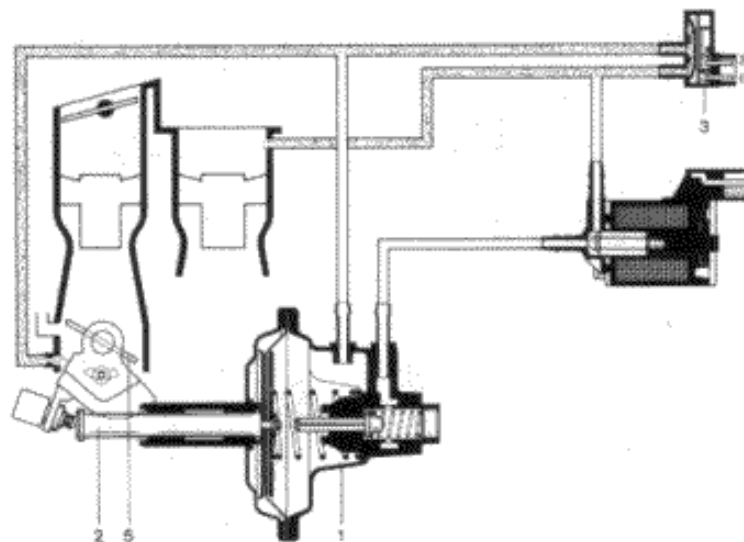


figure 13

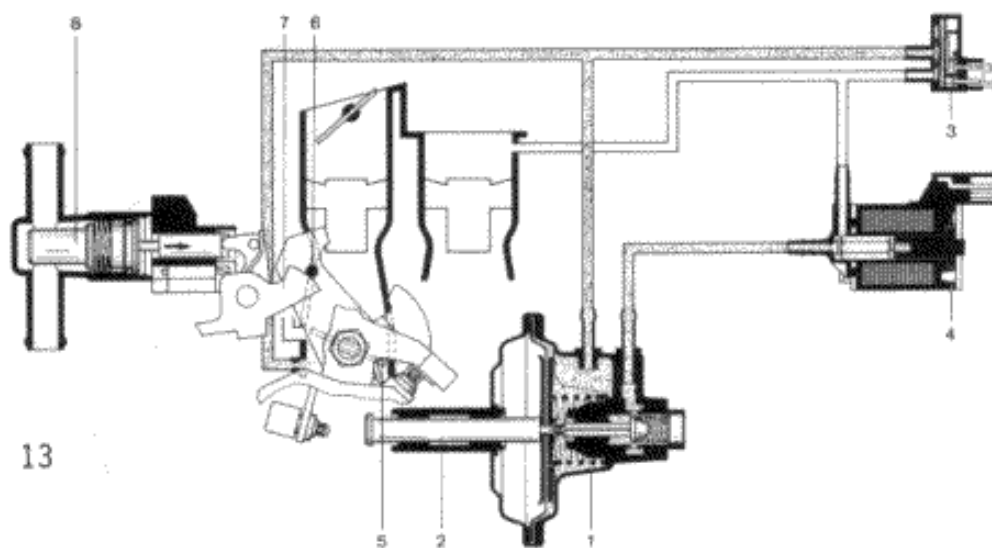


figure 14

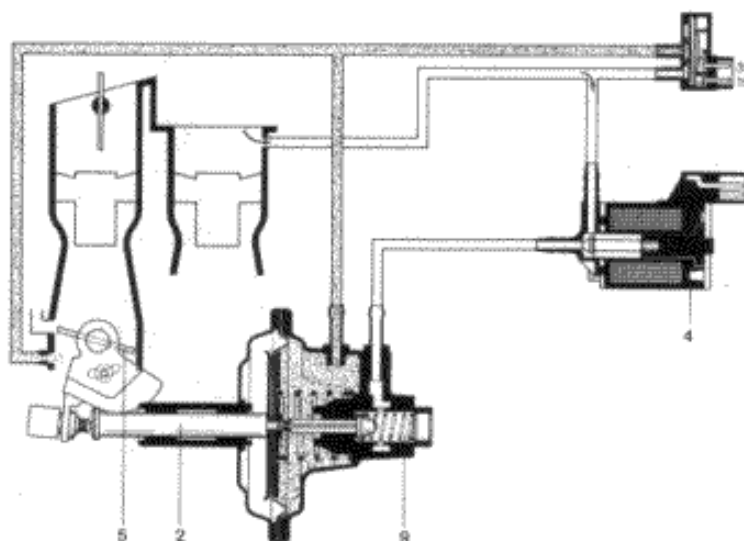


figure 15

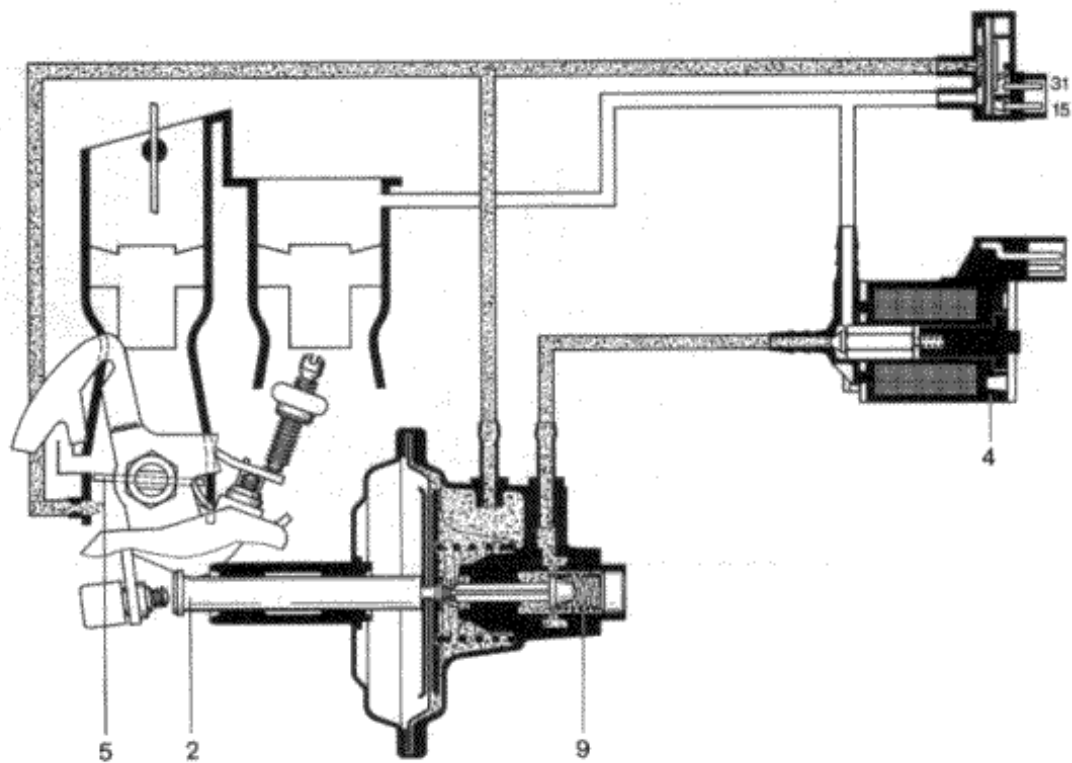


figure 16

