

AUTOMOBILES
CITROËN

**CUSTOMER SERVICE
AFTER-SALES TECHNICAL DEPARTMENT**



**TECHNICAL
BULLETIN**

N° 43 G

8th November 1972
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Since the 29th August 1972, these vehicles have been available in the following versions :

- Saloon
- Estate
- Commercial Estate
- " Service " Van with metal side panels

The term " Comfort " or " Club " has been abolished.

These vehicles are fitted with a 1015 cc engine and a 4-speed mechanical gearbox exclusively.

They differ from the " Comfort 72 " version as follows :

- 1°) The upper front door trim panel with " Club 72 " type arm-rests instead of door strap handles.
- 2°) The upper rear door trim panel with " Club 72 " type arm-rests and ashtray instead of door strap handles.
- 3°) Instrument panel with a new covering plate instead of the previous one.
- 4°) Discontinuance of trip mileage recorder.
- 5°) Grey rubber carpet.

CHARACTERISTICS OF THE CONSTITUENT PARTS

I. ENGINE

It differs from the preceding engine (see Technical Bulletin N° 40 G) as follows :

Fitting of an anti-pollution device with inlet casing heated by the exhaust gases.

GS VEHICLES

GX series GA

GX series GE

GX series GF

NEW VEHICLES

1973 MODELS

1015 cc ENGINE

Characteristics

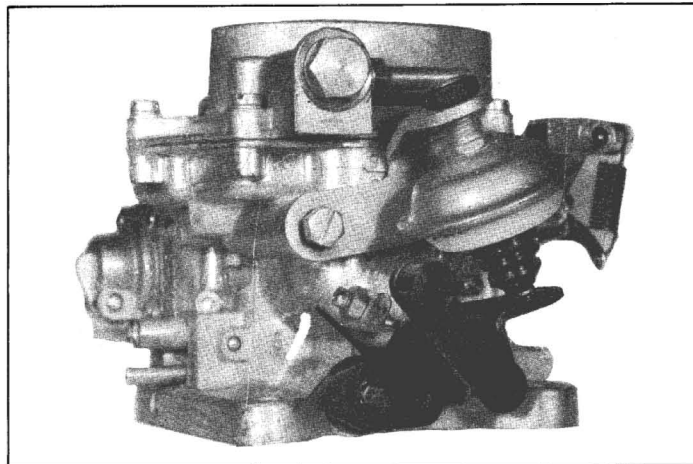
P. T. O.

1^o) Anti-pollution device.

This comprises :

a) A SOLEX 28 CIC 2 mark 137 CARBURETTOR

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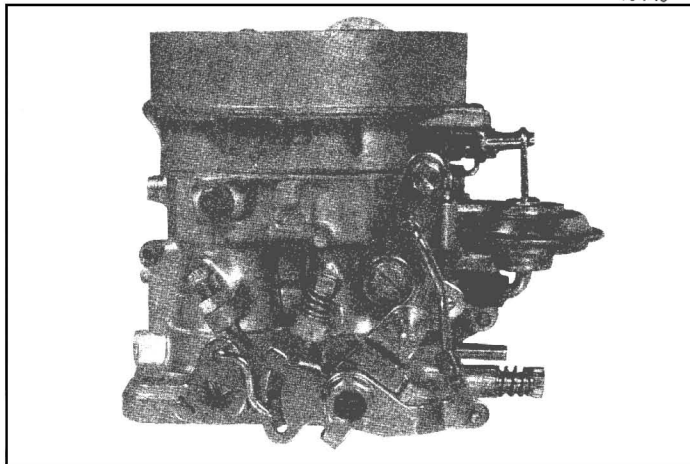
CHARACTERISTICS

ITEMS	Primary choke	Secondary choke
Venturi bore	19	19
Main jets	100	75
Emulsion tube assembly	1 P 2	2 P 3
Idling jet	45	
Idling jet at constant mixture	35	
Acceleration pump injector	50	
" By-pass" jet		50
Econostat jet		160
Hole in throttle butterfly of second choke		$\phi = 2 \text{ mm}$ (0.08")
Clearance between the edge of the 2nd barrel butterfly and the bore at the 3rd position of the choke		$\phi = 0.35 \text{ mm}$ (0.01")
Float needle		1.7
Float, double, polyamid		11.4 g
Fuel float level taken between joint face of cover (including gasket) and float spindle		$18 \pm 1 \text{ mm}$ (0.79")

- Idling adjustment at $900 \begin{smallmatrix} +50 \\ 0 \end{smallmatrix}$ r.p.m.

b) or a WEBER 30 DGS mark W 50-00 CARBURETTOR.

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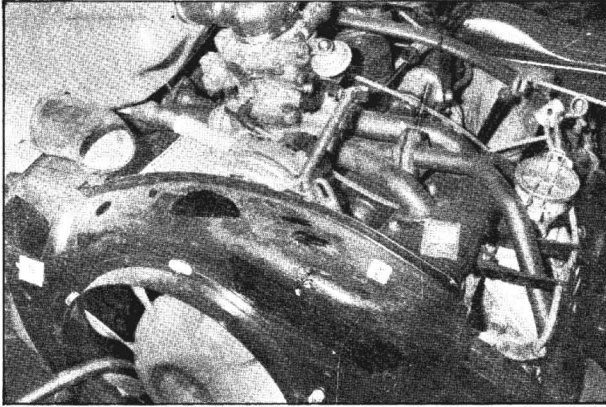


CHARACTERISTICS

ITEMS	Primary choke	Secondary choke
Venturi bore	20	20
Main jets	100	100
Air correction jets	A D 1	A D 2
Emulsion tube	F 20	F 20
Idling jets	45	45
Acceleration pump injector	50	
Float needle		1.5
Float weight		11 g
Height of float, taken between joint face of cover and float (gasket fitted and float needle ball released).....		6.5 ± 0.25 mm (0.26 " ± 0.01 ")

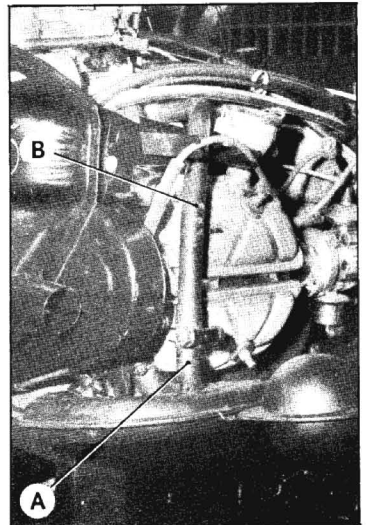
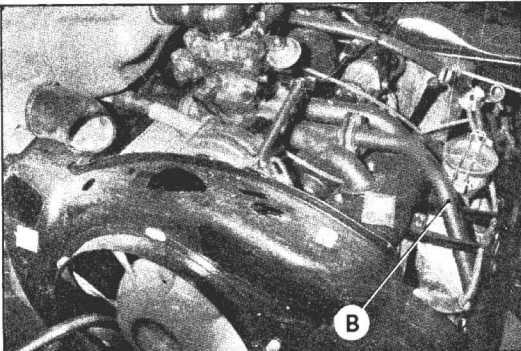
Idling adjustment : 900 $\begin{matrix} + 50 \\ 0 \end{matrix}$ r.p.m.

c) an inlet casing, heated by the exhaust gases (different casing according to the type of carburettor).



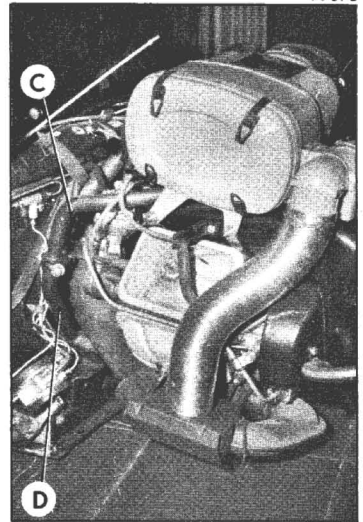
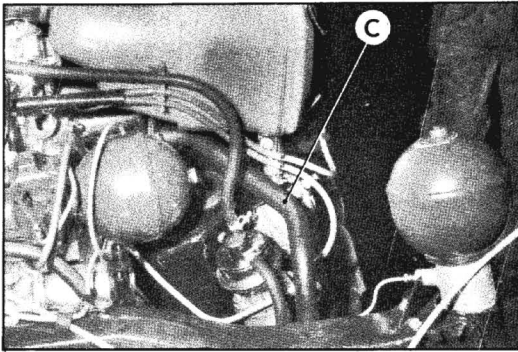
d) a pipe assembly which comprises :

- a L.H. exhaust pipe with gas inlet heating pipe A (not visible in the diagram on page 5).
- a linkage pipe B, between the exhaust and the inlet casing, on the L.H. side.

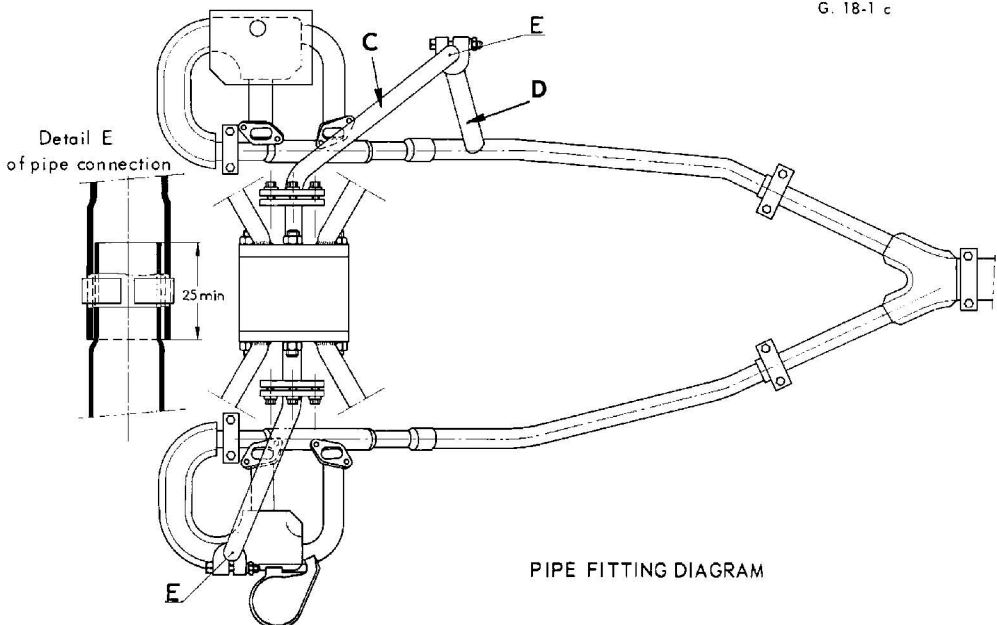


- a connecting tube between the inlet casing and the exhaust C on the R.H. side.

10375



- a heating tube D, connected to the R.H. exhaust pipe between heat exchanger and the Y shaped piping.
- The L.H. exhaust pipe, between heat exchanger and the Y shaped piping is new (following the diameter modification of the latter).
- The Y shaped piping is new (following the modifications of the connection diameters).



Detailed description of E : Before tightening the clamp, coat the pipes with heat resisting mastic 1500 glue supplied by : Etablissements BARTHELEMY, 64, rue DeFrance 94300 VINCENNES-FRANCE -Tel . 328-42-87.

e) with a DUCELLIER distributor :

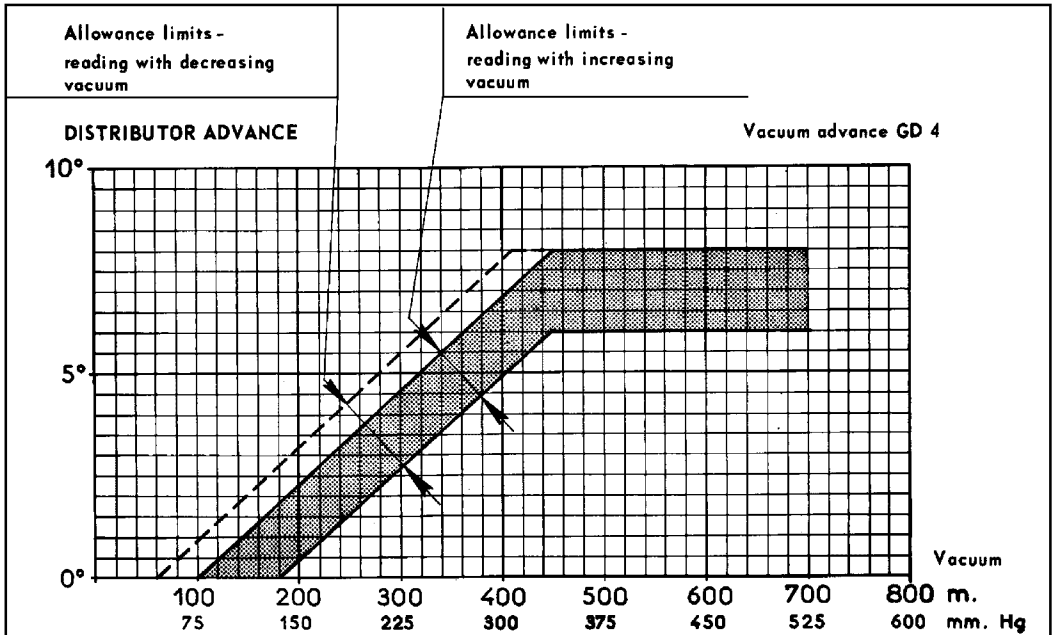
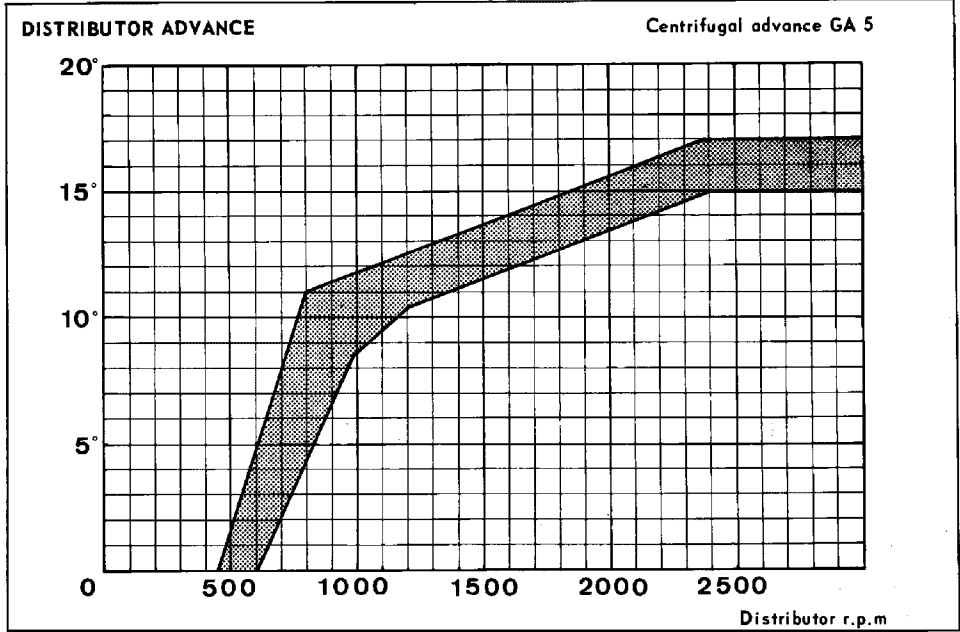
with centrifugal advance corrector : Curve GA 5

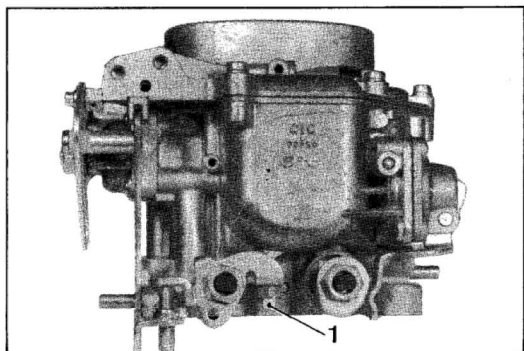
with vacuum advance corrector : Curve GD 4

- initial advance for static setting of distributor : 10°

- control of stroboscopic setting : 33° engine at 2500 engine r.p.m.

(vacuum advance capsule disconnected)

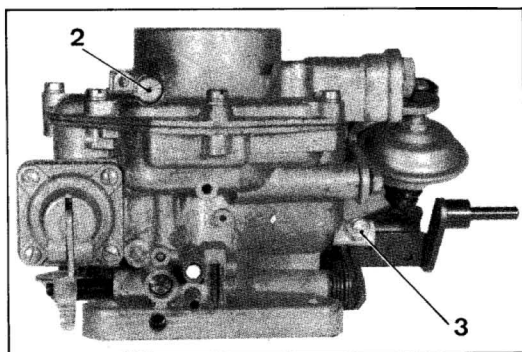


**WARNING :**

The carburettor is set by the manufacturer. The position of the stop screws (1) and (3), for the butterflies of the primary and secondary chokes, is obtained by using a micrometer and *this must, under no circumstances, be altered.* Only the idling air screw (2) may be adjusted to obtain the correct idling speed.

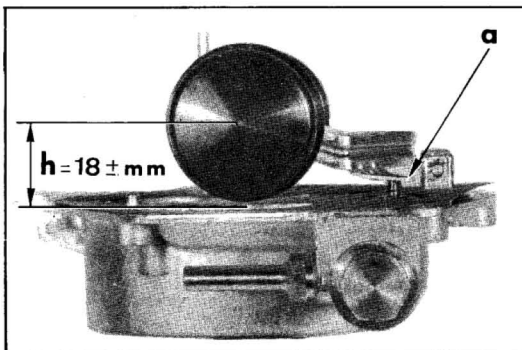
If the engine is running badly, the following points must be checked before any work is carried out on the carburettor :

- valve clearance,
- ignition, and in particular, the sparking plugs,
- distributor advance curves and its stroboscopic setting,
- carburettor cleanliness (blow the lines with compressed air).

**4. CHECKING AND SETTING THE FLOAT LEVEL**

- 1) Disconnect the fuel feed pipe.
- 2) Remove the carburettor cover.

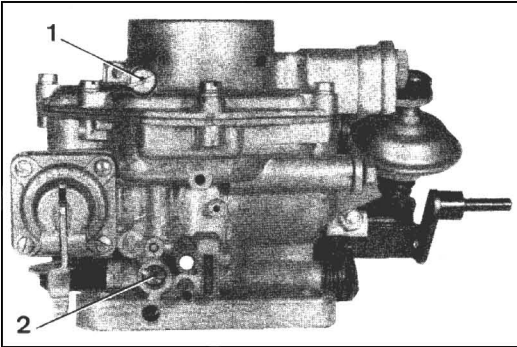
- 3) **Check the float level :**
Measure the distance between float spindle and joint face of cover (gasket in position).
This must be «h» = 18 ± 1 mm and approximately the same for both floats.
If not, modify the position of the float by moving lug «a».



- 4) Fit the carburettor cover and ensure that the float does not touch the walls.
- 5) Connect the fuel feed pipe.

NOTE : When the float is set at distance $h = 18 \pm 1$ mm, the float level (with the cover removed) should be positioned so that the distance measured between the free surface of the petrol and the joint face of the float chamber is 26 ± 1 mm.

10292



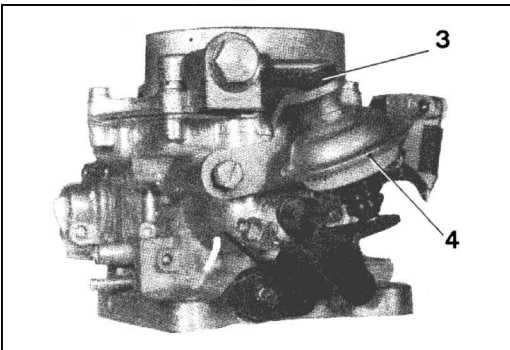
B. IDLING ADJUSTMENT AND CO and CO 2 MIXTURE

- 1) Ensure that the throttle butterflies, for the primary and secondary chokes, close properly.
- 2) Slacken the pressure regulator bleed screw.
- 3) Ensure engine oil has reached a temperature of between 70 and 80° C (158 - 176° F.). Keep this temperature during all the adjustment operations (§§ 4 and 5).
- 4) Operate screw (1) to obtain the correct idling speed
900 to 950 r.p.m
- 5) By means of screw (2) adjust the mixture to obtain :
 - CO mixture : 2 to 3,5 %
 - CO2 mixture : 10 to 13 %

The adjustment conditions for CO and CO2 mixture, are only obligatory in those countries, where the law demands the control of this adjustment, after any work is carried out. This control requires the use of gas analysers, which are in the process of being officially approved.

NOTE : The authorized CO and CO2 mixtures are given for an outside air temperature of between 15° and 30° C (61° and 86° F.).

10293



C. CHECKING THE CLOSING DELAY OF THE THROTTLE DAMPER.

1) Checking the closing delay :

The engine speed should fall from 2500 to 1000 r.p.m in a time of between 2 and 5 seconds.

2) Adjusting the closing delay :

Slacken the nut (3).

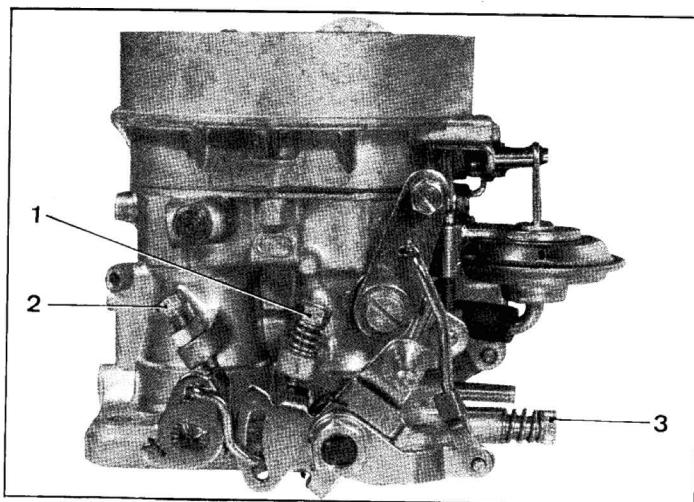
Screw in the throttle damper (4) to reduce the closing delay, or reverse the action to increase it.

Tighten the nut (3) between each time measurement.

NOTE : These mixtures must be obtained while observing the engine speeds laid down in § 4 and temperatures indicated in § 3.

These two operations must therefore be carried out simultaneously.

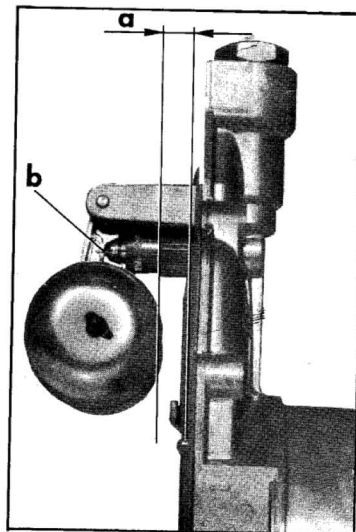
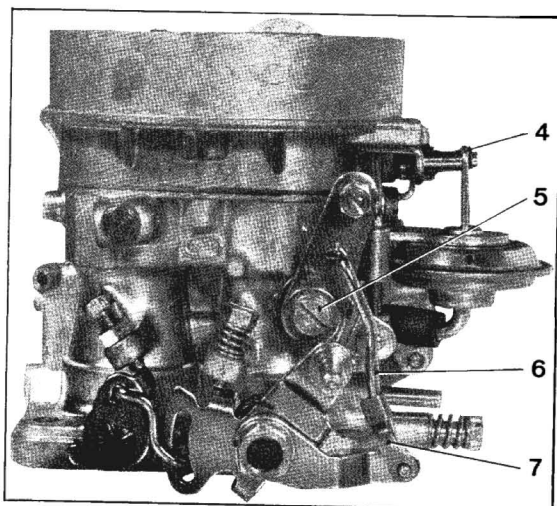
3°) Setting the Weber 30 DGS mark W 50-00 Carburettor.



WARNING :

- The carburettor is set by the manufacturer. The position of the secondary choke butterfly stop screw (2) is obtained by using a micrometer *and must not be altered under any circumstances*. Only the primary choke butterfly stop screw may be adjusted.
- When the engine is running badly the following points must be checked before any work is carried out on the carburettor :
 - valve clearance,
 - ignition, and in particular, sparking plugs,
 - distributor advance curves and control of the strobe setting,
 - carburettor cleanliness (blow the lines with compressed air).

A. CHECKING AND ADJUSTING THE FLOAT LEVEL.



1) Remove the carburettor cover. To do this :

- Remove clip (7), anti-noise washer and disconnect linkage rod (6) from throttle butterflies control lever.
- Disconnect the choke control from the carburettor bodies by removing screw (5) and its spring.
- Disconnect the capsule control lever by removing circlip (4).
- Remove the five cover securing screws, and take off the cover.

WARNING : One of the screws is found on the inside of the induction chamber of the cover.

2)-Place the cover as shown on the figure (page 9) (the needle ball not depressed).

-Measure distance « a » between the joint face of the cover (gasket in position) and the float. This distance must be 6.5 ± 0.26 mm ($0.26" \pm 0.01"$) (use a shim or a rod of this thickness) If not, adjust lug « b » to obtain this distance.

3)-Fit the cover in the reverse order of removal.

B. ADJUSTING THE IDLING SPEED AND THE CO AND CO2 MIXTURE.

1) Ensure that the primary and secondary choke throttle butterflies close properly.

2) Slacken the pressure regulator bleed screw.

3) Ensure engine oil has reached a temperature of between 70 and 80° C. (158 - 176° F.).
Keep this temperature during all the adjustments (§§ 4 and 5).

4) Adjust screw (1) to obtain the correct idling speed : 900 to 950 r.p.m.

5) Using adjusting screw (3), adjust the mixture to obtain :

- CO mixture	2 to 3.5 %
- CO2 mixture	10 to 13 %

NOTE : These mixtures must be obtained at the correct idling speed and engine temperature as shown in §§ 3 and 4. These operations must be carried out together.

The adjustment conditions for CO and CO2 mixture are only obligatory in those countries, where the law demands the control of this adjustment, after any work is carried out. This control requires the use of gas analysers, which are in the process of being officially approved.

NOTE : The authorized CO and CO2 mixtures are given for an outside air temperature of between 15° and 30° C. (67° and 86° F.).

4°) New or modified parts .

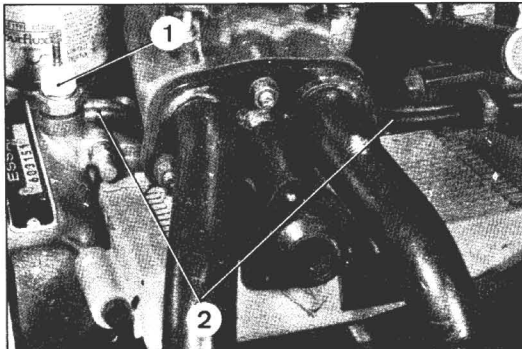
The crankcase has been modified following on from the omission of the oil outlet for heating the inlet casing.
The oil piping (2) for the cylinder heads has been modified :

- the oil pressure outlet is located below the pressure switch (1) instead of being situated on the inlet casing.

The oil pressure switch (1) is of a new type.

The switch screw, fixed into the crankcase has been lengthened. It comprises a non-threaded part to allow the fitting of the union on the cylinder heads lubricating pipe.

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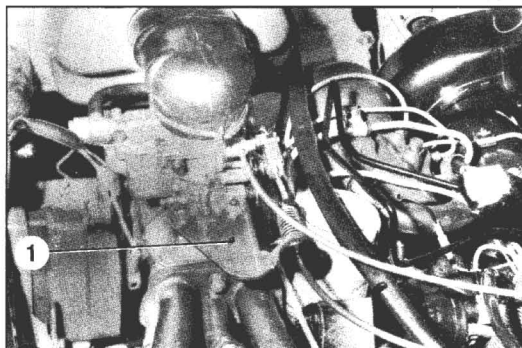


The accelerator cable and the choke control are longer to suit the Weber carburettor transverse control (fitting suitable for Weber and Solex carburettors).

The carburettor gasket is different according to the carburettor type.

Cable sheath stop support (1) is secured on the carburettor stud bolts (on Weber carburettor only).

11 173



NOTE : Concerning the tightening of the cylinder heads. Complement to Technical Bulletin N° 40 G.

1st tightening : 10 to 12 mAN (1 to 1.2 m.kg or 7 - 9 ft.lbs)

Final tightening : 20 to 22 mAN (2 to 2.2 m.kg or 14-16 ft.lbs)

II. CLUTCH

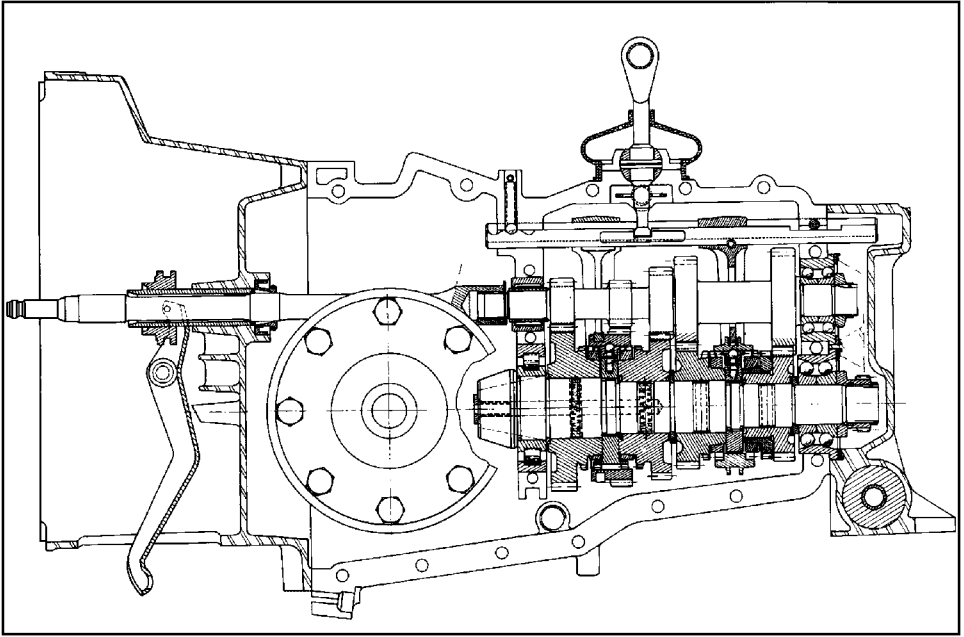
The clutch mechanism (with diaphragm) is identical to that of 1220 cc vehicles fitted with a 4-speed gearbox.

III. GEARBOX : Transmission ratios.

Gear	Gearbox ratios	Crownwheel and pinion	Overall ratios	Speed per 1000 engine r.p.m	
				km/h	m.p.h
1	$\frac{11}{42} = 0.2619$ (3.818 : 1)	$\frac{8}{35} = 0.2285$ (4.375)	0.0598 (16.7 : 1)	6.709	4.21
2	$\frac{16}{37} = 0.4324$ (2.313 : 1)		0.0988 (10.12 : 1)	11.085	6.88
3	$\frac{21}{32} = 0.6562$ (1.524 : 1)		0.1500 (6.67 : 1)	16,830	10.46
4	$\frac{25}{28} = 0.8928$ (1.120 : 1)		0.2040 (4.90 : 1)	22.888	14.27
Reverse	$\frac{11}{23} \times \frac{23}{46} = 0.2391$ (4.181 : 1)		0.0546 (18.3 : 1)	6.126	3.81

Theoretical speeds per 1000 r.p.m are given for a vehicle fitted with 145 - 152 X tyres for which the rolling circumference is 1.870 m (73.62").

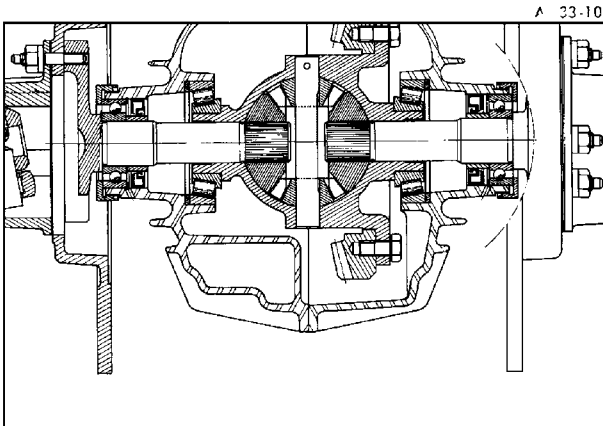
Speedometer ratio 6×13 .



The gearbox differs from that on " 1015 cc 1972 " vehicles, as follows :

- 1° casing : strengthened by ribs
- 2° gears : identical to 1220 cc (speed of 2nd $\frac{16}{32}$)
- 3° torque : 8/35 (4.375)

The bevel pinion is drilled to allow the springs and dowels for the 1st and 2nd driven pinions to be fitted.



4° Gearbox outlets: identical to 1220 cc vehicle (see Technical Bulletin N° 42 G).