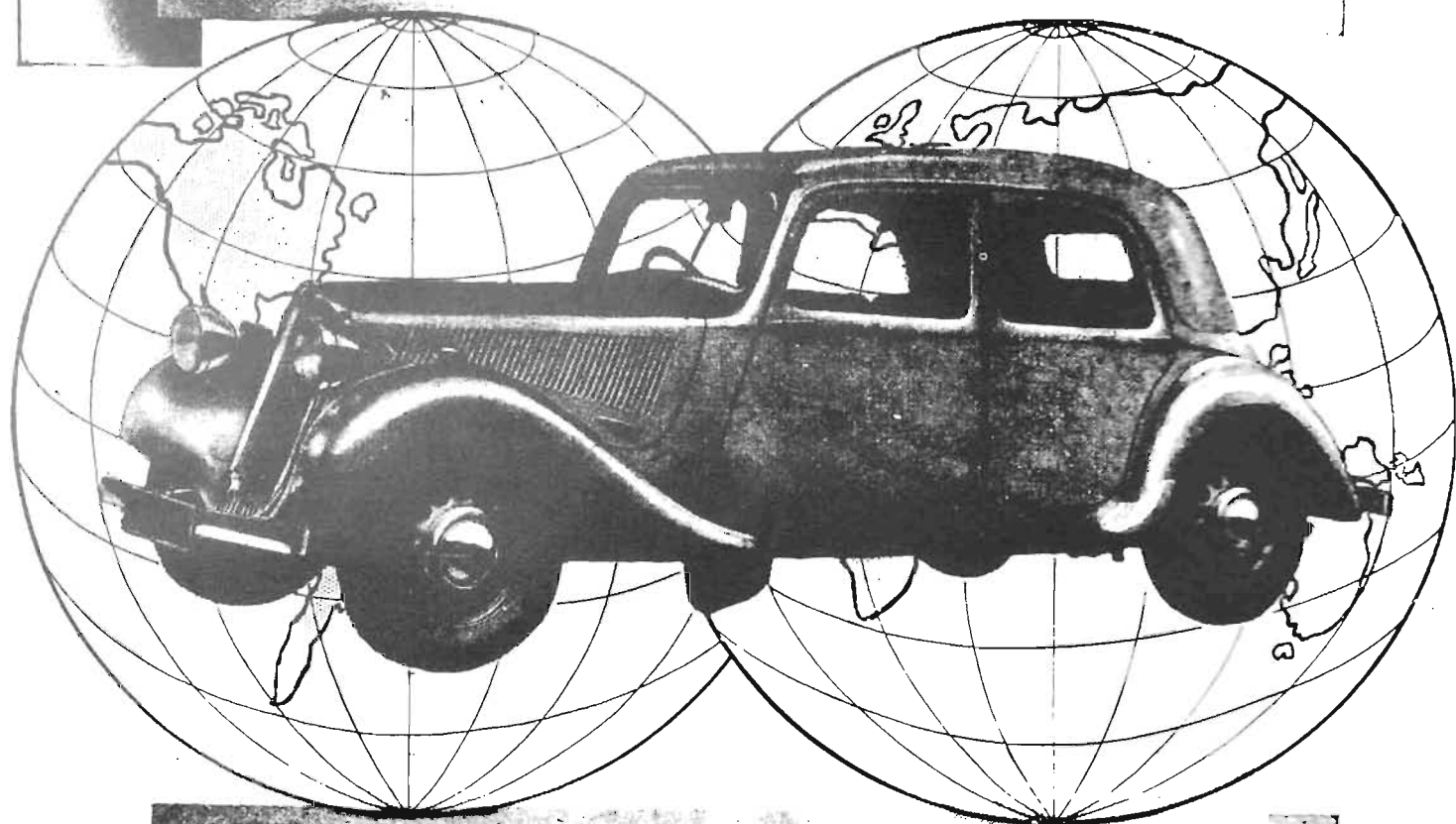


DOWN THE WORLD OVER



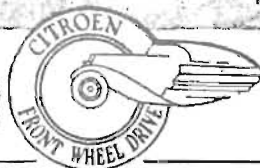
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Floating Power

Volume Two Number Six

December Nineteen Hundred and Seventy Seven

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We shall probably have had our annual TOC Christmas Nosh-Up by the time that this magazine reaches you, and I hope that it goes off as well as last year's event – both the editors are certainly looking forward to the magnificent food that the Meantime Restaurant produces. Last year Christmas cheer was slightly inhibited by the fact that we had to drive back to Sussex after dinner!

Fred Annells and John Austin have let us know that they are selling the remainder of their spares (see Classified in this issue) and therefore will no longer be a source of spares for sale – I think Fred has found that he has his work cut out just coping with the restoration of his own cars, and can no longer spare the time to act as a “clearing-house” for all spares enquiries. Anyone who in future has trouble tracing a particular spare part can always contact one of the TOC Spares Committee: members of the Committee make regular trips over to Holland, and can, if you contact them well in advance, arrange to buy the appropriate part for you if it can't be obtained over here.

We have heard on the grapevine that a Traction was auctioned by Christie's at the Earls Court Motorfair at the end of October, together with a Citroën Cloverleaf – it would be interesting to find out how much they went for!

Finally, Andrew Minney is organising a display of vintage and pre-'55 Citroëns to be held at the Citroën Car Club's annual dinner and dance on Feb. 4th/5th. The dinner and dance is being held on the centenary of the birth of André Citroën. Andrew has asked that all owners of pre-1955 cars contact him if they can attend, as he wants to have some idea of numbers in advance. Ring him after 6 pm. on 01 - 897 - 8157.

Happy Christmas, and see you at the annual Nosh-Up, I hope!

G.W.



North Cottage, Mongers Farm,
Barcombe, Nr. Lewes, Sussex.

The Six that was victorious in the 1953 Sestrières Rally.

RALLY TRACTIONS

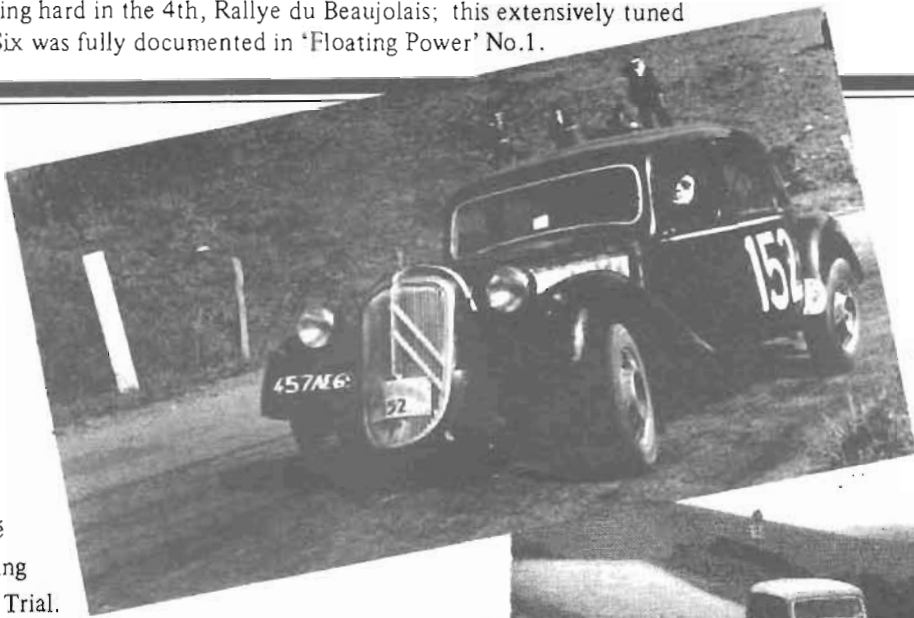
Two shots of an early R.A.C. Rally; Hanson-Moore's flag-waving Light Fifteen on his way to Harlech, and Makim's Six in convoy with B. King's Light Fifteen, also in Wales.



The celebrated Gautruche affixing Rally plates to their modified Six for the 1950 Alpine Trial. Note alloy wheels, and heavily louvred bonnet.

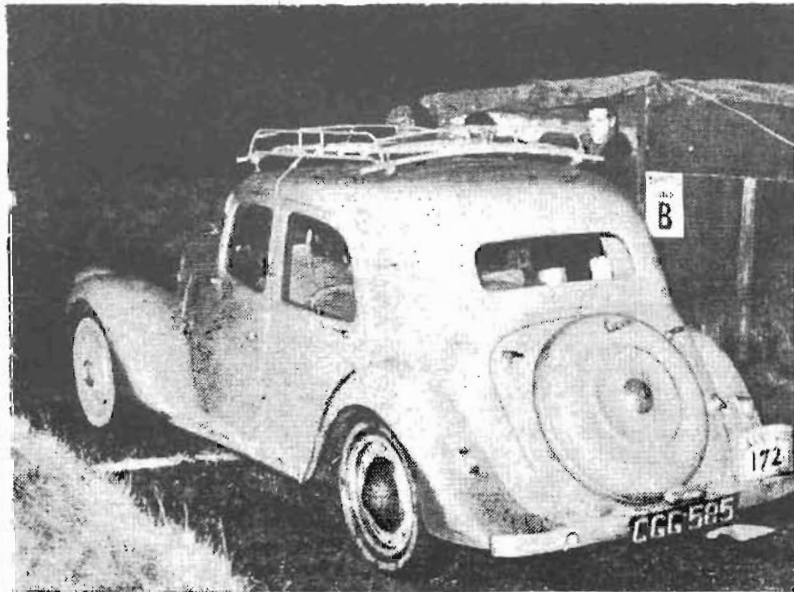


Eppendhal cornering hard in the 4th, Rallye du Beaujolais; this extensively tuned Six was fully documented in 'Floating Power' No.1.



Bridges' Light 15 in the Elan Valley during the 1953 London Rally

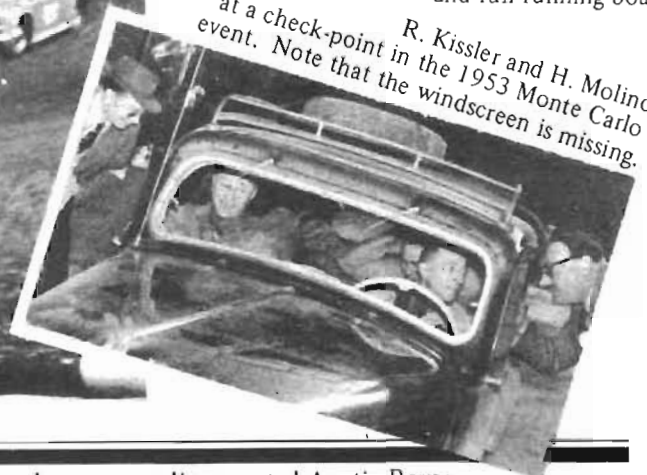
Stempert's 11BL in the parc fermé at Marseilles during the 1950 Alpine Trial.



G. Rennoldson restarting on Bwlch-y-groes during the 1954 M.C.C. Rally. This car, as well as having a four-speed gearbox, has full-skirt wings similar to those of the mystery Six estate featured recently, together with headlights inset into the front wings and full running boards.



R. Kissler and H. Molino at a check-point in the 1953 Monte Carlo event. Note that the windscreen is missing.



Karel Ton's Big 15 at Zandvoort during the 1952 Tulip Rally, showing the way to a disconcerted Auntie Rover.



CITROEN/RILEY COMPARISON

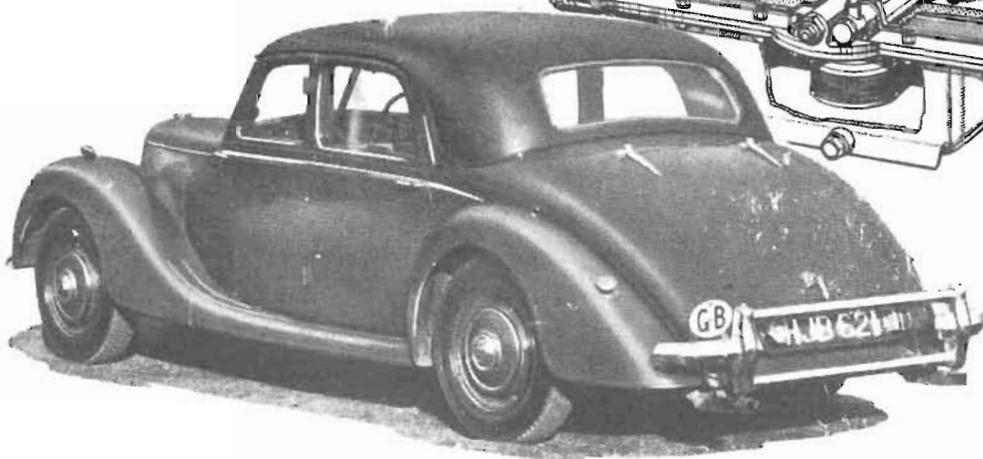
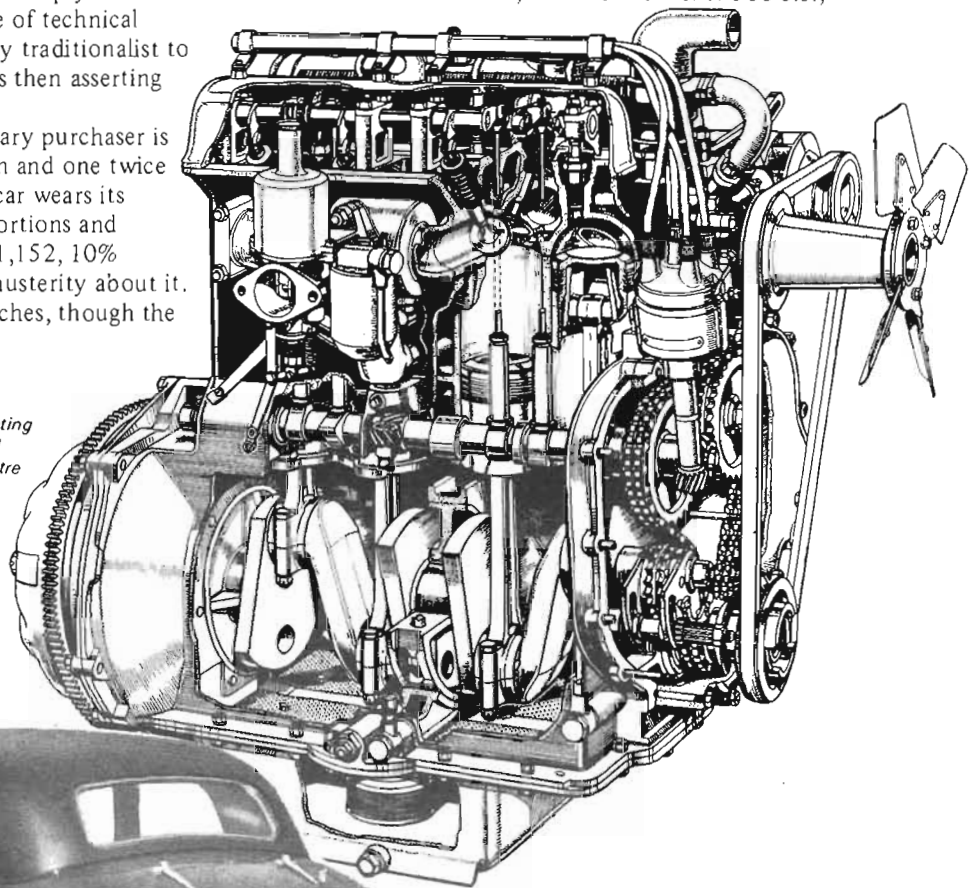
It was on hearing "Look, there goes one of them old Rileys!" for the umpteenth time the other day that we thought it might be interesting to compare the Traction with the English contemporary for which it is so often mistaken. The comparison is valid insofar as both were aimed at post-war motorists of more than average means, who wanted more than simply basic wheels; one who appreciated a degree of technical sophistication yet who was sufficiently traditionalist to eschew the vogue for slab-sided bodies then asserting itself.

It is 1953, then, and our imaginary purchaser is choosing between a ten-year old design and one twice as old, though externally the French car wears its years lightly. Both have elegant proportions and flowing lines, though the Big 15, at £1,152, 10% cheaper than the Riley, has a certain austerity about it. It is also longer and wider by a few inches, though the

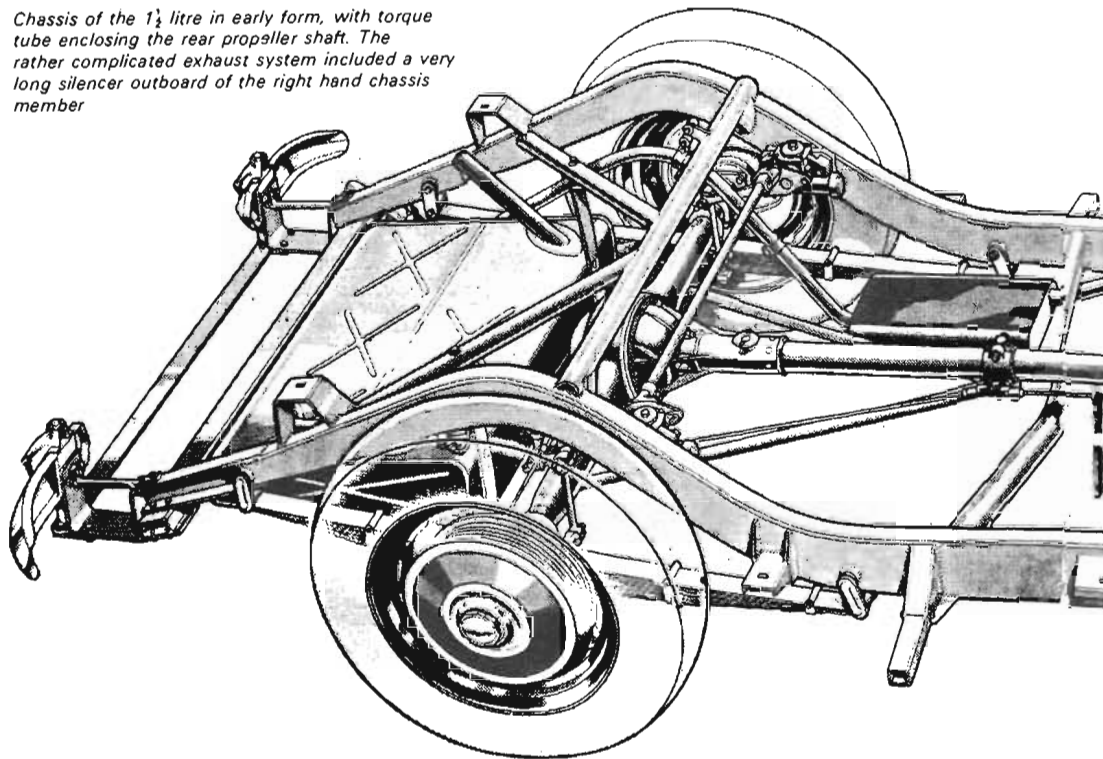
English car is lower overall, and, presumably, because of its separate chassis, two hundredweight heavier.

Mechanically, the two cars differ widely. The Riley's engine, of distinguished pre-war ancestry, is a 1½ litre twin cam unit with hemispherical combustion chambers delivering a very healthy 55 b.h.p. — exactly the same as the Citroen, with its additional 500 c.c.;

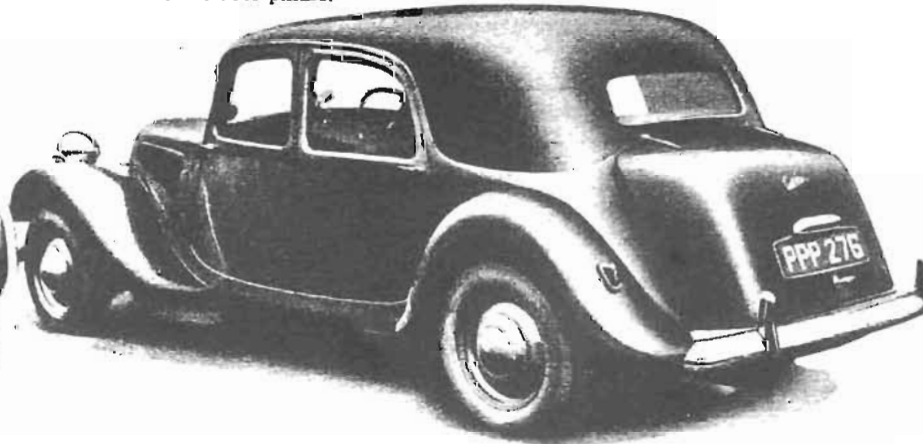
Max Millar's cutaway of the 1½-litre engine, dating from 1945. The chain camshaft drive replaced the gear drive used on pre-war units. The 2½-litre was essentially a scaled-up version.



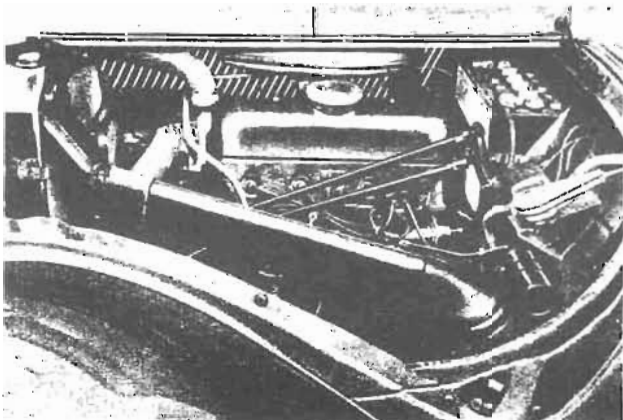
Chassis of the 1½ litre in early form, with torque tube enclosing the rear propeller shaft. The rather complicated exhaust system included a very long silencer outboard of the right hand chassis member



The exposed head lamps are an unusual feature today, but they are set high and give a powerful beam. The fog lamp is included in the standard equipment. An external luggage locker, hinged at the top, constitutes the first major change in appearance which Citroën have made for nearly eighteen years. There are twin tail and stop lamps in the wings and semaphore direction indicators in the centre door pillars.

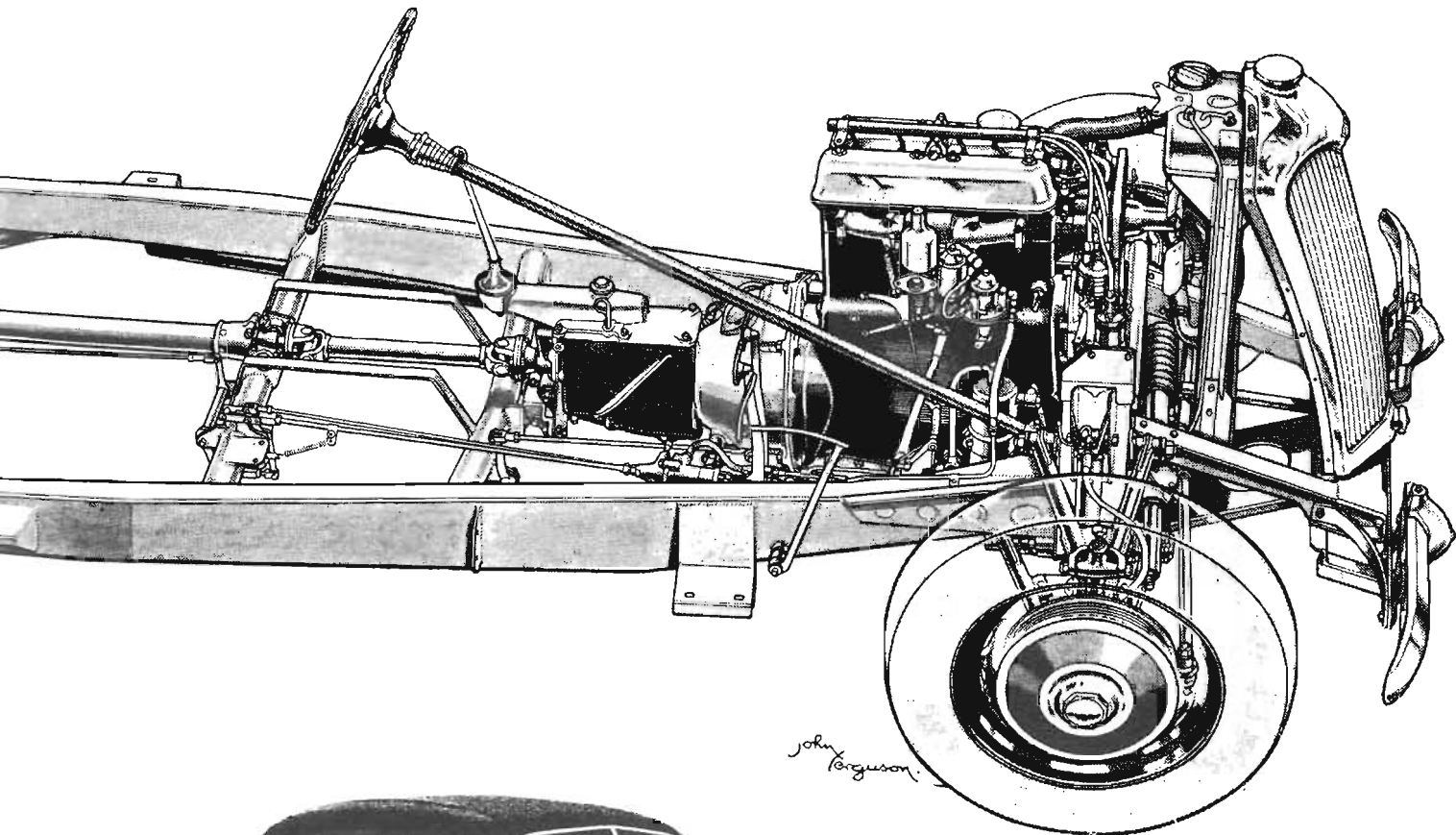


The bonnet is hinged on the centre line. One side opens to reveal the simple heater duct collecting warm air from behind the radiator. Oil and water fillers, fuel pump, distributor, plugs, coil, battery and wiper motor are all accessible. On the opposite side, carburettor, dynamo, starter, water pump, electrical junctions, brake reservoir and master cylinder can be reached with unusual ease.

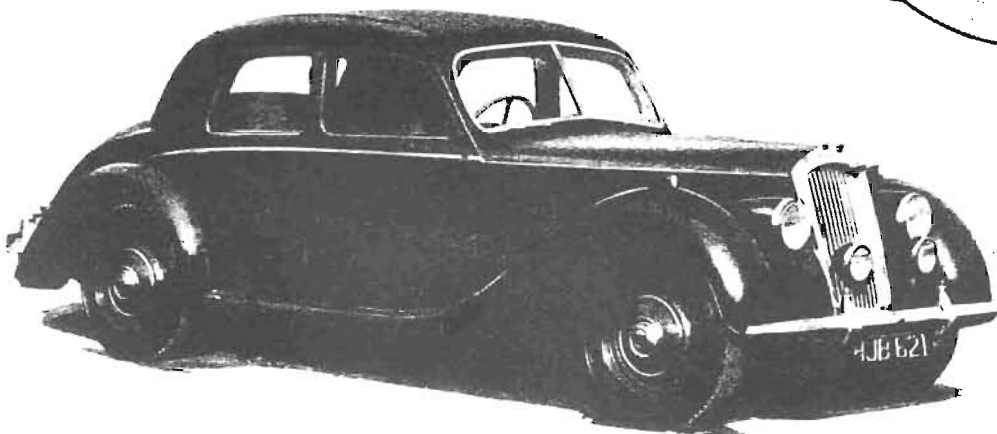


Behind the spare wheel a space capable of carrying considerable luggage is enclosed by the new locker lid. The interior is illuminated by the number plate lamp at night. Tools are carried in the well alongside the wheel.

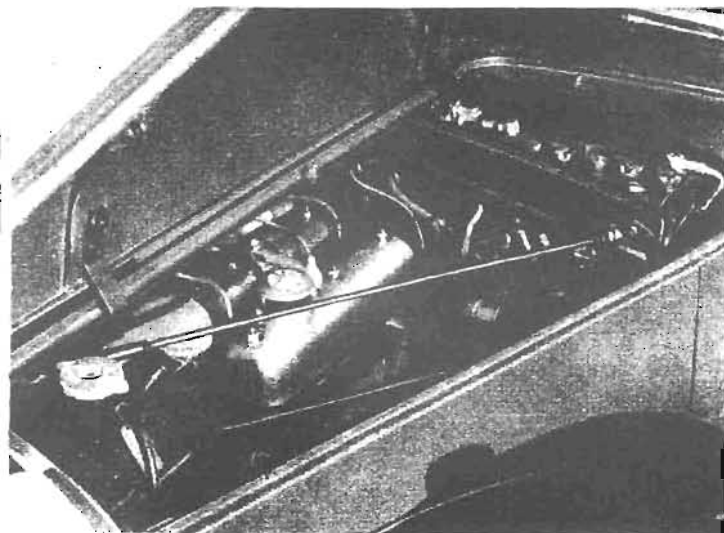




John Ferguson

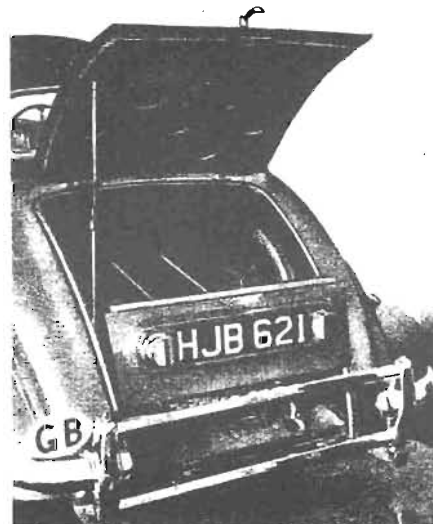


Like its larger brother, the 1½-litre Riley has sporting, rakish lines together with a traditional body style. The bright strip at the waist-line assists in increasing the impression of length.



Left: The compartment just in front of the bulk-head contains the battery on one side and the jack and tools on the other. Although the engine bay is well filled, the sparking plugs, together with the oil, water, and brake fluid filler caps, are all accessible.

Right: The luggage locker is adequate. A separate lower compartment contains the spare wheel, which slides out between the two bumper bars.



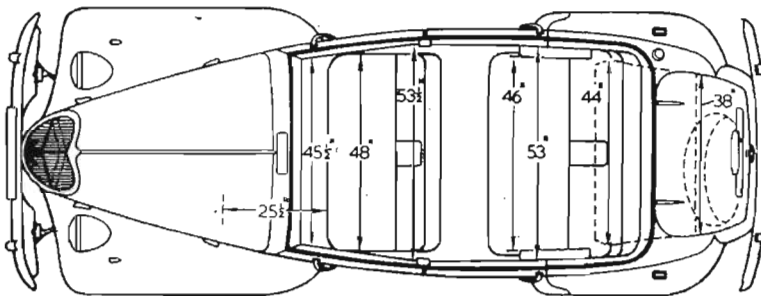
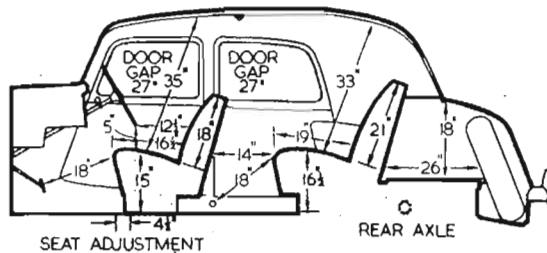
the long-stroke, agricultural o.h.v. French unit deriving the benefit of its greater capacity in having much greater torque. This it needs, however, since it has one speed less than the Riley, with a slow change imposed by the selector locks connected to the clutch action. Although its competitor has a conventional sporting floor change, 'Autocar' found the change stiff and the synchromesh on both cars easy to beat. The drive on the Nuffield product is taken via a Hotchkiss drive open propellor shaft arrangement to the rear axle in the conventional manner, and by this time our buyer might be less mistrustful of the Citroen's front

drive. He will have heard of the handling advantages conferred by such a system, but will wonder why no other manufacturer offers a large front-drive machine.

Discerning as he is, he will note that both saloons have rack and pinion steering; but it is in this department that the Traction is inferior, since, at 45 ft., its lorry-like turning circle is a full fifteen feet larger than the Riley's. It is lighter and more precise, though, and this seems to be the case as regards the pedal controls, too. Especially the brakes, for, despite having 25% greater braking area, the Riley's are both heavier and less efficient. Otherwise, their performance

CITROEN BIG FIFTEEN SALOON

WHEELBASE 10' 1 1/2"
FRONT TRACK 4' 10 1/2"
REAR TRACK 4' 10 1/2"
OVERALL LENGTH 15' 6 1/2"
OVERALL WIDTH 5' 10"
OVERALL HEIGHT 5' 1"



Measurements in these 1/2 in to 1ft scale body diagrams are taken with the driving seat in the central position of fore and aft adjustment and with the seat cushions uncompressed.

PERFORMANCE

ACCELERATION: from constant speeds.
Speed, Gear Ratios and time in sec.

M.P.H.	4.3 to 1	7.3 to 1	13.1 to 1
10-30	11.9	6.7	5.7
20-40	11.6	6.9	—
30-50	12.8	9.8	—
40-60	18.4	—	—

From rest through gears to:

M.P.H.	sec.
30	7.3
50	17.9
60	29.1

Standing quarter mile, 23.3 sec.

SPEED ON GEARS:

Gear	M.P.H. (normal and max.)	K.P.H. (normal and max.)
Top	(mean) 70.3 (best) 72.0	113.1 115.8
2nd	36-52	58-84
1st	16-32	26-51

TRACTION RESISTANCE: 23.7 lb per ton at 10 M.P.H.

SPEEDOMETER CORRECTION: M.P.H.

Car speedometer	10	20	30	40	50	60	70	80
True speed	10.5	18	26.5	35	44	52	62	72

TRACTION EFFORT:

	Pull (lb per ton)	Equivalent Gradient
Top	200	1 in 11.2
Second	347	1 in 6.4

BRAKES:

Efficiency	Pedal Pressure (lb)
88 per cent	100
79 per cent	50

FUEL CONSUMPTION:

23.6 m.p.g. overall for 806 miles (12.0 litres per 100 km).
Approximate normal range 22-26 m.p.g. (12.8-10.9 litres per 100 km).
Fuel, First grade.

WEATHER: Dry, cool, medium breeze.

Air temperature 43 degrees F.
Acceleration figures are the means of several runs in opposite directions.
Traction effort and resistance obtained by Tapley meter.
Model described in *The Autocar* of October 17, 1952.

DATA

PRICE (basic), with saloon body, £740.
British purchase tax, £412 12s 3d.
Total (in Great Britain), £1,152 12s 3d.
Extras: Heater £1 11s 2d.
Sliding roof £15 11s 1d.

ENGINE: Capacity: 1,911 c.c. (116.6 cu in)
Number of cylinders: 4.
Bore and stroke: 78 x 100 mm (3.07 x 3.93 in).
Valve gear: overhead, push rods.
Compression ratio: 6.5 to 1.
B.H.P.: 55.7 at 4,250 r.p.m. (B.H.P. per ton laden 40.9).
Torque: 90.4 lb ft at 2,200 r.p.m.
M.P.H. per 1,000 r.p.m. on top gear, 17.4.

WEIGHT (with 5 gals fuel), 23 1/2 cwt (2,632 lb).
Weight distribution (per cent) 53.4 F; 46.6 R.
Laden as tested: 27.2 cwt (3,046 lb)
Lb per c.c. (laden): 1.59.

BRAKES: Type: F, Leading and trailing shoes. R, Leading and trailing shoes.
Method of operation: F, Lockheed hydraulic. R, Lockheed hydraulic.
Drum dimensions: F, 12in diameter, 1.38in wide. R, 10in diameter, 1.38in wide.
Lining area: F, 49.62 sq in. R, 40.08 sq in (66 sq in per ton laden).

TYRES: 165 x 400 mm.
Pressures (lb per sq in): 20-22 F; 22-24 R.

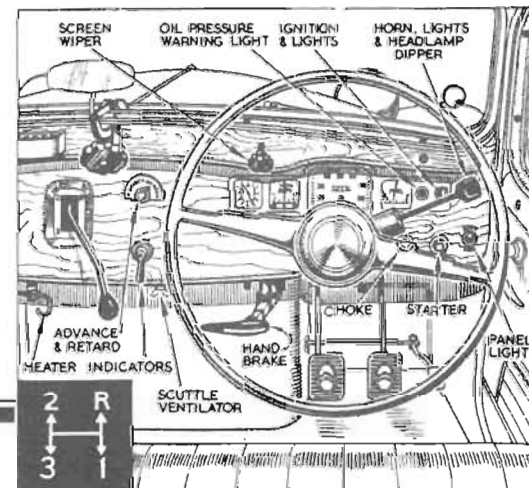
TANK CAPACITY: 11 Imperial gallons.
Oil sump, 8 pints.
Cooling system, 14 pints.

TURNING CIRCLE: 45ft (L and R).
Steering wheel turns (lock to lock): 2 1/2.

DIMENSIONS: Wheelbase 10ft 1 1/2 in.
Track: 4ft 10 1/2 in (F); 4ft 10 1/2 in (R).
Length (overall): 15ft 6 1/2 in.
Height: 5ft 1 in.
Width: 5ft 10 in.
Ground clearance: 7 in.
Frontal area: 20 sq ft (approx).

ELECTRICAL SYSTEM: 12-volt; 57-ampere four battery.
lead lights Double dip; 36-36 watt.

SUSPENSION: Front, Independent, torsion bars and wishbones. Telescopic dampers.
Rear, Torsion bars and trailing arms with solid axle beam. Telescopic dampers.



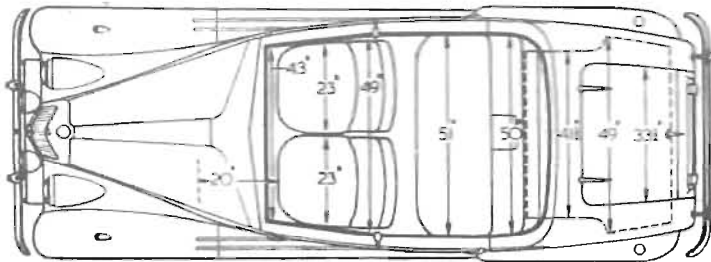
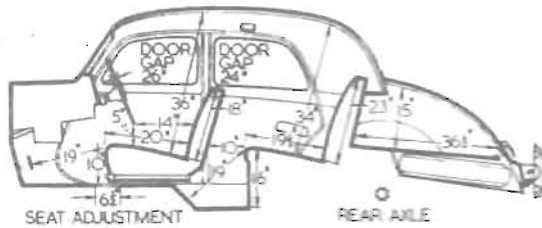
generally is similar, the Riley being a few m.p.h. faster and more accelerative by a fraction, and both returning identical fuel consumption. These statistics obviously reflect creditably on the English car's engine, having to pull 2.2 lbs. per c.c. as opposed to 1.6 lbs. per c.c. in the Citroën's case; the latter, however, being more lightly stressed, might be expected to have greater longevity.

What about the interiors? Both leather and woodwork, though the older design caters for six people, not four, its seats wider, its floor unobstructed and its rear legroom more generous and doors much

wider. It doesn't, however, offer an adjustable steering wheel, nor effective demisting facility, though its switchgear is less confusing and is, with deeper side windows, seemingly much less claustrophobic inside. Our man will notice the Riley's boot to be marginally more capacious, but will balance this against its inferior underbonnet accessibility. After a quick drive in both to confirm his impressions, he will undoubtedly, unless he is completely Francophobic or has an irrational desire for fake leather roofs, chrome strips and running boards, make the only logical choice -- and buy a Big Fifteen.

1½-LITRE RILEY SALOON

WHEELBASE 9' 4½"
FRONT TRACK 4' 4½"
REAR TRACK 4' 4½"
OVERALL LENGTH 14' 11"
OVERALL WIDTH 5' 3½"
OVERALL HEIGHT 4' 11"



Measurements in these ¼ in to 1 ft scale body diagrams are taken with the driving seat in the central position of fore and aft adjustment and with the seat cushions uncompressed.

PERFORMANCE

ACCELERATION : from constant speeds.
Speed, Gear Ratios and time in sec.

M.P.H.	5.125 to 1	7.585 to 1	11.736 to 1	20.372 to 1
10-30	11.9	8.5	6.2	—
20-40	12.5	9.2	—	—
30-50	14.1	10.7	—	—
40-60	17.3	—	—	—
50-70	25.9	—	—	—

From rest through gears to:

M.P.H.	sec
30	6.2
50	15.9
60	25.1
70	41.0

Standing quarter mile, 22.8 sec.

SPEED ON GEARS :

Gear	M.P.H. (normal and max.)	K.P.H. (normal and max.)
Top	(mean) 74.25 (best) 75.5	119.5 121.5
3rd	44-52	71-84
2nd	26-31	42-50
1st	14-19	23-31

TRACTIVE RESISTANCE : 23 lb per ton at 10 M.P.H.

SPEEDOMETER CORRECTION : M.P.H.

Car speedometer	10	20	30	40	50	60	70	80
True speed	10.5	19	28	38	48	57	66	75.5

TRACTIVE EFFORT :

	Pull (lb per ton)	Equivalent Gradient
Top	193	1 in 11.5
Third	265	1 in 8.4
Second	359	1 in 6.1

BRAKES :

Efficiency	Pedal Pressure (lb)
73 per cent	130
60 per cent	100
31 per cent	60

FUEL CONSUMPTION :

24 m.p.g. overall for 1,603 miles (11.8 litres per 100 km).
Approximate normal range 23-27 m.p.g. (12.3-10.5 litres per 100 km).
Fuel, First grade.

WEATHER : Fine, dry surface; very slight wind.

Air temperature 48 degrees F.

Acceleration figures are the means of several runs in opposite directions.

Tractive effort and resistance obtained by Tapley meter.

Model described in *The Autocar* of October 10, 1952.

DATA

PRICE (basic), with saloon body, £860.
British purchase tax, £479 5s 6d.
Total (in Great Britain), £1,339 5s 6d.
Extras: Radio £34 12s 10d.
Heater £27 10s 0d.

ENGINE : Capacity: 1,496 c.c. (91.25 cu in).
Number of cylinders: 4.
Bore and stroke: 69 x 100 mm (2.72 x 3.94 in).
Valve gear: Overhead; push rods and twin side camshafts.

Compression ratio: 6.8 to 1.
B.H.P.: 54 at 4,500 r.p.m. (B.H.P. per ton laden 36.8).

Torque: 76 lb ft at 2,500 r.p.m.
M.P.H. per 1,000 r.p.m. on top gear, 15.26.

WEIGHT (with 5 gals fuel), 25½ cwt (2,870 lb).
Weight distribution (per cent) 50.5 F; 49.5 R.
Laden as tested: 29½ cwt (3,284 lb).
Lb per c.c. (laden): 2.2.

BRAKES : Type: F, 2-leading shoe. R, Leading and trailing.
Method of operation: F, Hydraulic. R, Hydraulic.

Drum dimensions: F, 10in diameter, 1½in wide. R, 10in diameter, 1½in wide.
Lining area: F, 67.2 sq in. R, 63.05 sq in (89 sq in per ton laden).

TYRES : 5.75-16in.

Pressures (lb per sq in): 22-24 F; 24-26 R.

TANK CAPACITY : 12½ Imperial gallons.

Oil sump, 10 pints.
Cooling system, 13 pints (plus 1 pint if heater is fitted).

TURNING CIRCLE : 30ft 0in (L and R).
Steering wheel turns (lock to lock): 2½.

DIMENSIONS : Wheelbase 9ft 4½in.

Track: 4ft 4½in (F); 4ft 4½in (R).

Length (overall): 14ft 11in.

Height: 5ft 0½in.

Width: 5ft 3½in.

Ground clearance: 7½in.

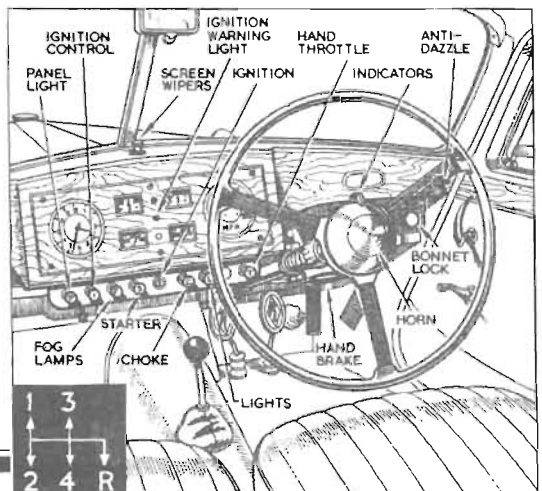
Frontal area: 20.85 sq ft (approx.).

ELECTRICAL SYSTEM : 12-volt. 51

ampère-hour battery.

Head lights: Double dip, 42-36 watt.

SUSPENSION : Front, Independent; wish-bones and torsion bars.
Rear, Half-elliptic springs.



Getting the Best Out of a 12-24 h.p. Citroën.

Hints on Care and Maintenance.

This is an article which should be carefully studied by all owners and prospective purchasers of this make. It is one of a series of informative articles of this nature that appear from time to time.

A LARGE number of 12-24 h.p. Citroën cars has been sold in Great Britain since this type was introduced at the last Olympia Show, and certain of these hints on care and maintenance also apply to the 11.4 h.p. chassis, so that they should be useful to numerous owner-drivers. The Citroën chassis, as is the case with most cars which have attained a wide degree of popularity, is both durable and easy to look after, so that maintenance work is reduced to a minimum. Lubrication is, of course, the most important point requiring periodic attention, and the instructions and chart issued by the manufacturers as a guide to the oiling and greasing processes are so complete that only a few of the more important operations need be mentioned here.

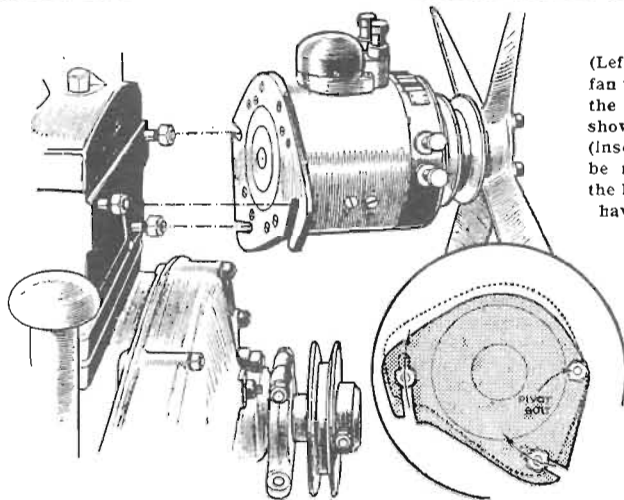
the engine. The quantity of oil contained in the sump is about seven pints when full. A device for regulating the oil pressure will be found on the off side of the crankcase to the rear of the magneto, this consisting of a screw and a lock-nut: turning the screw in a clockwise direction increases the oil pressure.

Chassis lubrication in general is simple enough with the aid of the chart provided, but there are several points which may escape attention and which should not be neglected. One is the clutch withdrawal ball-race, access to which is obtained by removing a sheet-metal cover on the clutch housing, after which a little thick oil should be smeared on the race. While this is being done, the clutch pedal should be depressed and the clutch shaft turned

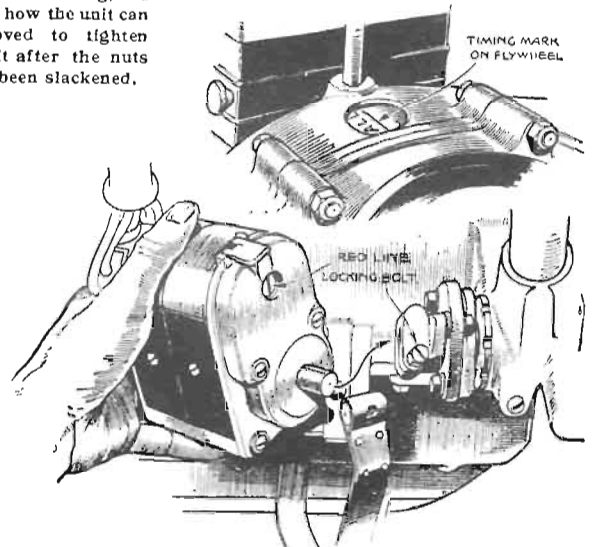
axle are so arranged that these parts cannot be over-filled and, in the case of the gearbox, the level should not be allowed to fall more than one inch below that set by the spout.

Engine Adjustments.

Reverting to the engine, there are various adjustments which it may be necessary to make from time to time. The dynamo is mounted at the front end of the cylinder block and carries the fan on its shaft, together with a V-pulley driven by a belt. The tension of this belt can be increased when necessary by slackening the nuts which hold the dynamo plate to the cylinder block and partially rotating the plate around one of its securing bolts, the other two being provided with slots which allow of this movement. It is important not to put undue tension on the belt, as this leads to bearing wear. Incidentally, the accumulators are neatly placed in the off-side valance



(Left) The dynamo and fan unit, detached from the cylinder block to show the mounting, and (inset) how the unit can be moved to tighten the belt after the nuts have been slackened.



(Right) Two drawings which show the positions in which the mark on the flywheel and the red line on the magneto should be set to time the spark when No. 1 cylinder is compressed.

As regards the engine, draining and refilling the crankcase is recommended at intervals of 1,000 miles, there being a drain plug on the sump. When attending to this matter it is as well to remove the cover plate in which the drain plug is situated so as to obtain access to a circular oil filter, which should be cleaned. The oil-pressure indicator on the dash takes the form of a disc with fan-shaped slots which should show black when the engine is stationary and white when it is running.

Priming the Oiling System.

Immediately after refilling the sump the indicator may sometimes not function, and in this event the union nut which connects the oil pipe leading to the indicator to a tube inserted in the crankcase should be disconnected and some engine oil injected into this tube by means of a syringe for priming purposes.

Failure of the oil indicator to register at other times usually means that the oil level in the engine has fallen too low and this can be checked by the level indicator, which will be found on the crankcase on the off side and which consists of a pivoted arm worked by a float: the sump is full when the arm has moved over towards the front of

by hand until a hole appears, through which oil should be inserted for conveyance to the spigot bearing. Lubrication should not be overdone, or oil may reach the clutch plates, which should run in a dry condition.

A pair of oil holes which may escape attention are those situated at the ends of the central braking cross-shaft, where it is carried in bearings secured to a cross-member; to reach these it is necessary to lift the front-seat cushions. There is also an oil hole in the outer bearing of the starter-motor pinion.

Gargoyle Mobiloil is the lubricant recommended by the manufacturers; grade A being used for the engine, both in summer and winter, while grade C is employed for the gearbox, rear axle and chassis bearings. An oil-gun is included in the equipment and connections to which it can be applied are fitted to all the principal points. The filling spouts on the gearbox and back

and should, of course, be replenished with distilled water from time to time.

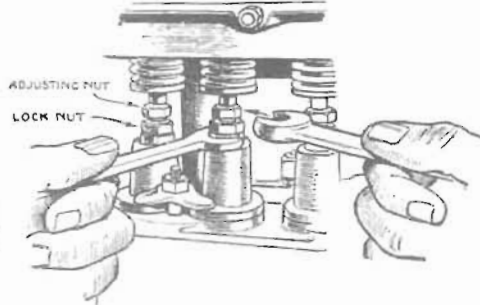
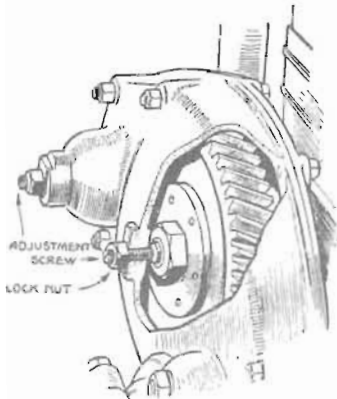
The timing gears consist of helical-toothed pinions and require no mesh adjustment, but should any end-play develop in the camshaft, or magneto drive shaft, this can be taken up by means of left-handed screws, fitted to the timing gear cover and provided with lock-nuts, which bear against hardened pads at the ends of the shafts. The screws should be turned until they just bear on the ends of the shafts without exerting any great pressure and should then be locked by the nuts.

Side-by-side valves are situated on the near side of the engine and are operated from the camshaft by mushroom-headed tappets, access to which is obtained by removing a cover. Each tappet is provided with a hexagon-headed screw and lock-nut for adjusting valve clearances; there is also a pair of flats on the body of the tappet

for the purpose of holding it against turning while the adjustment is being carried out.

The makers recommend that the clearances should be set when the engine is quite cold and these should be eight-thousandths of an inch for both exhaust and inlet valves. Needless to say, the valves should be set in pairs, bringing each cylinder in turn to the compression stroke, when both valves are closed; the firing order is 1, 3, 4, 2.

If a valve spring should become fractured it is possible to remove it



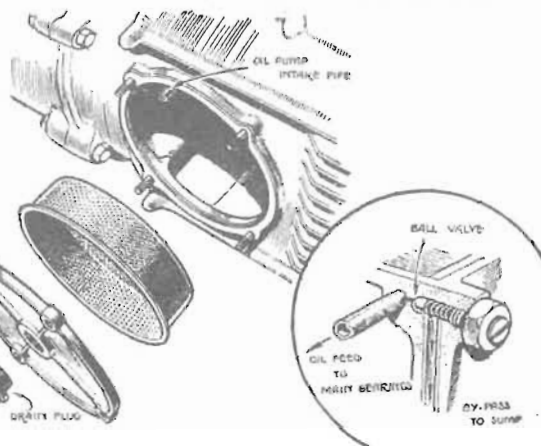
(Left) Left-handed screws are fitted to the timing cover to take up end-play in the shafts. (Above) How to adjust the tappets.

without taking off the cylinder head if the tappet is screwed down to the full extent, this giving sufficient clearance to enable the spring to be taken out and another fitted. The timing provided by the camshaft is such that the inlet valve should just commence to open and the exhaust valve be simultaneously just closing when the piston is at top dead centre.

Fixed ignition is employed, and should it be necessary at any time to retune the magneto, this can very readily be carried out, thanks to the various indications provided. The clutch cover should be removed and the engine turned until the piston of

to state that the instrument is a Solex is sufficient to show that the operation of cleaning it, or clearing a jet, is as simple as could well be imagined. As most people are aware, it is only necessary to slacken a large hexagon-headed nut, whereupon the float chamber and jet carrier can be detached and the jets removed if need be.

(Right) The drain plug, cover plate and filter fitted to the underside of the sump and (inset) the oil-pressure relief valve which is placed on the side of the crankcase.



(Left) The clutch, showing the screws provided for the adjustment of spring pressures and the setscrew fitted to the lever operating the withdrawal gear and bearing against the lever secured to the clutch pedal shaft.

this the cylinder-head nuts should be unscrewed, the magneto wires disconnected and the sparking plugs removed. If the two nuts holding the radiator be loosened it will be found possible to rock the radiator forward through an angle sufficient to enable the cylinder head to be lifted off its studs clear of the water connections. The combustion chambers and piston heads can then be cleaned in the ordinary way.

Grinding-in the Valves.

It is as well to take the opportunity of grinding-in the valves, for which purpose all the valve springs must be removed, and it will be as well to screw down all the tappets, so as to ensure a generous clearance during the grinding process. It is advisable to use a special tool when removing the valve springs, because the rough-and-ready method of employing a lever is apt to bend the valve stems.

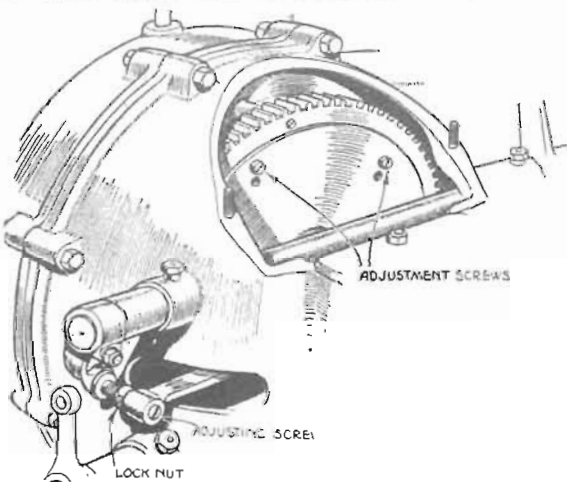
As little grinding paste as possible should be used and, of course, all traces of the abrasive compound must carefully be cleaned away before assembling the engine. The old gasket should not be used, even if it appears to be in good condition, because it always pays to fit a new one, both sides of which should be dressed with gold-size or boiled linseed oil. If the gasket does not drop down readily over the studs the holes should be eased slightly with a file and on no account should the gasket be forced into place.

Having fitted the gasket, the cylinder head can be dropped over the studs and all the nuts screwed down so far as is possible with the fingers. They can then be tightened gradually with a spanner, starting with the middle nut of the centre row and working outwards, recommencing the process for a

final tightening when the ends have been reached. After the engine has been run for a short time the nuts can probably be tightened again with a spanner.

Turning to other adjustments, the clutch should require but little attention; if it should tend to slip it may be washed out with petrol to clear oil from the friction surfaces. When the clutch cover is removed it will be seen that there are six setscrews provided, by means of which the tension of the six clutch springs can be increased if need be, care being taken to turn each screw to an equal extent.

The movement of the pedal is conveyed to the spindle operating the withdrawal gear through a pair of



umber one cylinder is on the compression stroke; when this stroke is nearly complete it will be found that a mark on the flywheel (stamped A.L.I.) will register with another on the edge of the casing, the piston being then about 3 mm. from top dead centre. Having set the crankshaft in this way the magneto driving coupling

Incidentally, the gravity feed tank under the scuttle contains a reserve supply of one gallon, which can be released by the driver at will.

Decarbonizing the engine is a process very easy to carry out, the first step being to drain the radiator and disconnect the hose joining the outlet pipe to the cylinder head; following

CITROEN.—Contd.

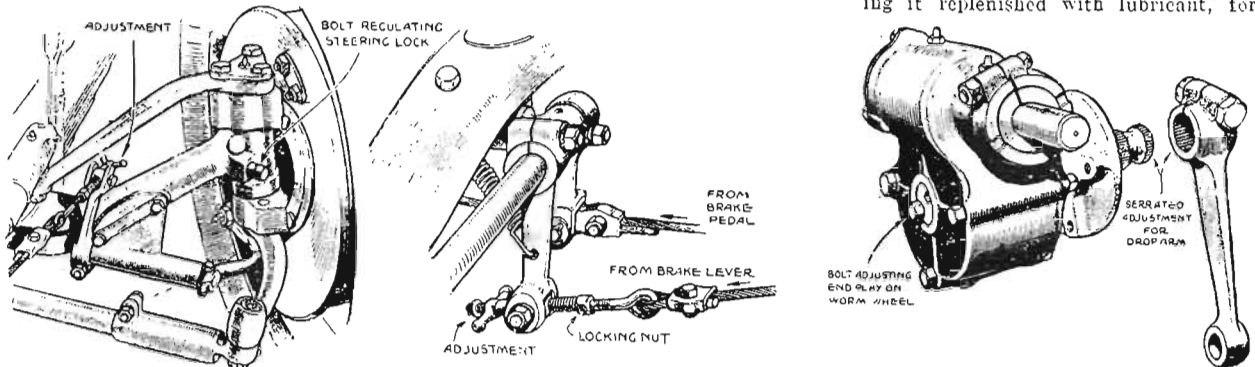
interacting levers placed to the near side of the clutch housing, and one of these is provided with a setscrew for adjusting the relative positions of pedal and withdrawal gear. It is worth noting that, before carrying out any work on the clutch or gearbox with metal tools, it is advisable to disconnect the cable which runs from the starter

the drop arm, which is mounted on serrations, turning the wheel and then replacing the arm in a new position.

A separate adjusting nut is provided adjacent to each of the four brakes operating on the wheels, by means of which they can be independently set to the correct clearance, this process being carried out with both axles jacked up and the pedal held in the "on" position by means of packing.

The removal or either the front or rear brake drums is hardly a job which the ordinary owner-driver should tackle, as a special extractor is required to withdraw them. Should he decide to carry out the work, however, it is essential that before commencing operations the adjusters on the brake cables should fully be slackened.

There is but little the owner-driver should do to the rear axle beyond keeping it replenished with lubricant, for



(Left) The front-wheel brake, showing the adjusting nut, and the bolt by means of which the lock can be set as it constitutes a stop. (Centre) A second brake-adjusting nut is placed under the front seats close to the end of the main braking cross-shaft. (Right) On the steering box there are two adjustments for end-play—a bolt and a locking ring—and in addition the drop arm can temporarily be removed and the worm wheel turned to a new position.

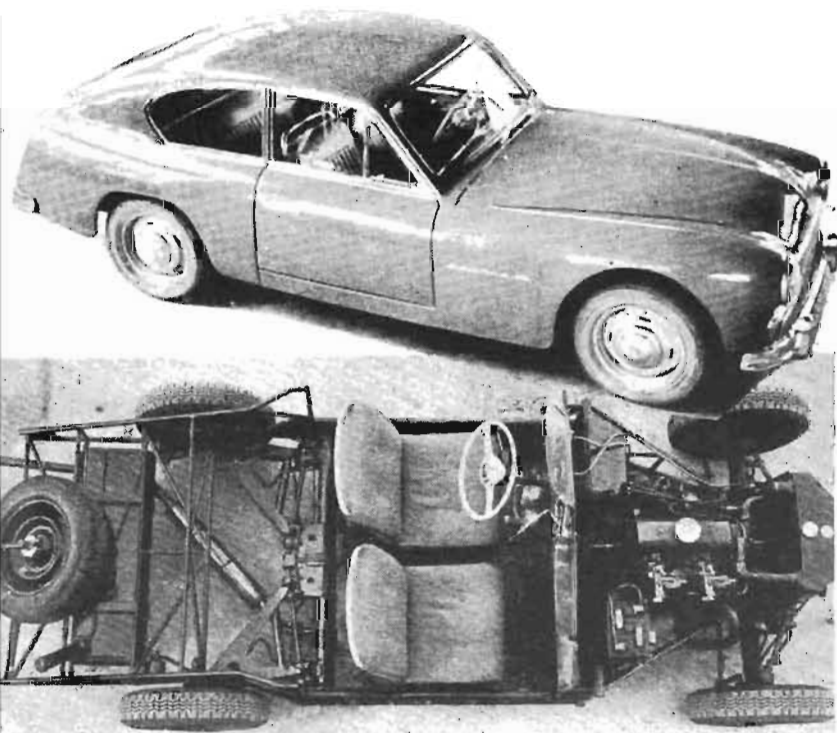
switch to the battery, in order to avoid risks of a short-circuit.

Any undue play in the steering gearbox can be adjusted by turning a large nut near to the base of the column which adjusts a thrust washer, and after the car has seen long service a fresh portion of the worm wheel can be brought into use by disconnecting

In the ordinary way, however, it should be sufficient to take up wear in the pedal-operated system by means of the central adjustment provided, which is situated on a lever near to one end of the main braking cross-shaft, beneath the front seats. Here, also, there is a hand-nut for adjusting the hand-brake system.

although adjusters are provided for setting the mesh of the bevel pinion and crown wheel without dismantling the axle, this job is best left to an experienced mechanic. We mention it here because it is as well that the owner should know that the mesh can be adjusted should prolonged use eventually lead to noise and wear.

A G.T. TRACTION



There is little externally to identify the coupe pictured here as a Traction derivative—yet that is exactly what it is, and a little-known one at that. As can be seen from the chassis illustration, underneath the clean, understated elegance of a surprisingly modern-looking 'carrosserie', there lie reassuringly familiar mechanicals and front-end arrangements.

The car is a type D.7 M.E.P., built in small numbers at Albi in 1953 by one Maurice E. Pezous (hence the marque's name). The 1,911 cc. motor we know so well nestles in an entirely new lightweight tubular steel space-frame—the only visible Citroen component aft of the bulkhead being the fuel tank. In this application, however, the engine, with ported head, twin carbs and duralumin alloy con rods, pushes out 80 b.h.p. (at 4,500 r.p.m.)—a good 25% more than the standard unit.

The suspension, independent all round, employs Citroen torsion bars, though the trailing arms at the rear—in lieu of dead axle—are totally different and are the subject of Pezou patents. The customer could either specify the standard gearbox, with a choice of four axle ratios, or a MAAG-Cotal electromagnetic four-speeder. On top cog with the delectable latter option, an honest 90 m.p.h. was claimed as possible—a believable figure, bearing in mind that the overall weight was pared down to 1100 Kgs, and that the Cx of the all-steel shell must be a fraction of a Light Fifteen's.

A truly sporting Citroen, then, of considerable breeding—a tractionniste's Aurelia. Have any survived?

Correspondence

Dear Sir,

We have pleasure to ask you friendly with this letter if you and your Clubmembers will help us at our strictly personal collection of all Types from CITROËN Cars.

This collection is as COLOUR-SLIDES (35 and 36 mm. Film) and PHOTOGRAPHS of all Types CITROËN Cars from 1910 to 1960. (communicate the Type and year of building from the Car please)

No to day we thank the Citroën drivers from the whole World wo have send us one or more Colour-slides and Photographs and we are very happy if you will help us with this to very good Souvenir from your Club in England!

We hope that we may have an answer and we wish your "Traction Owners Club" much success!

Yours faithfully,

J. M. Spileers
Evergemse Stwg.258,
B.9030 Wondelgem/Gent,
Belgium

Dear Reg and Ginny,

I have just received the latest "Citroënian" and learned of the 1931 Citroën in Essex.

Being unable to attend TOC meetings I am therefore making a proxy proposal that we acquire said vehicle for the same purposes as we had in mind for a T45/32 lorry, namely transportation of bodies to continental Traction events and possibly even vehicles (as used by racing teams) – last weekend I encountered an elderly AEC S.W.B. single decker thus fitted out, complete with bar dispensing real ale!

Anyway, do I have a seconder? [Yes! Ed.] I appreciate, from the photo, that the bus is in a rather sad state of repair and that the body will require refurbishing – but the initial outlay is likely to be far less than that for acquiring a lorry in running order in France and bringing it back to G.B. The cost of restoring it to respectable order could be defrayed over a much longer period of time. The type of bus is illustrated in the "Quai de Javel" book; I believe that they were painted brown with yellow stripes down each side.

It is easy for me to sit up here and make such a proposal, I know – having no regard to the question of who can store the vehicle etc., but I think we should consider the matter. As far as the body is concerned, the problem would be solved by finding a retired fish 'n chip bus on an old Bedford chassis or something, and grafting it onto the Citroën chassis.

Regards,
Walford Bruen.

P.S. The bus would be eligible for HVCC London to Brighton run!

Classified

WANTED – set of hub caps for Light 15, part painted/part chromed type. Also a set of guards for front wings. C. MacCallum, 7 Bossuile Terrace. Portree, Syke. (Tel: Portree 2500).

John Austin and Fred Annells are selling the remainder of their spares – anyone interested in making an offer for the lot should contact John Austin, Wellington House, High Street, Shurrel Heath, Southampton.

FOR SALE: Front outer-wheel bearings. Contact Mark Navin, Citroën Car Club of Victoria, 1 Alexander Street, Box Hill, Victoria 3128, Australia, for further details. State model and year of your car when writing.

FOR SALE "CITROËN" spare wheel cover embellishments. Made to the same pattern as the originals in chrome plated brass. Fit into existing two holes on wheel cover – £6.50 each, plus postage. C. Moss, 35 Manor Road North, Hinchley Wood, Esher, Surrey. (01 - 398 - 3176).

FOR SALE: An original and totally unrusty French Big 15. A big boot model, in sound everyday condition. About £800. Tel: Lewes 71849 or Brighton 400277.

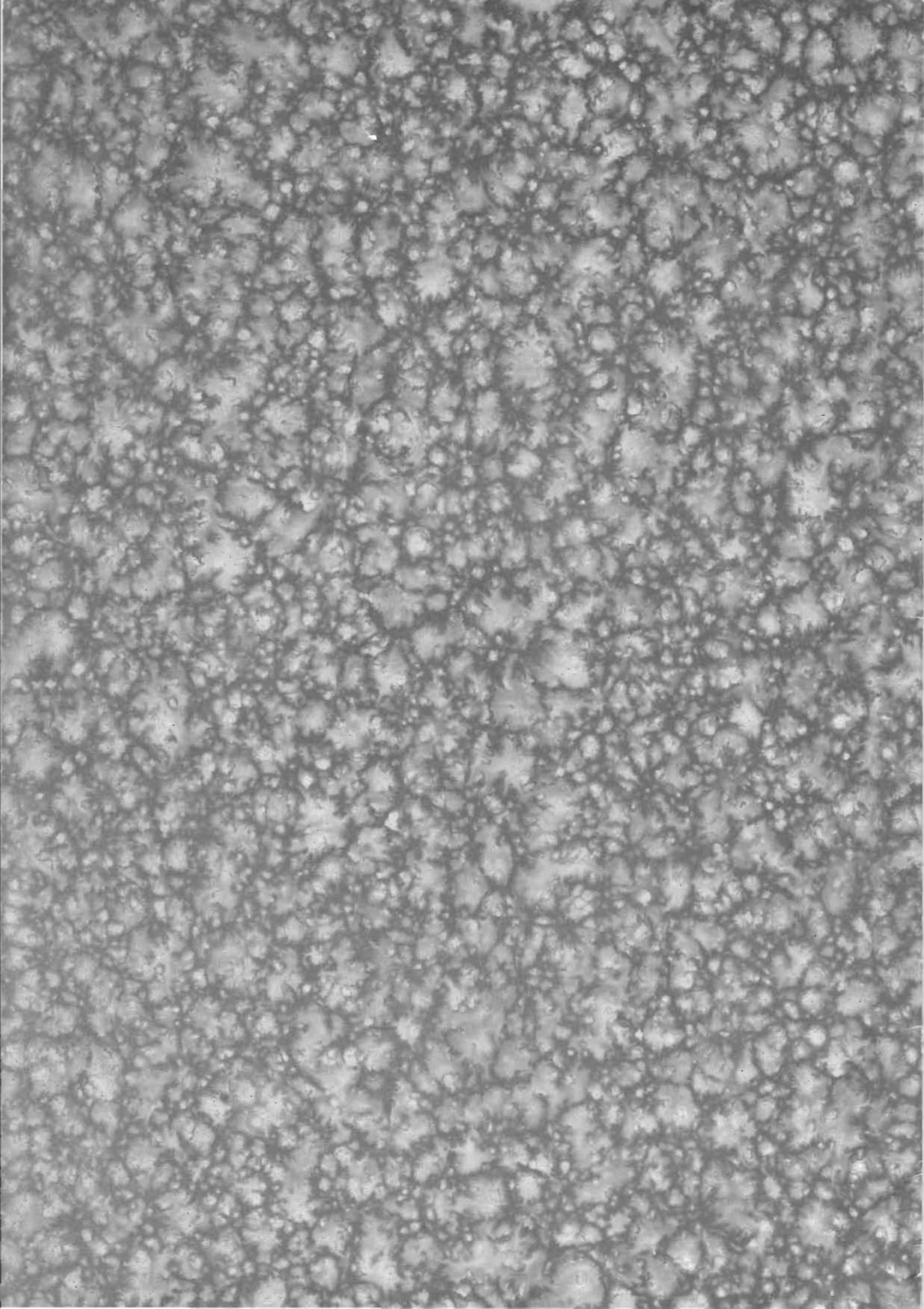
CLUB MANUALS for all models are available for loan from the Secretary, £1 p & p., together with a cheque for £20 as a deposit (returnable able of course).

Evening classes at Highbury Grove Institute, London, N1 in "Vintage Car Metalwork" (alias traction maintenance!) recommence on 20 September. Classes are run Tuesday 7–9.00 pm. at a cost of £2.50/term or £7.00 for all 3 terms.

Pub meetings each Tuesday at 9.15 pm. will resume at the Canonbury Tavern, Canonbury Park, N1. If you are interested in joining the class for the first time, or just want a chat, drop into the pub.

Whilst every effort is made to ensure the accuracy of the information and advice given in the technical articles in this magazine and the replys to readers enquiries, neither the Citroen Car Club, T.O.C or the officers and members there of or the authors accept any liability whatsoever for such information and advice.





OBJECTS OF THE TRACTION OWNERS CLUB

The objects of the Club are to promote interest in pre-1957 water-cooled Citroen cars, and to promote and foster fellowship between the owners of such cars. These objects to be achieved by the publication of a magazine and the organising events for the mutual advantage of members. Where possible the Club will aim to provide spares and service facilities for members cars.

Rules of the Club

1. The Name of the Club shall be the Traction Owners Club, hereafter referred to as the Club.

2. Constitution: Ladies and gentlemen of not less than 17 years of age shall be eligible for membership. The membership shall consist of (a) Honorary Members; (b) Ordinary Members.

3. Management: The authority and responsibility for the transaction of the business of the Club shall be vested in a Committee.

4. Election of Officers: The President and Vice-President of the Club, the Treasurer, Secretary, and where appropriate, other Committee members, shall be elected at the Annual General Meeting, and subject to termination of office by resignation at the next AGM following their appointment. The Committee will have the power to co-opt members as they deem necessary. The retiring officers and other members of the Committee shall be eligible for re-election.

5. Committee: The Committee shall consist of not less than eight and not more than eighteen, exclusive of the President, Vice-President, Treasurer and Secretary, who shall be ex-officio members of the Committee. The Committee shall elect from among its own members a Chairman and Vice-Chairman. One half of the Committee shall form a quorum. Nominations of candidates for election to the Committee must be received by the Secretary not less than seven days before the AGM with an intimation in writing, signed by each member nominated, that he or she is willing to serve. Nominations of candidates shall also be signed by the member proposing them, who shall not be their spouse.

6. Meetings of the Committee: The Committee shall meet whenever summoned by the Secretary who may convene a meeting of his or her own accord, or shall do so by direction of the Chairman, or on a requisition signed by not less than half the Committee.

7. Absence from the Committee: Any member on the Committee who shall without sufficient reason absent himself or herself from three consecutive Committee meetings, will be understood to have resigned his or her position.

8. Secretary: It shall be the duty of the Secretary or his or her deputy to attend all Committee meetings and to take minutes of the proceedings. Such minutes shall be entered in a book and presented for confirmation at a following meeting.

9. Banking: It shall be the duty of the Treasurer to account for all the moneys of the Club in the name of the Club, and no disbursements other than those needed for the normal day to day running of the Club shall be made without consent of the Committee. Only Club signatories approved by the Committee may spend money on the Club's behalf for day to day expenses, without prior consent of the Committee.

10. Voting at a Committee Meeting: Each member present shall be entitled to exercise one vote. The Chairman or acting Chairman shall not vote except in the case of a casting vote. The Committee shall vote by ballot if any one member present so demands. A majority vote will be binding.

11. Subscriptions: Subscriptions shall fall due on the first day of April each year in full. The Committee reserves the right to alter the subscription rates as necessary, without recourse to balloting the

membership.

12. Honorary Members may be elected by the Committee; i.e. all members of the Royal Family, any person distinguished by their civic, scientific, literary, industrial, and administrative capacities, and those who have distinguished themselves in promoting the cause of motoring or of the Club.

13. Spouses of fully paid up members may become joint members, entitling them to the right to vote at the AGM and to participate in club business and functions, and to serve if elected on the Committee. They will not be entitled to an additional magazine. Any spouse wishing to take advantage of this option must inform the Secretary in writing. Joint membership will then stand for all periods in the future providing one spouse is a fully paid up member and unless the Secretary hears to the contrary.

14. The Committee reserve the right if it be in the interests of the Club to refuse membership. The Committee also reserve the right to expel members on the same grounds, providing the said member has been given at least seven days warning to offer explanation of his conduct. The Committee shall vote and the expulsion is only valid if the majority is at least two-thirds of those present against the member retaining his or her membership.

15. The Annual General Meeting: The AGM of the Club shall be held each year upon a date and at a time to be chosen by the Committee. The AGM shall:

- (a) Receive from the Committee a full statement of accounts duly audited, showing receipts and expenditure for the year ending 31st March.
- (b) Receive from the Committee a report of the activities of the Club during the year.

- (c) Elect the President and Vice-President, and the Secretary and Treasurer of the Club, and, if appropriate, the Solicitor and Auditor.
- (d) Elect the Committee.
- (e) Decide on any resolution, which may be duly submitted to the meeting as hereinafter provided.

16. Special General Meetings may be convened by direction of the Committee, or on a requisition to the Secretary stating the business for which the SGM is required, signed by not less than 12 members. If the meeting so requisitioned is not convened within 21 days without good reason, the said 12 members may convene such a meeting. Fifteen members shall form a quorum.

17. At least 21 days notice of all General Meetings shall be given but the non-receipt of such a notice shall not invalidate the proceedings.

18. When members wish a matter to be discussed at an AGM, the text of such matter shall be sent to the Secretary not less than 14 days before the AGM.

19. Every person present at the AGM with a right to vote (i.e. fully paid up members and spouses if the latter have previously notified the Secretary of their wish to be joint members) will be entitled to one vote per item. The Chairman will not vote except in the case of a casting vote.

20. At any General Meeting not less than 12 members may demand a poll, thereupon the meeting shall be adjourned by the Chairman and a new time and place chosen by the Chairman. The postal vote should be taken by all members and the decision of the postal vote reported to the adjourned meeting.

21. Observance of the rules and interpretation: Every member binds himself to abide by the rules of the Club and also by any modifications thereof made in conformity with such rules, and also to accept as final and binding the decision of the Committee in all cases of dispute or disagreement as to the interpretation of these rules.

22. Use of Club name and address: The name and address of the Club shall not be given by a member as his address for trade, advertising or business purposes or in connection with any legal proceedings.

23. Any alteration of these rules may be made at an AGM providing that the said alteration is on the Agenda for the said meeting, and providing the alteration is

passed by a two-thirds majority of those present and voting. The Committee reserve the right to alter the rules if necessary in the best interest of the Club without recourse to balloting the membership, provided the alteration is passed by a two-thirds majority of the Committee voting.

24. Every member shall be furnished with a copy of the rules.

25. Events: All motoring competitions organised by the Club shall be held under the Rules and requirements of the RAC MSA Ltd. It follows that the TOC shall be a paid-up contributor to the RAC MSA Ltd whenever it wishes to organise such competitions.

26. Any member convicted of an offence arising out of his being in charge of a motor vehicle in any Club event or on Club business may thereupon be liable to expulsion under the Rule 14, and under no circumstances will the Club be held liable for any part of the offence.

27. Dissolution: The Club may be dissolved by a Special General Meeting convened by direction of the Committee, or on the requisition of the majority of the members. If the resolution of dissolution be duly passed, the Committee shall forthwith liquidate the affairs of the Club, and if there be any surplus assets on realisation, these shall be disposed of at the discretion of the Committee.

SUPPLEMENT TO BASIC CLUB RULES Spares and Services Levy

1. In addition to its basic membership subscriptions, the TOC shall be able to collect a fund of money to be known as the Spares Levy. This can be regarded as a means of investment for members, as its sole purpose is to provide a fund which the Club shall use to purchase, manufacture, or otherwise obtain spare parts, tools or other specialist items or services which are necessary to repair, restore or keep running the vehicles in which the Club's interests lie. This is considered necessary because such parts and services are known to be unobtainable from usual motoring sources.

2. The Spares Fund shall be used solely to run a Spares Scheme for the Club, which will be carried out by the TOC Committee or their appointed Spares Co-ordinator.

3. The fund may be contributed to optionally, by any TOC member, who will receive a Fund card as receipt.

4. The contribution to the Spares Fund is payable once only by any member.

5. The Fund contribution shall be 1½ times the membership subscription which is payable at the time the member joins the Spares Fund Scheme. The Fund's subscriptions are thus reviewed at the same time as the membership subs.

6. Contributors to the Spares Fund can expect to pay preferential prices for those spares and services provided through the Scheme.

7. Contributors to the Fund whose TOC membership lapses are no longer eligible to purchase goods at Fund prices.

8. Members who rejoin the TOC after a lapsed membership automatically regain the right to purchase at Fund prices.

9. Members may be asked to provide proof of current TOC membership and their Fund card when purchasing at Fund prices.

10. The sale of, and price structure for goods and services under the Spares Fund, will be entirely at the discretion of the Committee and/or Spares Co-ordinator.

11. Purchase of, or other means of obtaining parts or services for sale in the Spares Scheme shall be at the discretion of and by agreement with the Spares Co-ordinator and the TOC Committee, and money shall not be spent without their general consent. They will aim to use the Fund in the best interests of the Club and the Spares Scheme.

12. The sale of all parts or services shall aim to generate a profit in order to perpetuate the Scheme.

13. The sale of spares and services to non-Fund, and non-TOC members will be permitted. This will be entirely at the discretion of the Spares Co-ordinator and/or TOC Committee, based on there being supplies of the item sufficient for Fund contributors as well as non-contributors and non-TOC members. Where supplies are sufficient, these will be sold at basic prices to non-Fund Club members and at a 20% surcharge to non-TOC members.

14. A member's Spares Fund contribution is not transferable to another member in any circumstances.

15. Members may face expulsion from the Spares Scheme under the same conditions as described in the basic Club Rules (Rule 14).

The expelled member's Spares Fund contribution will not be refunded.