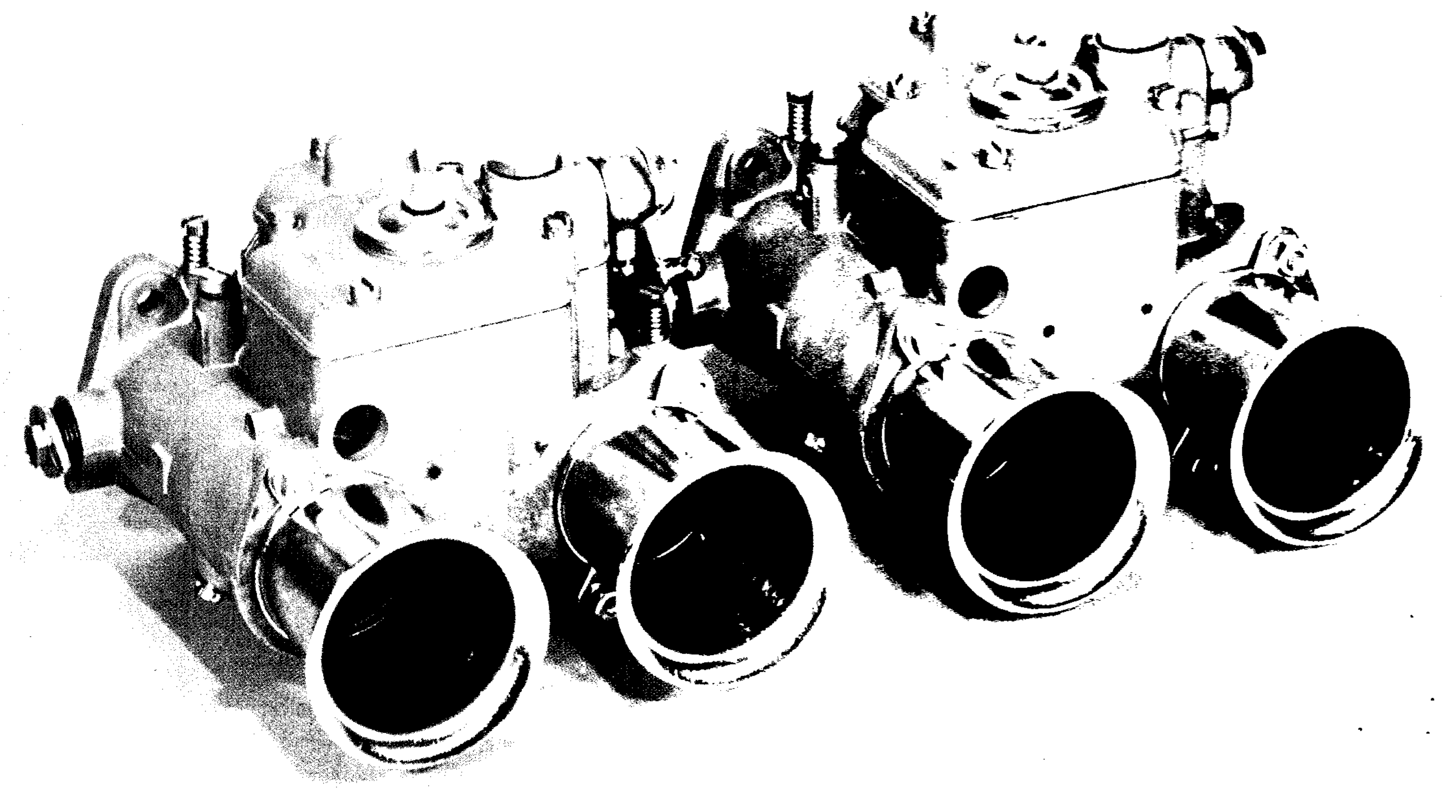
WEBER CARBURETTORS

Tuning □ Overhaul □ Specification tables
Popular carburettor types □ to 1979

Owners Workshop Manual



Weber Carburettors Owners Workshop Manual

by J H Haynes
Member of the Guild of Motoring Writers
and A K Legg T Eng (CEI), AMIMI

Types covered:

DAF, DCD, DFA, DFV, DFD, DFE, DFM, DFT, DGV, DIF, IDA, IDF, IDS, IDT, DCNF, DCOE, DFAV, DFTA, DGAS, DGAV, IDAP and IDTP carburettors

ISBN 1 85010 061 6
ISBN 1 85010 020 9 (US)

ABCDE
FGHIJ
K

2

Printed in England *(393-7M3)*

Haynes Publishing Group
Sparkford Nr Yeovil
Somerset BA22 7JJ England

Haynes Publications, Inc
861 Lawrence Drive
Newbury Park
California 91320 USA

Acknowledgements

We are indebted to Martin Goodall of Weber Carburettors (UK) Limited, Sunbury-on-Thames, Middlesex, for supplying technical material and for being so helpful with advice and the supply of carburettors used during the compilation of this Manual.

Special thanks must also go to a number of people who were kind enough to lend us carburettors and supply technical information. They include Garry Pollard of Long Beach, Califor-nia; Josh Sadler of Autofarm, Amersham, Bucks; Terry Batchelor of the Crewkerne Tyre Company, Crewkerne, Somer-set; Robin Gould of Pilton Garage, Pilton, Somerset; Pete Wareham of Corville Auto Engineers, Babylon Hill, Sherborne, Dorset; Graham Briginshaw of Western Services, Bristol; Jonathan Evans of the Ilminster Motor Company, Ilminster, Somerset; Tony Bishop of Autoconti Limited, Southwick, Trowbridge, Wiltshire; Martin Hudson and our Chairman John Haynes.

We are also grateful to the Ford Motor Company (GB) Limited, the Champion Sparking Plug Company who supplied the illustrations showing the various spark plug conditions and also to Messrs Derringtons of Kingston, Surrey.

Last, but not least, thanks are due to all of those people at Sparkford who helped in the production of this Manual. Particularly Brian Horsfall and Les Brazier who carried out the mechanical work and photography respectively, Chris Rogers who edited the text and Stanley Randolph who planned the layout of each page.

About this manual

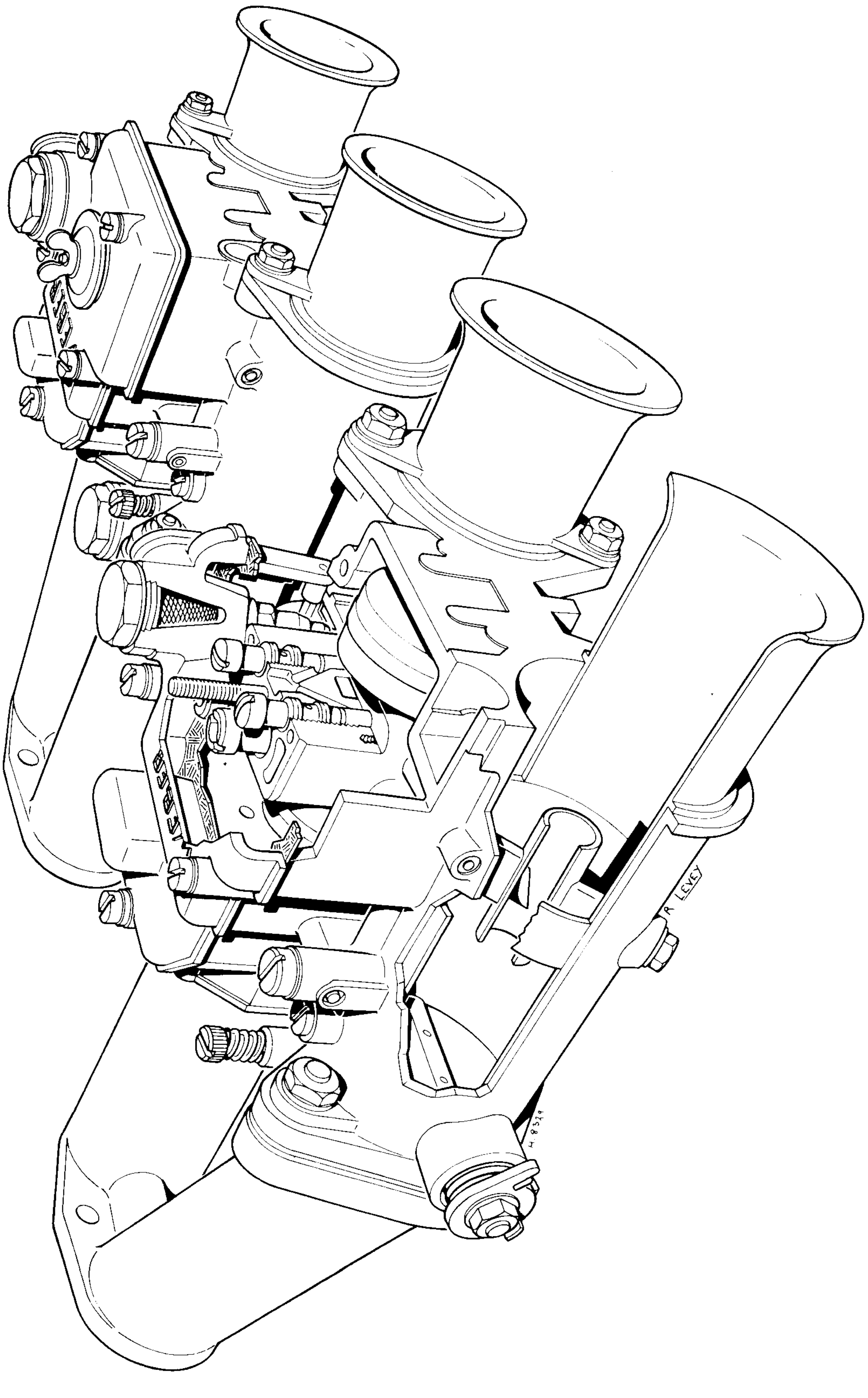
The aim of this Manual is to enable you to obtain the very best from your Weber carburettor, both economically and from the performance angle. Because the carburettor is a fine preci-sion instrument, the Manual assumes that the owner already knows how an engine works and is well acquainted with the basic servicing requirements of the engine.

Part 1 of the Manual contains the theoretical aspects of carburettor care and function, whereas Part 2 describes the practical procedures tabulated under separate chapters cover-ing carburettors of similar type. The operation of the carburettor is fully described so that the owner can diagnose problems quickly, thus saving himself time and money. Although there are a number of special tools available for the servicing of Weber carburettors, alternative methods employing the more common tools are described wherever possible.

Due to the vast number of Weber carburettors that have been manufactured, the scope of this Manual is somewhat limited to the more common types, although information given in Part 1 applies to all Weber carburettors. Information given in Part 2 under the Weber type numbers also applies to Holley and Bressell versions fitted to cars manufactured in the USA and Spain respectively.

The Manual contains two types of illustration: Figures which are numbered according to Chapter and sequence of occurence in that Chapter and photographs which have a reference number on their caption. All photographs apply to the Chapter in which they occur so that the reference figure pinpoints the pertinent Section and paragraph number.

Contents



Cutaway view of a typical DCOE carburettor

Part 1
Chapter 1 Basic carburation

Contents

1 Function of a carburettor

1 The modern internal combustion engine has been developed considerably from its original concept in a number of ways; including increased power output, greater flexibility and the more efficient combustion of fuel supplied to it. As a direct result of this the role of the carburettor has become an increasingly important factor, requiring frequent modification and the introduction of many previously unheard of devices to improve the function of the carburettor.

Carburettor technology is, of course, a vast subject, and to cover all aspects would require the writing of a volume of books; however, it will be helpful for the reader to be acquainted with the basic factors concerning carburation, as it will then be easier to understand the function of the various components which make up the Weber carburettor.

The prime objective of any carburettor is to meter out a mixture of fuel and air to the engine in a form that can be burnt quickly and completely. In practise this is rarely achieved, although the modern carburettor is much improved on its original counterpart and there is every indication of further advancement. Ideally, for complete combustion, the air/fuel mixture must be supplied to the engine in vapour form. This leads us to the secondary objective of the carburettor, which is to break up or atomise the fuel and disperse it into the air passing into the engine. The efficiency with which the carburettor carries out this process largely determines the efficiency of combustion within the engine.

The third objective of the carburettor in the automotive field is necessary, owing to the constant change of engine speed resulting from the vehicle accelerating and decelerating. The carburettor must be able to vary the amount of fuel supplied to the engine in order to cope with the different speed and power requirements encountered. This also requires that the quantity of air be varied, along with the fuel, to provide a combustible mixture.

2 A/F ratio variation

The theoretical air/fuel ratio for complete combustion is called the stoichiometric A/F ratio and under laboratory conditions is in the region of 15:1 by weight. When the fuel is fully vaporised, the ratio by volume is between 50:1 and 60:1 because fuel vapour is denser than air. However, fuel will tolerate a wide range of mixture ratios varying from about 8:1 to 22:1 by weight.

The stoichiometric A/F ratio does not give maximum power or minimum fuel consumption, these two requirements being obtained with A/F ratios of 12.5:1 and 16:1 respectively, as shown in Fig. 1.1. The curves of the graph are important with regard to the tuning of a carburettor, as they enable the operator to tune the engine for maximum power or maximum economy within defined limits.

It should be observed that an engine will run with A/F ratios outside the 12.5:1 and 16:1 limits, such as when starting (1:1 A/F ratio weakening to 4:1 A/F ratio), but under normal conditions the ratio should be within the limits in order to obtain optimum power or fuel consumption. There are additional adverse effects which occur as a result of A/F ratios outside the limits.

A weak mixture burns considerably slower within the combustion chamber and as a result may still be burning when the piston reaches the end of its power stroke. This leads to overheating and, in extreme cases, burnt valves and piston crowns.

A rich mixture will cause carbon to form rapidly on the combustion chamber and piston crown surfaces; this will necessitate a premature de-coke. Spark plug performance will be impaired and excess fuel will contaminate the engine lubricating oil and cause rapid wear of the cylinder walls.

Excessively rich or lean mixtures also increase the amount of toxic emissions in the exhaust gases. In some countries this has led to the design and introduction of emission control systems. It will therefore be appreciated that mixture control is

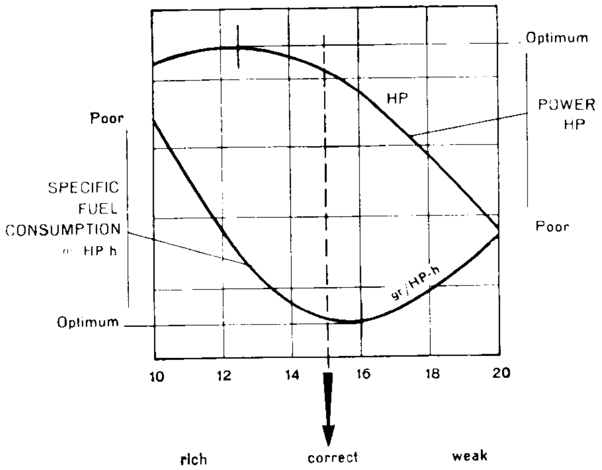


Fig. 1.1 Curves showing the effect of the variation of the air/fuel ratio on power output and fuel consumption (Sec 2)

extremely critical over the complete range of engine speeds and loads, and the correct functioning of the carburettor is therefore an important if not essential factor.

The mixture content of a particular engine can be tested by using an exhaust gas analyser to determine the amount of carbon monoxide (CO) present. The instrument is particularly helpful when adjusting idle mixture screws in order to supply the correct A/F mixture necessary for good combustion. Exhaust gas analysers are available in many accessory shops and their use may very well become compulsory in the future in view of the trend towards tighter regulations regarding air pollution.

3 The simple carburettor

All modern carburettors are designed around one basic principle. This is illustrated in Fig. 1.2 which is a cross-section of a tube having a curved restriction within it. The restriction in a carburettor is termed a venturi. If air is drawn through this component it will increase in speed in proportion to the cross-sectional diameter of the venturi. Since the air density decreases progressively to a point where its velocity is greatest, the air pressure at the smallest section of the venturi will be considerably less than atmospheric.

In the carburettor, this phenomenon is exploited by inserting a fuel outlet or nozzle into the venturi, this being supplied by a reservoir or float chamber (Fig. 1.3). Note that under static conditions, the fuel level in the float chamber is just below the nozzle outlet in order to prevent it leaking from the nozzle; also the air pressure in the float chamber is identical to that at the nozzle, ie atmospheric. When air is drawn through the venturi arrangement it will be observed that, due to the difference in air pressure at the float chamber and outlet nozzle, the fuel will flow out of the nozzle and mix with the air. On an engine, the resulting mixture is drawn into the cylinders and combustion takes place.

In order to maintain the level of the fuel just below the nozzle outlet, a float controlled inlet valve is incorporated into the float chamber. As the fuel flows out of the nozzle its level drops and the float opens the valve; when the correct level is reached the valve shuts.

To regulate the amount of mixture admitted to the engine, the carburettor is provided with a throttle valve which, when closed, completely seals the engine side of the venturi.

Unfortunately, the simple carburettor has one failing which renders it unsuitable for use in the road vehicle where the engine is operated at variable speeds and loads. In its present form the air/fuel mixture will be consistent provided the air flow remains at a constant speed. If the air flow is increased, its density will decrease in far greater proportion to the liquid fuel, with the result that the mixture becomes progressively richer. If the air flow is decreased the mixture will progressively weaken.

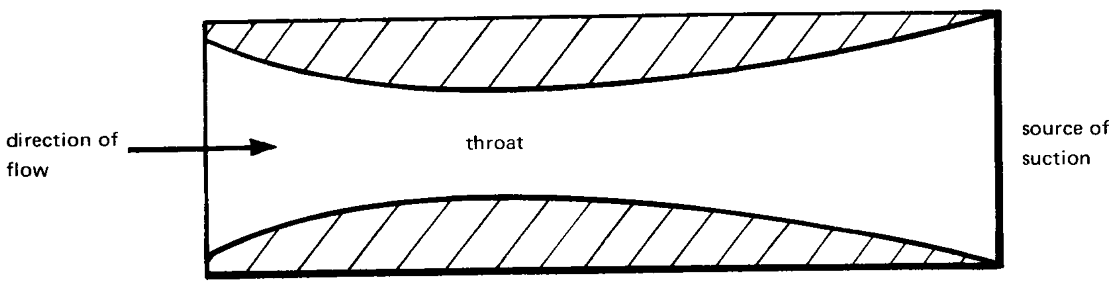


Fig. 1.2 The principle of the venturi (Sec 3)

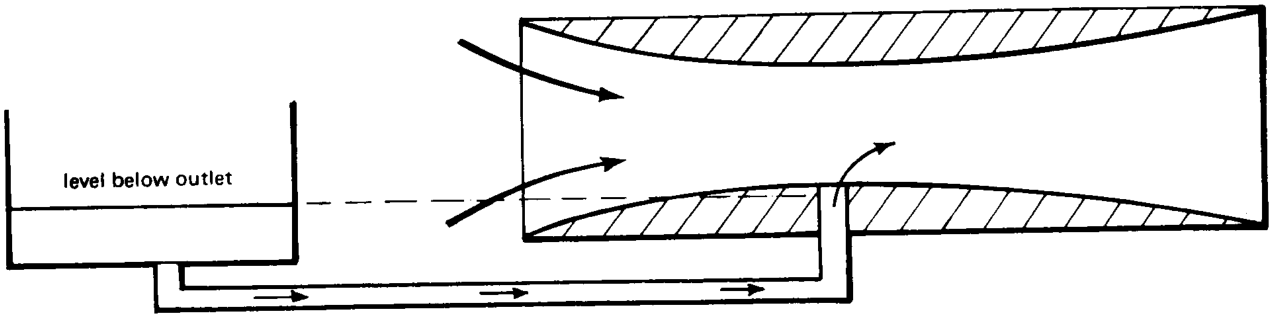


Fig. 1.3 The principle of fuel flow into a venturi (Sec 3). Large arrows indicate air flow, small arrows indicate fuel flow

Another failing is that the simple carburettor makes no provision for engine idling, acceleration, or cold starting. It is therefore obvious that additional modifications must be made in order to adapt the carburettor for automotive use.

4 The Weber carburettor

Carburettor manufacturers have overcome the deficiencies of the simple carburettor in various ways. With the use of sophisticated test equipment Weber have developed their carburettors to a very high standard and have proved to be leaders in the field of carburettor manufacture.

To overcome the mixture enrichening phenomenon mentioned in Section 4, the Weber carburettor is equipped with an air bleed system. Reference to Fig. 1.4 shows that as the fuel flows from the float chamber to the nozzle in the venturi, it passes a tube (called the emulsion tube), which is vented to atmospheric pressure and additionally has a number of holes drilled throughout its length. The effect of the depression acting on the nozzle will not only draw fuel into the carburettor but also air through the air bleed jet and into the fuel via the holes in the emulsion tube. As the engine speed increases, the fuel level inside the emulsion tube lowers with the result that more air is released into the fuel. The fact that the fuel becomes emulsified also results in better atomization at the nozzle.

In the Weber carburettor the emulsion tube is removable and by varying its diameter, location of holes and diameter of air bleed jet, the mixture strength for a particular engine can be adjusted to fine limits.

At engine idling speed there is insufficient vacuum in the venturi to draw any fuel from the nozzle; so a separate supply of fuel is channelled to the engine side of the throttle valve where there will be greater vacuum, since the throttle is closed. Fig. 1.5 illustrates a typical idling speed circuit and it will be observed that a fuel jet and air corrector jet is incorporated to provide a combustible mixture; the air jet also prevents a syphoning effect through the circuit. A volume of mixture adjustment is also incorporated, so that it is possible to vary the mixture strength as necessary in co-operation with the throttle valve adjustment screw, which controls the amount of air allowed past the throttle valve at idling.

It should be noted that the idle circuit is supplied from the lower region of the emulsion tube. This arrangement ensures that the idle circuit ceases or is in some instances reversed when the main fuel system is in operation.

The Weber carburettor also includes what is termed as a progression function. When the throttle valve is open slightly after being in the idling position, there is a tendency for the mixture to lean-out and thus cause the engine to misfire. To overcome this problem, one or more transition orifices are drilled into the idling circuit on the inlet side of the throttle valve and in the carburettor barrel. Reference to Fig. 1.6 will show that the vacuum on the engine side of the throttle valve is progressively introduced to the transition orifices and extra fuel is thus provided to cover this stage of increasing engine speed. When the engine reaches sufficient speed to draw fuel from the main nozzle, the progression function will cease.

Where the throttle valve is opened fully and quickly, even the progression orifices are insufficient to enrichen the mixture enough. In this case an accelerator pump must be used. Figs. 1.7 and 1.8 show the two types of accelerator pump used on Weber carburettors.

With the piston type pump, fuel is drawn from the float chamber when the throttle is closed, because this action lifts the pump operating rod by way of a lever. When the throttle is opened, the operating rod is free to move the piston down its bore under the action of the accelerator pump spring. Fuel is channelled past a one-way ball valve, through the pump jet, and thus mixes with the air being drawn into the engine. The fuel is prevented from re-entering the float chamber by a ball and seat in the intake valve, but in order to calibrate the amount of fuel injected, a discharge hole allows a certain amount of fuel to return to the float chamber. The discharge hole also prevents fuel being injected during slow throttle movement.

The diaphragm type pump operates in a similar manner, except that a spring tensioned diaphragm is used instead of a piston.

The final failure of the simple carburettor concerns cold starting. In this respect there are two main methods employed in the Weber carburettor:

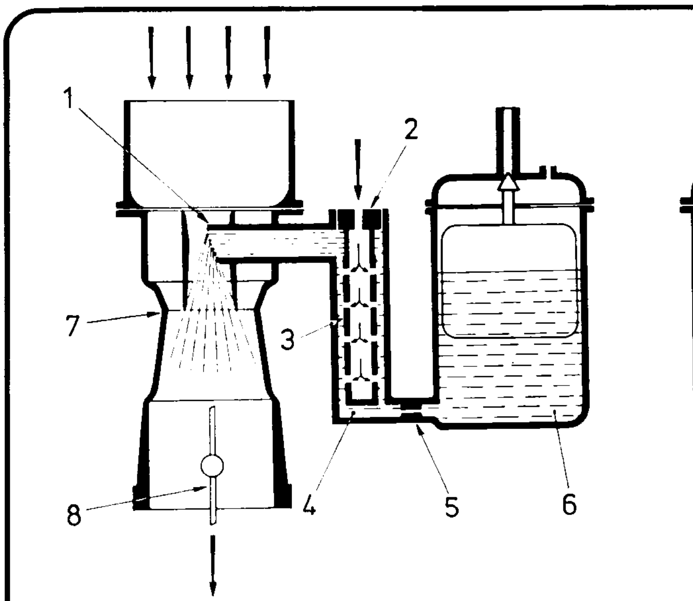


Fig. 1.4 The Weber air bleed correction system (typical) (Sec 4)

1 Nozzle
2 Air bleed jet
3 Emulsion tube
4 Reserve well
5 Main fuel jet
6 Float chamber
7 Venturi
8 Throttle valve

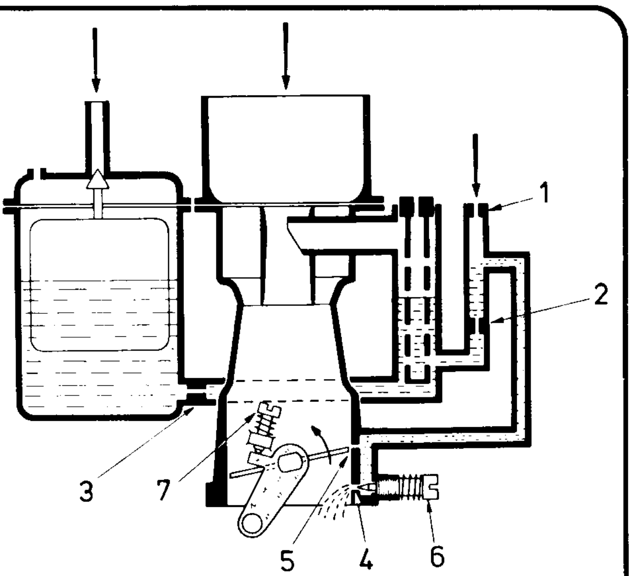


Fig. 1.5 The Weber idling speed system (typical) (Sec 4)

1 Air jet
2 Fuel jet
3 Main fuel jet
4 Idle speed mixture orifice
5 Progression orifice
6 Idle mixture adjusting screw
7 Throttle idle speed adjusting screw

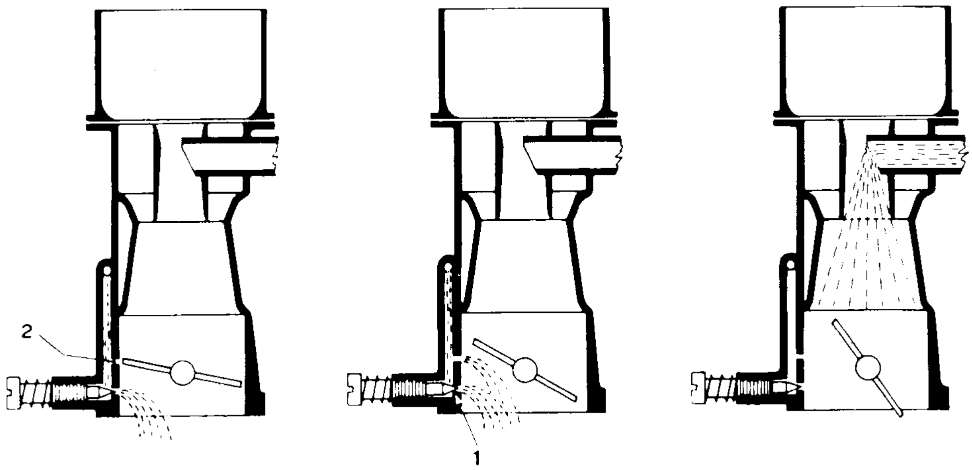


Fig. 1.6 The Weber progression system (Sec 4)

1 Idle speed mixture orifice *2 Progression orifice*

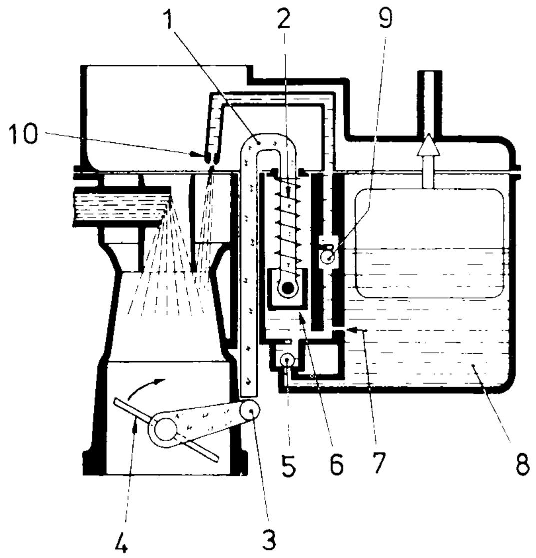


Fig. 1.7 The Weber piston type accelerator pump (Sec 4)

1 Operating rod
2 Spring
3 Control lever
4 Throttle valve
5 Intake valve
6 Pump piston
7 Discharge jet
8 Float chamber
9 Delivery valve
10 Pump jet

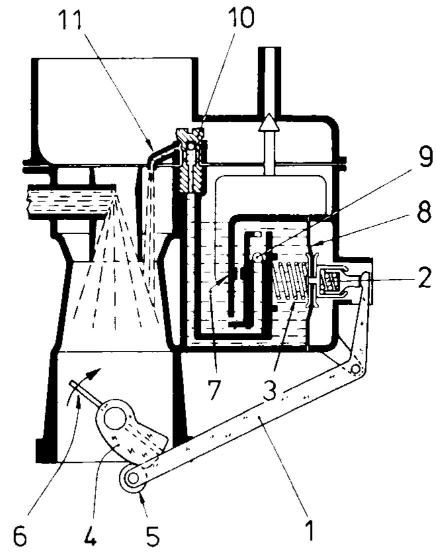


Fig. 1.8 The Weber diaphragm type accelerator pump (Sec 4)

1 Operating lever
2 Pump spring
3 Diaphragm return spring
4 Cam lever
5 Roller
6 Throttle valve
7 Discharge jet
8 Diaphragm
9 Intake valve
10 Delivery valve
11 Pump jet

The first method employs what is best described as a separate carburettor within the main carburettor. Fig. 1.9 shows the system in basic form. It will be observed that the system can be introduced or regulated by means of a manually controlled valve. The system is designed to give the necessary enrichment of mixture for starting with the throttle valves in the idling position.

The second method is shown in Fig. 1.10 and is termed the strangler or shutter valve type. With this system, an offset valve is positioned in the carburettor inlet and by restricting the amount of air admitted to the carburettor, the quantity of fuel emerging from the nozzle is increased, thus enriching the mixture for starting. Once the engine has started, the mixture must be weakened and this is automatically taken care of by the offset design of the strangler valve. As soon as the vacuum below it reaches a predetermined level, the larger area of the valve will be drawn downwards against the tension of a calibrated spring and additional air will thus be admitted.

The strangler valve may be operated manually or automatically, but in either case must be returned to its fully open position as soon as the engine reaches its normal operating temperature.

The range of Weber carburettors includes variations of the functions so far described. Where necessary there will be further descriptions in detail in the relevant Chapters of this manual dealing with the individual carburettor types.

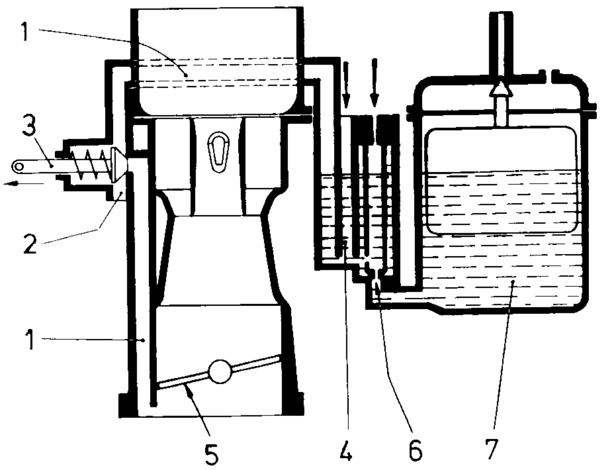


Fig. 1.9 The Weber jet type choke (Sec 4)

1 Starting mixture channel
2 Starting air jet
3 Valve
4 Reserve well
5 Throttle valve
6 Starting fuel jet
7 Float chamber

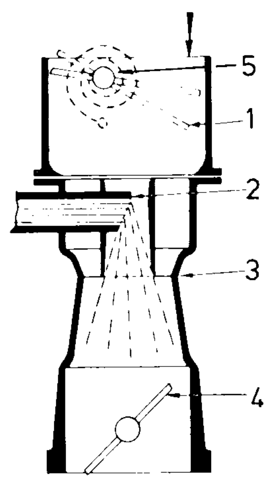


Fig. 1.10 The Weber strangler type choke (Sec 4)

1 Choke valve
2 Nozzle
3 Venturi
4 Throttle valve
5 Calibrated spring

5 By-pass idle carburettors

A more recent development is the bypass idle carburettor which has been introduced as a result of legislation concerning atmospheric pollution. Weber carburettors equipped with this function have two independent idle systems; the first is the basic idle system which is fitted to all carburettors, and the second is the bypass idle system.

Reference to Fig. 1.11 will show the operation of the bypass idle system. Fuel from the float chamber is drawn through the secondary main jet (A) to the secondary idle jet (B) where it becomes emulsified with air drawn through the calibrated orifice (C). The mixture is then drawn through internal channels and a calibrated drilling and mixes with air supplied through the drilling (D) in the primary choke. The bypass idle adjustment screw (E) controls the amount of mixture admitted to the discharge apertures (F and G) which then is drawn through the inlet manifold and into the engine.

On some by-pass idle carburettors there is a fuel return system to prevent the fuel in the float chamber from being heated excessively, which could otherwise enrich the idle mixture. With this system there is a continuous flow of fuel from the fuel tank to the carburettor inlet and back to the fuel tank.

Another feature included on bypass idle carburettors is the anti-stall or low vacuum enrichment device, which is normally fitted to vehicles with automatic transmission where there is a tendency for the engine to stall when moving the selector. The device comprises a spring tensioned diaphragm and cover, usually located in the vicinity of the float chamber opposite the accelerator pump.Under normal operating conditions, engine vacuum holds the diaphragm against the spring pressure and fuel is drawn into the chamber of the device. If the engine tends to stall, the vacuum will decrease and the spring tension will compress the diaphragm and eject fuel from the chamber. The device is connected by internal channels to the accelerator pump delivery valve and jet, and the fuel is injected into the primary barrel thus providing mixture enrichment in order to overcome the stall.

6 Thermostatically controlled air cleaners

This type of air cleaner ensures a constant temperature of the intake air, so that fuel atomisation in the carburettor takes place using air at the correct temperature. The air cleaner incorporates two inlets; one with fresh air at ambient temperature and the other with air heated by the exhaust manifold. An internal flap determines the quantity of heated or cool air to admit to the carburettor and is controlled by a heat sensor and vacuum assistance.

When the engine is cold, heated air is directed from the exhaust manifold into the air cleaner, but as the engine warms up, cold air is progressively mixed with this heated air. At high ambient temperatures the hot air intake is closed off completely.

7 Tamperproof carburettors

A further recent development as a result of atmospheric pollution control, is the tamperproof carburettor on which various adjustment screws are sealed with plastic plugs. The type of tamperproofing varies according to the carburettor and in some instances special tools are required in order to remove the seals. However before removing them, the owner is advised to be aware of any legislation which may be contravened by removing the seals and making adjustments. In some territories a coloured seal, only available to garages, must replace the removed seal. In this instance, it is recommended that the owner entrusts his car to a suitably equipped agent to carry out any adjustments to the carburettor.

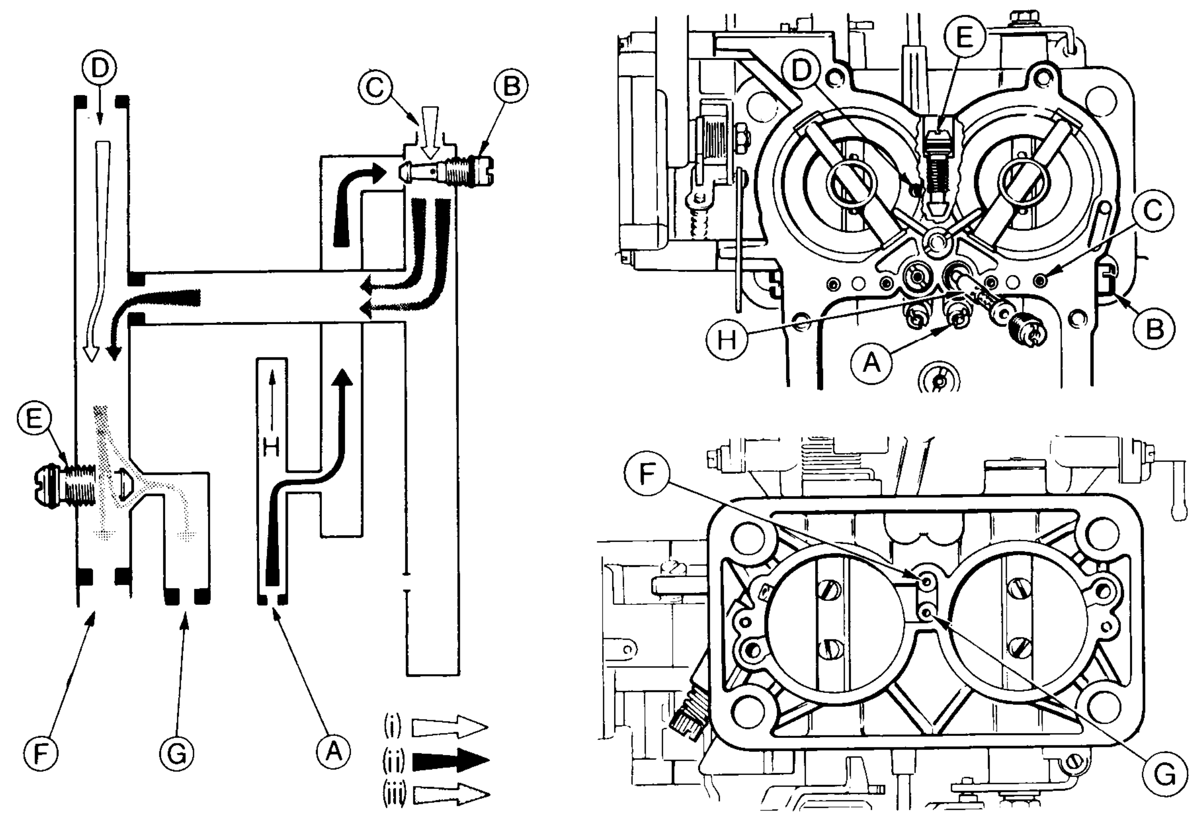


Fig. 1.11 The bypass idle system (Sec 5)

(i) Air supply
(ii) Fuel supply
(iii) Air/fuel mixture

A Secondary main jet
B Secondary idle jet
C Air bleed

D Plain air supply
E Bypass idle adjustment screw

F Fixed discharge aperture
G Bypass discharge aperture
H Secondary emulsion tube

8 USA carburettors

Carburettors used in the USA may have some or all of the following items fitted to them; the exact line-up will depend on local legal requirements:

Deceleration valve

During deceleration this valve supplies an additional flow of air/fuel mixture into the inlet manifold in order to improve combustion within the engine; this in turn lowers the hydrocarbon emission in the exhaust gases. The valve is mounted on the inlet manifold and consists of a spring loaded diaphragm, a control valve, and two ports. Under all driving conditions except deceleration, the spring holds the valve shut, but during deceleration the additional vacuum opens the valve and extra mixture is supplied to the engine. To prevent over-enrichment during the engine warm-up period when the choke is in operation, the control valve, which is temperature sensitive to the cooling system, only operates the deceleration valve when normal operating temperature has been reached.

Evaporative emission control

This system prevents unburnt hydrocarbons in the form of fuel vapour from escaping from the vehicle fuel system into the atmosphere. The fuel system is sealed and the carburettor is vented internally so that the fuel vapour cannot escape when the vehicle is stationary. The build up of vapour in the fuel tank and carburettor is channelled via pipes to a canister containing activated carbon particles which absorb the vapour. When the engine is running, the activated carbon releases the vapour which is then drawn into the air cleaner from where it passes into the engine.

Exhaust gas recirculation (EGR) system

This system reduces the emission of nitrogen oxides from the vehicle exhaust pipe by introducing a small amount of inert exhaust gas into the inlet manifold. The effect of this is to reduce the peak temperatures reached in the combustion chambers, which are responsible for the emission of nitrogen oxides.

The EGR valve is usually operated by vacuum from the carburettor and sometimes uses the same vacuum take-off port as that used for the distributor advance, although normally a separate port is provided.

Ignition advance and retard ports

On some engines the ignition is advanced and retarded by vacuum from the carburettor and inlet manifold. On some carburettors both take-off ports may be incorporated into the carburettor.

Dashpot

This device can be fitted to most carburettors as a bolt-on extra. Its purpose is to retard the action of the throttle lever as it returns to the idling position after releasing the throttle. This prevents an over weak mixture, particularly during deceleration and therefore reduces the emission of certain harmful gases from the exhaust system.

Idle speed step-up valves

On vehicles fitted with air conditioning equipment, a valve is usually incorporated into the carburettor to increase the engine idle speed setting during the period when the air conditioning compressor is in operation. This is necessary because the additional load on the engine would normally cause it to stall. The adjustment of this valve will depend on the type of engine it is fitted to and therefore this information should be obtained from the vehicle manufacturer. However, the overall effect of the step-up valve is to retain the original engine idle speed when the air conditioning compressor is in operation.

A similar type of step-up valve is sometimes fitted to vehicles equipped with automatic transmission, in order to prevent stalling when the selector lever is moved.

Idle cut-off valve

This valve stops the flow of fuel or fuel/air mixture in the idle circuit immediately the ignition is switched off, thus eliminating any tendency for the engine to run-on or 'diesel'. This is particularly important where low octane lead free fuel is used, because the run-on characteristics are more prominent with this type of fuel.

Part 3
Appendix 1 Original equipment jet setting list

This list gives details of calibration and jet sizes on carburettors fitted as original equipment:

A *Model details*
B *Number of cylinders*
C *Capacity in cc*
D *Carburettor type*
E *Number of carburettors*
F *Choke sizes*
G *Auxiliary venturi*
H *Main jet*
I *Idle jet*
J *Air idle jet or hole*
K *Emulsion tube*
L *Air corrector jet*
M *Starter jet*
N *Accelerator pump jet*
O *Accelerator pump back bleed*
P *Needle valve*

Note:

Where two sets of data are tabulated against the car model, the first line refers to the primary barrel and the second line refers to the secondary barrel

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
ALFA ROMEO															
Giulietta Sprint Veloce	4	1290	40 DCOE 2	2	29	4·50	1·10	0·50 F11	–	F16	2·00	0·60 F5	0·35	0·70	1·50
1300 GT Junior Super	4	1290	40 DCOE 28	2	28	4·50	1·12	0·50 F11	–	F16	2·10	0·65 F5	0·35	0·60	1·50
Giulia 1600 SS	4	1570	40 DCOE 2	2	30	4·50	1·20	0·55 F11	–	F16	1·80	0·65 F5	0·35	0·70	1·50
Giulia 1600 TI Super	4	1570	45 DCOE 14	2	30	4·50	1·20	0·55 F8	–	F16	1·80	0·65 F5	0·35	0·50	1·50
Giulia 1600 Sprint GT	4	1570	40 DCOE 4	2	30	4·50	1·27	0·50 F11	–	F16	2·20	0·65 F5	0·35	0·50	1·50
Giulia 1600 Super	4	1570	40 DCOE 24	2	27	4·50	1·10	0·50 F11	–	F16	1·80	0·65 F5	0·35	0·50	1·50
Giulia 1600 Super	4	1570	40 DCOE 33	2	30	4·50	1·20	0·50 F14	–	F9	2·00	0·65 F5	0·35	0·60	1·50
1600 Junior Z, Giulia 1600 Super	4	1570	40 DCOE 44/55	2	30	4·50	1·17	0·50 F15	–	F16	1·80	0·65 F5	0·35	0·60	1·50
Giulia 1600 GTV/Spider	4	1570	40 DCOE 27	2	30	4·50	1·17	0·50 F14	–	F16	1·80	0·65 F5	0·35	0·60	1·50
Giulia 1600 GTA	4	1570	45 DCOE 14	2	30	4·50	1·35	0·50 F8	–	F16	2·20	0·65 F5	0·35	0·50	1·50
Giulia 1600 Sprint GTA	4	1570	45 DCOE 18	2	30	4·50	1·20	0·50 F8	–	F9	2·20	0·65 F5	0·35	0·50	1·50
1750 Berlina/Coupé GT															

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Veloce/Spider Veloce	4	1779	40 DCOE 32	2	32	4·50	1·30	0·50 F8	–	F9	2·00	0·65 F5	0·35	0·60	1·50
Giulia 1600, Alfetta 1600	4	1570	40 DCOE 106/107	2	30	6·00	1·32	0·55 F21	–	F41	1·80	0·85 F9	0·30	none	1·50
Alfetta 1·6	4	1570	40 DCOE 82/83	2	30	6·00	1·32	0·55 F21	–	F41	1·80	0·85 F9	0·35	0·35	1·50
Alfetta 1·8	4	1779	40 DCOE 72/73	2	32	4·50	1·35	0·55 F17	–	F34	2·10	0·85 F9	0·35	0·60	1·50
2000 GT Spider Europa	4	1962	40 DCOE 76/77	2	32	4·50	1·35	0·55 F17	–	F34	2·10	0·85 F9	0·35	0·60	1·50
2600 Sprint-Coupé	6	2584	45 DCOE 9	3	36	4·50	1·45	0·55 F8	–	F16	1·55	0·60 F5	0·45	0·40	2·00
ASTON MARTIN															
DB4 GT	6	3670	45 DCOE 9	3	40	3·50	1·55	0·55 F6	–	F2	1·50	0·60 F5	0·55	none	2·00
DB5 GT, DB6 Vantage	6	3995	45 DCOE 9	3	40	4·50	1·50	0·50 F6	–	F2	1·25	0·60 F5	0·45	none	2·00
DB 6MK Coupé	6	3995	45 DCOE 9	3	40	4·50	1·45	0·50 F6	–	F7	1·25	0·60 F6	0·45	none	2·00
DBS V8 Europa	8	5340	42 DCNF 27/100	4	36	4·50	1·35	0·55	1·10	F33	1·80	0·80 F5	0·45	0·40	2·00
DBS V8 Europa	8	5340	42 DCNF 27/150	4	36	4·50	1·35	0·55	1·10	F39	1·80	0·80 F5	0·45	0·40	2·00
DBS V8 USA	8	5340	42 DCNF 27/200	4	36	4·50	1·35	0·55	1·10	F39	2·20	0·80 F5	0·45	0·40	2·00
BMW															
1800 T1/SA	4	1773	45 DCOE 15/16	2	38	5·00	1·25	0·45F8	–	F9	1·70	1·40 F5	0·40	0·70	2·25
1600 Alpina	4	1573	40 DCOE 84/85	2	27	4·50	1·10	0·50 F8	–	F9	2·00	0·60 F5	0·35	0·70	1·50
1800 Alpina	4	1766	40 DCOE 86/87	2	32	4·50	1·20	0·55 F8	–	F9	2·10	0·60 F5	0·35	0·60	1·75
2000 Alpina	4	1990	40 DCOE 88/89	2	34	4·50	1·25	0·55 F8	–	F16	1·70	0·60 F5	0·40	0·60	2·00
CHRYLSER UK															
Avenger Tiger	4	1725	40 DCOE 70/71	2	30	4·50	1·10	0·45 F11	–	F15	2·40	1·00 F5	0·35	1·00	1·50
CHRYSLER FRANCE															
1100 Special H	4	1294	36 DCNF 15	1	28	3·50	1·55	0·50	1·60	F27	1·65	0·80 F1	0·40	none	1·75
1100 TI	4	1294	36 DCNF 17/18	2	29	3·50	1·20	0·45	1·30	F36	1·85	0·70 F10	0·40	0·40	1·75
1100 Special Austria	4	1294	36 DCNF 21	1	28	3·50	1·55	0·50	1·60	F27	1·65	0·80 F1	0·40	none	1·75
1100 Special	4	1294	36 DCNF 24	1	28	3·50	1·55	0·45	1·40	F27	1·65	0·80 F1	0·40	none	1·75
1100 Special	4	1294	36 DCNF 33/34	2	28	4·50	1·50	0·45	1·35	F27	1·75	0·80 F4	0·40	none	1·75
1100 T1/1307 S	4	1294	36 DCNF 49-50/100	2	29	3·50	1·25	0·45	1·35	F36	2·00	0·70 F10	0·40	0·40	1·75
FERRARI															
Dino 246 GT	6	2418	40 DCNF 13-20, 13(2)-20(1)	3	32	4·50	1·25	0·50	1·20	F24	2·20	0·60 F6	0·50	0·40	1·75
Dino 246 GT USA	6	2418	40 DCNF 19	3	32	4·50	1·25	0·55	1·20	F24	2·20	0·60 F6	0·50	0·40	1·75
Dino 208 GT4 '75	8	1991	34 DCNF 53/54/55/56/100	4	29	3·50	1·20	0·45	1·80	F36	2·00	0·80 F5	0·45	0·40	1·75
Dino 308 GT4	8	2926	40 DCNF 35/36/37/38	4	32	4·50	1·30	0·45	1·60	F24	2·20	0·60 F6	0·45	0·40	1·75
Dino 308 GT4 '75	8	2926	40 DCNF 57/58/59/60	4	32	4·50	1·30	0·50	1·50	F36	2·00	1·00 F6	0·45	0·40	1·75
308 GTB/GT4 '77	8	2926	40 DCNF 57/58/59/60/150	4	32	4·50	1·30	0·50	1·50	F36	2·00	1·00 F6	0·45	0·40	1·75
308 GT4 USA	8	2926	40 DCNF 45/46/47/48	4	32	4·50	1·35	0·55	1·70	F36	2·20	0·60 F6	0·45	0·70	1·75
308 GT4 Australia	8	2926	40 DCNF 64/65/66/67	4	32	4·50	1·25	0·55	1·60	F36	1·90	1·00 F6	0·45	0·40	1·75
365 GTC/4	12	4390	38 DCOE 59-60	6	30	4·50	1·25	0·60 F8	–	F29	2·10	0·65 F5	0·35	none	1·50
365 GTC/4 USA	12	4390	38 DCOE 59A/60A	6	30	4·50	1·25	0·55 F9	–	F29	2·10	0·65 F5	0·35	none	1·50
400 GT	12	4823	38 DCOE 110M/11M	6	30	6·00	1·40	0·45 F24	1·55	F41	1·90	0·65 F5	0·35	none	1·50
400 GT (auto)	12	4823	38 DCOE 110/111	6	30	6·00	1·40	0·45 F23	1·25	F41	1·90	0·65 F5	0·35	none	1·50
FIAT															
124 Sport 1600	4	1608	40 IDF 13-15	2	32	4·50	1·25	0·55	1·15	F11	2·10	0·80 F5	0·40	0·50	1·75
124 Sport/Rally	4	1997	44 IDF 20/200/21/200	2	36	4·50	1·45	0·60	1·15	F9	1·90	0·90 F5	0·40	0·80	1·75
Dino Coupé Spider	6	2418	40 DCNF 12	3	32	4·50	1·25	0·50	1·20	F24	2·20	0·75 F5	0·45	0·40	1·75
Dino Coupé Spider	6	2418	40 DCNF 22/23	3	32	4·50	1·25	0·50	1·25	F24	2·20	0·75 F5	0·50	0·40	1·75
FIAT – ABARTH															
124 Sport/Rally	4	1756	44 IDF 20-21/200	2	36	4·50	1·45	0·60	1·15	F9	1·90	0·90 F5	0·40	0·80	1·75
FORD															
Anglia	4	997	28/36 DCD 41	1	23	4·50	1·20	0·40	2·00	F30	2·30	1·00F1	0·55	0·35	1·75
					24	4·50	1·30	0·50	0·70	F30	1·80				
Escort L/GL	4	940	28/30 DGV 14A	1	21	4·50	1·15	0·55	1·50	F50	2·00	–	0·50	0·40	2·00
					22	4·00	1·05	0·50	0·70	F50	2·00				
Escort GT	4	1098	32 DGV 16B	1	21	3·50	1·05	0·45	1·50	F66	1·70	–	0·50	0·30	2·00
					24	4·50	1·15	0·40	1·40	F50	1·70				
Escort GT	4	1098	32 DGV 16C/16D	1	21	3·50	1·05	0·45	1·50	F66	1·70	–	0·50	0·30	2·00
					24	4·50	1·15	0·40	1·40	F50	1·70				
Escort GT Sport	4	1298	32 DGV 15C	1	23	3·50	1·20	0·45	1·65	F66	1·90	–	0·45	0·30	2·00
					24	4·50	1·05	0·45	1·50	F50	1·60				
Escort GT	4	1599	32 DGAV 5C	1	23	3·50	1·20	0·45	1·85	F50	1·60	–	0·45	0·30	2·00
					24	4·50	1·15	0·45	1·50	F50	1·20	–	0·45		
Escort GT	4	1599	32 DGAV 6C	1	23	3·50	1·15	0·45	1·85	F50	1·60	–	0·50	0·30	2·00
					24	4·50	1·20	0·45	1·50	F50	1·20				
Escort GT	4	1599	32 DGAV 5D	1	23	3·50	1·20	0·45	1·85	F50	1·60	–	0·45	0·30	2·00
					24	4·50	1·15	0·45	1·50	F50	1·20		0·45		
Escort GT	4	1599	32 DGAV 6D	1	23	3·50	1·15	0·45	1·85	F50	1·60	–	0·50	0·30	2·00
					24	4·50	1·20	0·45	1·50	F50	1·20				
Escort GT	4	1599	32 DGAV 5E	1	23	3·50	1·20	0·45	1·65	F50	1·60	–	0·45	0·30	2·00
					24	4·50	1·15	0·45	1·50	F50	1·20		0·45		
Escort GT	4	1599	32 DGAV 6E	1	23	3·50	1·15	0·45	1·65	F50	1·60	–	0·50	0·30	2·00
					24	4·50	1·20	0·45	1·50	F50	1·20				
Escort GT/Capri/1300GT	4	1298	32 DFE 2	1	23	4·50	1·20	0·50	2·00	F6	1·40	–	0·65	0·40	2·00
					24	4·50	1·20	0·45	1·10	F6	1·65				
Escort/Capri 1300/GT	4	1298	32 DGV 7A	1	23	3·50	1·25	0·55	1·50	F50	1·80	–	0·55	0·40	2·00
					24	3·50	1·30	0·50	0·70	F6	1·80				
Cortina Special/ Corsair GT	4	1500	28/36 DCD 23	1	26	4·50	1·40	0·50	2·00	F30	2·30	2·05 F1	0·70	0·50	1·75
					27	4·50	1·55	0·70	0·70	F30	1·80				
Cortina Special GT	4	1500	28/36 DCD 36	1	26	4·50	1·40	0·55	2·00	F30	2·30	2·05 F1	0·70	0·50	1·75
					27	4·50	1·55	0·70	0·70	F30	1·80				

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Cortina Special GT	4	1500	28/36 DCD 38	1	26	4·50	1·40	0·55	2·00	F30	2·30	2·05 F1	0·70	0·50	1·75
					27	4·50	1·55	0·70	0·70	F30	1·80				
Cortina 1600 GTE	4	1596	32 DFM 4	1	26	4·50	1·42	0·50	1·80	F6	1·65	–	0·65	0·40	2·00
					27	4·50	1·65	0·45	0·70	F6	1·65				
Cortina GT - Export	4	1596	32 DFD	1	26	4·50	1·40	0·55	1·75	F6	1·60	–	0·65	0·40	2·00
					27	4·50	1·62	0·50	0·70	F6	1·40				
Capri 1600 GT	4	1599	28/36 DCD 22	1	26	4·50	1·40	0·50	2·00	F30	2·30	2·05 F1	0·70	0·50	1·75
					27	4·50	1·55	0·70	0·70	F30	1·80				
Capri 1600 GT	4	1599	32 DFM 5	1	26	4·50	1·42	0·50	1·80	F6	1·65	–	0·65	0·40	2·00
					27	4·50	1·65	0·45	0·70	F6	1·65				
Capri 1600 GT	4	1599	32 DFM 3	1	26	4·50	1·45	0·45	1·80	F6	1·50	–	0·55	0·40	2·00
					27	4·50	1·55	0·45	0·70	F6	1·40				
Capri 1600 GT	4	1599	32/36 DGV 5A/05A	1	26	3·50	1·40	0·55	1·60	F50	1·65	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F6	1·60				
Capri 1600 GT	4	1599	32/36 DGAV 8A/08A	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·40	0·45	0·70	F50	1·40				
Capri 1600 GT	4	1599	32 DGAV 9A/09A	1	26	3·50	1·35	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·50	0·45	0·70	F50	1·40				
Capri 1600 GT	4	1599	32/36 DGAV 8B/8B1	1	26	3·50	1·30	0·50	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Capri 1600 GT	4	1599	32/36 DGAV 9B/9B1	1	26	3·50	1·30	0·45	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Capri 1600 GT	4	1599	32/36 DGAV 8C	1	26	3·50	1·30	0·50	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Capri 1600 GT	4	1599	32/36 DGAV 9C	1	26	3·50	1·30	0·45	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Capri 1600 GT	4	1599	32/36 DGAV 8C1	1	26	4·50	1·37	0·45	1·50	F50	1·70	–	0·45	0·30	2·00
					27	3·50	1·25	0·45	1·50	F50	1·20		0·45		
Taunus/Cortina 1600	4	1599	32/36 DGAV 1A/01A, 1B/01B	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·40	0·45	0·70	F6	1·40				
Taunus/Cortina 1600	4	1599	32/36 DGAV 2A/02A, 2B/02B	1	26	3·50	1·35	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·45	0·45	0·70	F6	1·40				
Taunus/Cortina 1600	4	1599	32/36 DGAV 1C/1C1	1	26	3·50	1·30	0·50	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Taunus/Cortina 1600	4	1599	32/36 DGAV 2C/2C1	1	26	3·50	1·30	0·45	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Taunus/Cortina 1600	4	1599	32/36 DGAV 1D	1	26	3·50	1·30	0·50	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Taunus/Cortina 1600	4	1599	32/36 DGAV 2D	1	26	3·50	1·30	0·45	1·50	F66	1·60	–	0·50	0·30	2·00
					27	4·50	1·25	0·45	1·50	F66	1·25				
Taunus/Cortina 1600	4	1599	32/36 DGAV 1D1	1	26	4·50	1·37	0·45	1·50	F50	1·70	–	0·45	0·30	2·00
					27	3·50	1·25	0·45	1·50	F50	1·20		0·45		
Taunus/Cortina Svezia	4	1599	32 DGAV 24A	1	23	3·50	1·15	0·50	1·50	F50	1·85	–	0·50	0·30	2·00
					24	3·50	1·05	0·45	0·70	F50	1·40				
Taunus/Cortina Svezia	4	1599	32 DGAV 25A	1	23	3·50	1·12	0·55	1·50	F50	1·85	–	0·55	0·30	2·00
					24	3·50	1·10	0·45	0·70	F50	1·40				
Corsair 2000 E GT	4	1997	32 DAF 1	1	26	4·50	1·55	0·45	1·50	F6	1·80	–	0·65	0·40	2·00
					27	4·50	1·40	0·45	0·70	F6	1·80				
Corsair 2000 E GT	4	1997	32 DIF 4	1	26	4·50	1·55	0·50	1·50	F6	1·80	–	0·65	0·40	2·00
					27	4·50	1·40	0·45	0·70	F6	1·80				
Cortina 2000 V4	4	1997	32 DIF 5	1	26	4·50	1·55	0·50	1·50	F6	1·80	–	0·65	0·40	2·00
					27	4·50	1·40	0·45	0·70	F6	1·80				
Taunus/Cortina 2000	4	1997	32/36 DGAV 3A/03A, 3B/03B	1	26	3·50	1·40	0·60	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·40	0·50	0·70	F50	1·60				
Taunus/Cortina 2000	4	1997	32/36 DGAV 4A/04A, 4B/04B	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·40	0·50	0·70	F50	1·60				
Taunus/Cortina 2000	4	1997	32/36 DGAV 3C/3C1	1	26	3·50	1·37	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Taunus/Cortina 2000	4	1997	32/36 DGAV 4C/4C1	1	26	3·50	1·35	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Taunus/Cortina Granada	4	1997	32/36 DGAV 3D	1	26	3·50	1·37	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Taunus/Cortina Granada	4	1997	32/36 DGAV 4D	1	26	3·50	1·35	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Taunus/Cortina Granada	4	1997	32/36 DGAV 3D1	1	26	3·50	1·35	0·45	1·60	F66	1·70	–	0·45	0·30	2·00
					27	4·50	1·30	0·45	1·60	F66	1·25		0·45		
Taunus/Cortina Granada	4	1997	32/36 DGAV 4D1	1	26	3·50	1·32	0·45	1·60	F66	1·75	–	0·45	0·30	2·00
					27	4·50	1·40	0·45	1·60	F66	1·25		0·45		
Taunus/Cortina Svezia	4	1997	32/36 DGAV 18A	1	26	3·50	1·32	0·55	1·50	F66	1·75	–	0·45	0·30	2·00
					27	4·50	1·27	0·50	0·70	F66	1·45		0·45		
Taunus/Cortina Svezia	4	1997	32/36 DGAV 19A	1	26	3·50	1·32	0·55	1·50	F66	1·75	–	0·50	0·30	2·00
					27	4·50	1·27	0·50	0·70	F66	1·45				
Capri 2000 GT	4	1997	32/36 DFV	1	26	4·50	1·45	0·45	1·50	F6	1·70	–	0·65	0·40	2·00
					27	4·50	1·45	0·50	0·70	F6	1·80				
Capri 2000 GT	4	1997	32/36 DFAV	1	26	4·50	1·35	0·45	1·50	F6	1·70	–	0·65	0·40	2·00
					27	4·50	1·40	0·50	0·70	F6	1·80				
Capri 2000	4	1997	32/36 DGAV 12A	1	26	3·50	1·40	0·60	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·50				
Capri 2000	4	1997	32/36 DGAV 13A	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·50				
Capri 2000	4	1997	32/36 DGAV 12A1	1	26	3·50	1·40	0·60	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·50				
Capri 2000	4	1997	32/36 DGAV 13A1	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·50				
Capri 2000	4	1997	32/36 DGAV 12C	1	26	3·50	1·37	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Capri 2000	4	1997	32/36 DGAV 13C	1	26	3·50	1·35	0·45	1·75	F66	1·70	–	0·50	0·30	2·00
					27	4·50	1·27	0·60	1·40	F66	1·25				
Capri 2000	4	1997	32/36 DGAV 12C1	1	26	3·50	1·35	0·45	1·60	F66	1·70	–	0·45	0·30	2·00
					27	4·50	1·30	0·45	1·60	F66	1·25		0·45		

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Capri 2000	4	1997	32/36 DGAV 13C1	1	26	3·50	1·32	0·45	1·60	F66	1·75	–	0·45	0·30	2·00
					27	4·50	1·40	0·45	1·60	F66	1·25		0·45		
Capri 2000 Svezia	4	1997	32/36 DGAV 22A1	1	26	3·50	1·32	0·55	1·50	F66	1·75	–	0·45	0·30	2·00
					27	4·50	1·30	0·50	0·70	F66	1·35		0·45		
Capri 2000 Svezia	4	1997	32/36 DGAV 23A	1	26	3·50	1·32	0·55	1·50	F66	1·75	–	0·50	0·30	2·00
					27	4·50	1·27	0·50	0·70	F66	1·45				
Capri 2000 Giappone	4	1997	32/36 DGAV 27A	1	26	3·50	1·32	0·55	1·10	F66	1·75	–	0·50	0·30	2·00
					27	4·50	1·10	0·50	0·70	F66	1·25				
Granada 2000 Svezia	4	1997	32/36 DGAV 20A1	1	26	3·50	1·32	0·55	1·50	F66	1·75	–	0·45	0·30	2·00
					27	4·50	1·30	0·50	0·70	F66	1·35		0·45		
Consul/Granada 2000	4	1997	32/36 DGAV 10A/010A	1	26	3·50	1·40	0·60	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·25				
Consul/Granada 2000	4	1997	32/36 DGAV 11A/011A	1	26	3·50	1·40	0·55	1·70	F50	1·70	–	0·50	0·30	2·00
					27	3·50	1·35	0·50	0·70	F50	1·25				
Consul/Granada 2500	6	2551	34 DGAS 8A	1	24	4·50	1·22	0·45	1·95	F50	1·80	–	0·55	0·40	2·50
Consul/Granada 2500	6	2551	38 DGAS 1A	1	27	4·00	1·45	0·50	2·00	F50	1·75	–	0·60	0·30	2·50
Consul/Granada 3000	6	2994	38 DGAS 3A/03A	1	27	4·00	1·45	0·45	1·85	F50	1·85	–	0·60	0·30	2·50
Consul/Granada 3000	6	2994	38 DGAS 4A/04A	1	27	4·00	1·45	0·45	1·95	F50	1·85	–	0·70	0·30	2·50
Granada 3000	6	2994	38 DGAS 4A2	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·70	0·30	2·50
Granada 3000	6	2994	38 DGAS 3B	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·55	0·45	2·50
Granada 3000	6	2994	38 DGAS 3C	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·55	0·45	2·50
Capri 3000 GT	6	2994	38 DGAS 7A/07A	1	27	4·00	1·45	0·45	1·95	F50	1·85	–	0·70	0·30	2·50
Capri 3000	6	2994	38 DGAS 6A1	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·70	0·30	2·50
Capri 3000	6	2994	38 DGAS 7A1	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·70	0·30	2·50
Capri 3000	6	2994	38 DGAS 6B	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·55	0·45	2·50
Capri 3000	6	2994	38 DGAS 6C	1	27	4·00	1·42	0·45	1·95	F50	1·85	–	0·55	0·45	2·50
Fiesta 1600 (49 States)	4	1598	32 DFTA	1	22	4·00	1·00	0·60	1·20	F22	2·50	–	0·45	0·40	1·50
					22	4·00	1·05	0·60	0·70	F22	2·50				
Fiesta 1600 (California)	4	1598	32 DFTA 1	1	22	4·00	1·05	0·60	1·10	F22	2·50	–	0·45	0·40	1·50
					22	4·00	1·00	0·60	0·70	F22	2·50				
Escort GT, twin cam	4	1558	40 DCOE 31	1	30	4·50	1·10	0·45 F8	–	F11	1·55	1·00 F5	0·35	0·40	1·75
Escort 2000 RS	4	1993	44 IDF 40/41	2	34	4·50	1·45	0·55	1·30	F19	1·80	0·90 F55	0·40	0·80	1·75
IKA															
Torina GS Coupé	6	3770	45 DCOE 17	3	33	4·50	1·30	0·55 F8	–	F11	2·00	0·60 F5	0·45	0·60	2·00
LAMBORGHINI															
Urraco USA	8	2462	40 IDF 30-31/32/33	4	30	3·00	1·20	0·65	1·00	F7	1·60	–	0·35	1·00	1·75
Urraco SS	8	2462	40 DCNF 42/43	4	34	4·50	1·35	0·60	1·30	F24	2·20	0·60 F5	0·35	0·40	1·75
Urraco P200	8	1973	36 IDF 34/35/36/37	4	27	3·00	1·15	0·55	1·25	F7	1·70	–	0·35	1·00	1·75
Urraco P250	8	2462	40 IDF 22/23/24/25	4	30	3·00	1·20	0·60	1·00	F7	1·60	0·80 F5	0·35	1·00	1·75
Urraco P300 USA	8	2996	40 DCNF 70/71	4	32	4·50	1·30	0·55	1·65	F27	1·80	0·55 F5	0·35	0·45	1·75
Urraco P300 Silhouette	8	2996	40 DCNF 62/63	4	32	4·50	1·35	0·55	1·30	F27	1·90	0·60 F5	0·35	0·45	1·75
Islero GT/Espada GT Jarama	12	3929	40 DCOE 22/23	6	30	4·50	1·15	0·45 F9	–	F3	2·10	0·60 F5	0·35	0·70	1·75
Espada-Jarama USA	12	3929	40 DCOE 22A/23A	6	30	4·50	1·20	0·50 F9	–	F9	2·10	–	0·35	1·00	1·75
Espada-Jarama GTS '77	12	3929	40 DCOE 92-93/150	6	30	4·50	1·15	0·45 F19	–	F3	2·10	–	0·35	1·00	1·75
Countach	12	3929	45 DCOE 96-97/150	6	38	4·50	1·50	0·50 F19	–	F3	2·10	–	0·45	0·70	1·75
LANCIA															
Stratos	6	2418	40 IDF 28-29, 28(2)-29(1)	3	32	4·50	1·25	0·50	1·20	F3	2·20	0·60 F6	0·40	0·40	1·75
LOTUS															
Elan S4-SE	4	1558	48 DCOE 18	2	30	4·50	1·15	0·45 F9	–	F11	2·00	1·00 F5	0·40	0·50	1·75
Cortina GT	4	1558	40 DCOE 31	2	30	4·50	1·10	0·45 F8	–	F11	1·55	1·00 F5	0·35	0·40	1·75
MASERATI															
Merak 2000	6	1999	42 DCNF 78-78/1, 78(2) 78/1	3	32	3·50	1·25	0·50	1·45	F36	1·80	0·80 F7	0·40	0·40	2·00
Merak	6	2995	42 DCNF 31(2), 32(1)	3	36	3·50	1·40	0·60	1·30	F25	1·60	0·80 F7	0·40	0·40	2·00
Merak SS	6	2965	44 DCNF 44	3	36	3·50	1·40	0·65	1·45	F25	1·70	1·10 F7	0·40	0·40	2·00
Merak SS '77	6	2965	44 DCNF 69-69/1, 69(2)-69/1(1)	3	36	3·50	1·40	0·65	1·45	F25	1·70	1·10 F7	0·40	0·40	2·00
3500 GT	6	3485	42 DCOE 8	3	32	3·50	1·35	0·55 F2	–	F15	1·55	0·60 F5	0·45	none	2·00
Khamsin	8	4930	42 DCNF 41	4	34	3·50	1·30	0·60	1·30	F25	1·55	0·80 F7	0·40	0·40	2·00
Khamsin '77	8	4930	42 DCNF 68	4	34	3·50	1·35	0·60	1·35	F25	1·55	0·80 F7	0·40	0·40	2·00
Kyalami 4200	8	4136	42 DCNF 76	4	34	3·50	1·30	0·60	1·35	F25	1·55	0·80 F7	0·40	0·40	2·00
Quattro Porte 11	6	2965	44 DCNF 61	3	34	3·50	1·40	0·65	1·65	F25	1·70	1·10 F7	0·40	0·40	2·00
Bora-Indy 4700	8	4719	42 DCNF 35(3)-36	4	36	3·50	1·40	0·60	1·60	F25	1·55	0·80 F7	0·40	0·40	2·00
Bora 4900	8	4930	42 DCNF 68	4	34	3·50	1·35	0·60	1·35	F25	1·55	0·80 F7	0·40	0·40	2·00
MATRA-SIMCA															
Baghera	4	1294	36 DCNF 49-50/100	1	29	3·50	1·25	0·45	1·35	F36	2·00	0·70F10	0·40	0·40	1·75
Baghera S	4	1294	36 DCNF 51-52/100	1	30	3·50	1·30	0·47	1·35	F36	2·10	0·70F10	0·40	0·40	1·75
PORSCHE															
904 GTS Carrera	4	1956	46 IDA 2/3	2	40	4·50	1·70	0·60 F10	–	F14	1·30	–	0·50	none	3·00
911L	6	1991	40 IDA 3C/1	2	30	4·50	1·25	0·55	1·10	F26	1·80	–	0·50	none	1·75
911 USA	6	1991	40 IDAP 3C/1	2	30	4·50	1·25	0·52	1·10	F26	1·80	–	0·50	none	1·75
911S	6	1991	40 IDS 3C/1	2	32	4·50	1·30	0·55	1·10	F3	1·80	–	0·50	none	1·75
911T	6	1991	40 IDT 3C/1	2	27	4·50	1·10	0·50	1·10	F2	1·85	–	0·50	none	1·75
911T	6	1991	40 IDTP 3C/1	2	27	4·50	1·10	0·45	1·45	F1	1·85	–	0·50	none	1·75
Carrera 6	6	1991	46 IDA 3C/1	2	42	4·50	1·70	0·70	0·80	F24	1·45	–	0·50	0·40	1·75
914/6	6	1991	40 IDTP 13C/1	2	27	4·50	1·05	0·50	1·45	F1	1·70	–	0·50	none	1·75
SUNBEAM (Rootes)															
Rapier H 120	4	1725	40 DCOE 90/91	2	30	3·50	1·15	0·50 F18	–	F34	2·00	1·40 F5	0·35	1·00	1·50

Part 3

Appendix 2
Conversion equipment jet setting list

This list gives details of calibration and jet sizes on carburettors fitted as conversion equipment:

A *Model details*
B *Carburettor type*
C *Number of carburettors*
D *Choke size*
E *Auxiliary venturi*
F *Main jet*
G *Emulsion tube*
H *Air corrector jet*
I *Idle jet*
J *Accelerator pump jet*
K *Accelerator pump inlet valve with exhaust orifice*
L *Needle valve*

A	B	C	D	E	F	G	H	I	J	K	L
Alfasud	40 IDF 42/43	2	28	4·50	1·10	F11	2·25	0·50	0·40	0·50	1·75
Austin Mini Cooper 'S' 1070 cc and 1275 cc	45 DCOE 13	1	34	3·5	1·30	F2	1·75	0·50 F9	0·50	0·50	2·00
Austin Mini Cooper 'S' 1275 cc	45 DCOE 13	1	38	5·00	1·60	F16	1·70	0·45 F9	0·50	1·00	2·25

A	B	C	D	E	F	G	H	I	J	K	L
Austin America	45 DCOE 9	1	34	3·5	1·30	F2	1·75	0·50 F9	0·50	0·50	2·00
Austin Marina	45 DCOE 9	1	36	4·5	1·65	F16	1·60	0·50 F8	0·60	closed	2·00
Austin Healey Sprite Mk 1	45 DCOE 9	1	32	5·0	1·40	F16	1·80	0·45 F6	0·40	0·50	2·00
Austin Healey Sprite Mk 2 and 3	45 DCOE 9	1	32	5·0	1·40	F16	1·80	0·45 F6	0·40	0·50	2·00
Austin Healey Sprite Mk 4	45 DCOE 9	1	34	3·5	1·30	F2	1·75	0·50 F9	0·50	0·50	2·25
Austin Healey 3000 Mk 2 and 3	45 DCOE 9	3	36	4·5	1·65	F16	1·50	0·55 F8	0·45	closed	2·00
BMW 1600	40 DCOE 18	2	32	4·5	1·30	F9	1·85	0·45 F12	0·35	0·45	1·75
BMW 2002	45 DCOE 15/16	2	34	5·0	1·30	F9	1·80	0·50 F8	0·40	0·45	2·25
Capri 1600	40 DCOE 2	2	32	4·5	1·20	F16	1·80	0·50 F9	0·40	0·50	2·00
Capri 2000	45 DCOE 13	1	34	3·5	1·45	F2	1·85	0·55 F4	0·50	0·50	2·25
Capri 2000	42 DCOE 8	2	32	4·5	1·25	F16	1·80	0·50 F9	0·40	0·50	2·00
Colt 1600	45 DCOE 9	1	32	5·0	1·25	F20	1·60	0·50 F8	0·45	0·50	2·00
Datson B110	40 DCOE 2	1	27	4·5	1·10	F7	1·65	0·50 F9	0·50	0·50	2·00
Datsun B210 F10	40 DCOE 2	1	33	4·5	1·30	F11	1·80	0·50 F8	0·60	closed	2·00
Datsun 510	45 DCOE 13	1	33	4·5	1·30	F16	1·90	0·50 F8	0·50	0·55	2·25
Datsun 510	40 DCOE 12	2	32	4·5	1·35	F15	1·70	0·55 F2	0·40	0·55	2·00
Datsun 610	45 DCOE 13	1	34	3·5	1·30	F16	1·80	0·50 F8	0·50	closed	2·25
Datsun 610	40 DCOE 2	2	33	4·5	1·50	F16	2·00	0·50 F6	0·45	0·55	2·00
Datsun 710	45 DCOE 13	1	34	3·5	1·30	F16	1·80	0·50 F8	0·50	closed	2·25
Datsun 710	40 DCOE 2	2	33	4·5	1·50	F16	2·00	0·50 F6	0·45	0·55	2·00
Datsun 240Z and 260Z	40 DCOE 18	3	30	4·5	1·30	F2	1·75	0·50 F9	0·45	0·55	1·75
Datsun 521 PU (1595 cc)	45 DCOE 13	1	33	4·5	1·30	F16	1·90	0·50 F8	0·50	0·55	2·25
Datsun 521 PU (1595 cc)	40 DCOE 2	2	32	4·5	1·35	F15	1·70	0·55 F2	0·40	0·55	2·00
Datsun 620 PU (1595 cc)	45 DCOE 13	1	33	4·5	1·30	F16	1·90	0·50 F8	0·50	0·55	2·25
Datsun 620 PU (1595 cc)	40 DCOE 2	2	32	4·5	1·35	F15	1·70	0·55 F2	0·40	0·55	2·00
Datsun 620 PU (1770 cc and 1952 cc)	45 DCOE 13	1	34	3·5	1·30	F16	1·80	0·50 F8	0·50	closed	2·25
Datsun 620 PU (1770 cc and 1952 cc)	40 DCOE 2	2	33	4·5	1·50	F16	2·00	0·50 F6	0·45	0·55	2·00
Fiat 126 Gruppo 2	40 DCOE 102	1	28	4·5	1·10	F11	2·50	0·45 F8	0·45	1·00	1·75
Fiat 124 Sport/Rally GR4	48 IDF 1-2/100	2	40	4·5	1·65	F11	1·90	0·65	0·40	1·00	2·00
Ford Cortina 1500	40 DCOE 2	2	33	4·5	1·25	F16	1·70	0·45 F9	0·35	closed	2·00
Ford Cortina 1600 (cross flow) and Pinto 1600	40 DCOE 2	2	32	4·5	1·20	F16	1·80	0·50 F9	0·40	0·50	2·00
Ford Pinto 2000	45 DCOE 13	1	34	3·5	1·45	F2	1·85	0·55 F4	0·50	0·50	2·25
Ford Pinto 2000	42 DCOE 8	2	32	4·5	1·25	F16	1·80	0·50 F9	0·40	0·50	2·00
Honda Civic (except CVCC)	40 DCOE 2	1	33	4·5	1·40	F2	1·85	0·45 F9	0·45	0·55	2·00
Jaguar XKE (3·8 and 4·2)	45 DCOE 9	3	38	3·5	1·65	F2	1·90	0·65 F8	0·40	0·50	2·00
Lancia Stratos	44 IDF 26(2)-27	3	36	4·5	1·50	F11	1·80	0·55	0·40	0·80	1·75
Lotus Europa (Renault engine)	45 DCOE 13	1	34	3·5	1·50	F2	1·80	0·45 F8	0·40	0·50	2·25
Mercedes Benz 190 SL	40 DCOE 18	2	30	4·5	1·35	F2	2·00	0·50 F9	0·45	closed	1·75
MG Midget Mk 1 and 2	45 DCOE 9	1	32	5·0	1·40	F16	1·80	0·45 F6	0·40	0·50	2·00
MG Midget Mk 3	45 DCOE 13	1	34	3·5	1·30	F2	1·75	0·50 F9	0·50	0·50	2·25

A	B	C	D	E	F	G	H	I	J	K	L
MG 1100 Saloon	45 DCOE 9	1	32	5·0	1·40	F16	1·80	0·45 F6	0·40	0·50	2·00
MGA (except twin cam)	45 DCOE 13	1	34	3·5	1·60	F16	1·70	0·50 F8	0·60	closed	2·25
MGB and MGB GT	45 DCOE 9	1	36	4·5	1·65	F16	1·60	0·50 F8	0·60	closed	2·00
Opel Kadette and Rallye (to 1970)	40 DCOE 2	2	33	4·5	1·15	F16	1·50	0·50 F9	0·35	0·55	2·00
Opel Kadette, Rallye and Manta (1971 on)	40 DCOE 2	2	33	4·5	1·15	F16	1·50	0·50 F9	0·35	0·55	2·00
Opel GT 1900	40 DCOE 2	2	33	4·5	1·15	F16	1·50	0·50 F9	0·35	0·55	2·00
Porsche 356A, B, C and 912	48 IDA 4	2	37	4·5	1·35	F7	1·20	0·70 F10	0·50	0·50	2·00
Renault R12 Gordini	45 DCOE 68/69	2	34	4·5	1·35	F9	2·00	0·55 F8	0·45	0·60	1·50
Toyota Corolla 1100 and 1200	40 DCOE 2	1	27	4·5	1·05	F7	1·55	0·50 F11	0·50	0·50	2·00
Toyota Corolla 1600 (2TC)	40 DCOE 18	1	30	4·5	1·10	F11	2·00	0·45 F9	0·50	0·50	1·75
Toyota Corolla 1600 (2TC)	40 DCOE 18	2	30	4·5	1·15	F11	2·00	0·50 F9	0·40	0·50	1·75
Toyota Carina 1600 (2TC)	40 DCOE 18	1	30	4·5	1·10	F11	2·00	0·45 F9	0·50	0·50	1·75
Toyota Carina 1600 (2TC)	40 DCOE 18	2	30	4·5	1·15	F11	2·00	0·50 F9	0·40	0·50	1·75
Toyota Celica (8RC and 18RC)	40 DCOE 2	1	33	4·5	1·60	F2	1·65	0·40 F9	0·60	closed	2·00
Toyota Celica (8RC and 18RC)	40 DCOE 2	2	33	4·5	1·40	F2	1·70	0·45 F6	0·35	closed	2·00
Toyota Corona (8RC and 18RC)	40 DCOE 2	1	33	4·5	1·60	F2	1·65	0·40 F9	0·60	closed	2·00
Toyota Corona (8RC and 18RC)	40 DCOE 2	2	33	4·5	1·40	F2	1·70	0·45 F6	0·35	closed	2·00
Toyota Corona Mk2 (8RC and 18RC)	40 DCOE 2	1	33	4·5	1·60	F2	1·65	0·40 F9	0·60	closed	2·00
Toyota Corona Mk2 (8RC and 18RC)	40 DCOE 2	2	33	4·5	1·40	F2	1·70	0·45 F6	0·35	closed	2·00
Toyota Hi-Lux PU (8RC and 18RC)	40 DCOE 2	1	33	4·5	1·60	F2	1·65	0·40 F9	0·60	closed	2·00
Toyota Hi-Lux PU (8RC and 18RC)	40 DCOE 2	2	33	4·5	1·40	F2	1·70	0·45 F6	0·35	closed	2·00
Toyota PU (18RC)	40 DCOE 2	1	33	4·5	1·60	F2	1·65	0·40 F9	0·60	closed	2·00
Toyota PU (18RC)	40 DCOE 2	2	33	4·5	1·40	F2	1·70	0·45 F6	0·35	closed	2·00
Triumph Dolomite Sprint	48 DCOE	2	42	4·5	1·65	F16	1·75	0·60	0·45	0·40	3·00
Triumph GT6	40 DCOE 2	3	29	4·5	1·20	F16	1·90	0·45 F9	0·40	closed	2·00
Triumph GT6 + Mk 2 and GT6 Mk 3	40 DCOE 2	3	27	4·5	1·30	F2	1·60	0·50 F11	0·45	closed	2·00
Triumph TR2, 3, 3A, 3B, 4 and 4A	42 DCOE 8	2	32	4·5	1·40	F15	1·50	0·50 F2	0·50	0·50	2·00
Triumph TR 250 and TR6	40 DCOE 2	3	27	4·5	1·30	F2	1·60	0·50 F11	0·45	closed	2·00
Volvo 122S, 144 and P1800	42 DCOE 8	2	32	4·5	1·25	F15	1·60	0·50 F8	0·50	0·50	2·00
Volkswagen 1200	36 IDF 16/17	2	27	4·5	1·10	F11	2·15	0·50	0·40	0·50	1·75
Volkswagen 1600	40 IDF 18/19	2	28	4·5	1·15	F11	2·00	0·50	0·50	0·50	1·75
Volkswagen 2000	44 IDF 38/39	2	36	4·5	1·70	F11	2·00	0·50	0·55	0·80	1·75
Volkswagen Saloon 1600 (dual port) stock	40 DCNF 12	1	32	4·5	1·60	F24	2·20	0·55	0·50	none	1·75
Volkswagen Saloon 1600 (dual port) – 1800 cc modification	40 DCNF 12	2	32	4·5	1·55	F24	2·20	0·55	0·45	none	1·75
Volkswagen Saloon 1600 (dual port) – 1800 cc modification	42 DCNF 9	2	34	4·5	1·40	F25	1·80	0·60	0·40	none	2·00
Volkswagen Saloon 1600 (dual port) – 1800 cc modification	40 IDF 19	2	28	4·5	1·15	F11	2·00	0·50	0·50	0·55	1·75
Volkswagen Transporter 1600 (dual port) – stock	40 DCNF 12	1	32	4·5	1·60	F24	2·20	0·55	0·50	none	1·75
Volkswagen Transporter 1600 (dual port) – 1800 cc modification	40 DCNF 12	2	32	4·5	1·55	F24	2·20	0·55	0·45	none	1·75
Volkswagen Transporter 1600 (dual port) – 1800 cc modification	40 DCNF 9	2	34	4·5	1·40	F25	1·80	0·60	0·40	none	2·00
Volkswagen Transporter 1600 (dual port) – 1800 cc modification	40 IDF 19	2	28	4·5	1·15	F11	2·00	0·50	0·50	0·55	1·75
Volkswagen Transporter 1700 (type 4)	40 IDF 19	2	28	4·5	1·15	F11	2·00	0·50	0·50	0·55	1·75
Volkswagen Saloon and Transporter 1600 – highly modified	48 IDA 4	2	37	4·5	1·35	F7	1·20	0·70 F10	0·50	0·50	2·00
Volkswagen Fastback and Squareback 1600 (dual port)	40 DCNF 12	2	32	4·5	1·55	F24	2·20	0·55	0·45	none	1·75
Volkswagen Fastback and Squareback 1600 (dual port)	42 DCNF 9	2	34	4·5	1·40	F25	1·80	0·60	0·40	none	2·00
Volkswagen 411 and 412 1700 and 1800	40 IDF 19	2	28	4·5	1·15	F11	2·00	0·50	0·50	0·55	1·75

Safety first!

Regardless of how enthusiastic you may be about getting on with the job at hand, take the time to ensure that your safety is not jeopardized. A moment's lack of attention can result in an accident, as can failure to observe certain simple safety precautions. The possibility of an accident will always exist, and the following points should not be considered a comprehensive list of all dangers. Rather, they are intended to make you aware of the risks and to encourage a safety conscious approach to all work you carry out on your vehicle.

Essential DOs and DON'Ts

DON'T rely on a jack when working under the vehicle. Always use approved jackstands to support the weight of the vehicle and place them under the recommended lift or support points.
DON'T attempt to loosen extremely tight fasteners (i.e. wheel lug nuts) while the vehicle is on a jack — it may fall.
DON'T start the engine without first making sure that the transmission is in Neutral (or Park where applicable) and the parking brake is set.
DON'T remove the radiator cap from a hot cooling system — let it cool or cover it with a cloth and release the pressure gradually.
DON'T attempt to drain the engine oil until you are sure it has cooled to the point that it will not burn you.
DON'T touch any part of the engine or exhaust system until it has cooled sufficiently to avoid burns.
DON'T siphon toxic liquids such as gasoline, antifreeze and brake fluid by mouth, or allow them to remain on your skin.
DON'T inhale brake lining dust — it is potentially hazardous (see *Asbestos* below)
DON'T allow spilled oil or grease to remain on the floor — wipe it up before someone slips on it.
DON'T use loose fitting wrenches or other tools which may slip and cause injury.
DON'T push on wrenches when loosening or tightening nuts or bolts. Always try to pull the wrench toward you. If the situation calls for pushing the wrench away, push with an open hand to avoid scraped knuckles if the wrench should slip.
DON'T attempt to lift a heavy component alone — get someone to help you.
DON'T rush or take unsafe shortcuts to finish a job.
DON'T allow children or animals in or around the vehicle while you are working on it.
DO wear eye protection when using power tools such as a drill, sander, bench grinder, etc. and when working under a vehicle.
DO keep loose clothing and long hair well out of the way of moving parts.
DO make sure that any hoist used has a safe working load rating adequate for the job.
DO get someone to check on you periodically when working alone on a vehicle.
DO carry out work in a logical sequence and make sure that everything is correctly assembled and tightened.
DO keep chemicals and fluids tightly capped and out of the reach of children and pets.
DO remember that your vehicle's safety affects that of yourself and others. If in doubt on any point, get professional advice.

Asbestos

Certain friction, insulating, sealing, and other products — such as brake linings, brake bands, clutch linings, torque converters, gaskets, etc. — contain asbestos. *Extreme care must be taken to avoid inhalation of dust from such products since it is hazardous to health.* If in doubt, assume that they *do* contain asbestos.

Fire

Remember at all times that gasoline is highly flammable. Never smoke or have any kind of open flame around when working on a vehicle. But the risk does not end there. A spark caused by an electrical short circuit, by two metal surfaces contacting each other, or even by static electricity built up in your body under certain conditions, can ignite gasoline vapors, which in a confined space are highly explosive. Do not, under any circumstances, use gasoline for cleaning parts. Use an approved safety solvent.

Always disconnect the battery ground (–) cable *at the battery* before working on any part of the fuel system or electrical system. Never risk spilling fuel on a hot engine or exhaust component.

It is strongly recommended that a fire extinguisher suitable for use on fuel and electrical fires be kept handy in the garage or workshop at all times. Never try to extinguish a fuel or electrical fire with water.

Torch (flashlight in the US)

Any reference to a "torch" appearing in this manual should always be taken to mean a hand-held, battery-operated electric light or flashlight. It DOES NOT mean a welding or propane torch or blowtorch.

Fumes

Certain fumes are highly toxic and can quickly cause unconsciousness and even death if inhaled to any extent. Gasoline vapor falls into this category, as do the vapors from some cleaning solvents. Any draining or pouring of such volatile fluids should be done in a well ventilated area.

When using cleaning fluids and solvents, read the instructions on the container carefully. Never use materials from unmarked containers.

Never run the engine in an enclosed space, such as a garage. Exhaust fumes contain carbon monoxide, which is extremely poisonous. If you need to run the engine, always do so in the open air, or at least have the rear of the vehicle outside the work area.

If you are fortunate enough to have the use of an inspection pit, never drain or pour gasoline and never run the engine while the vehicle is over the pit. The fumes, being heavier than air, will concentrate in the pit with possibly lethal results.

The battery

Never create a spark or allow a bare light bulb near a battery. They normally give off a certain amount of hydrogen gas, which is highly explosive.

Always disconnect the battery ground (–) cable *at the battery* before working on the fuel or electrical systems.

If possible, loosen the filler caps or cover when charging the battery from an external source (this does not apply to sealed or maintenance-free batteries). Do not charge at an excessive rate or the battery may burst.

Take care when adding water to a non maintenance-free battery and when carrying a battery. The electrolyte, even when diluted, is very corrosive and should not be allowed to contact clothing or skin.

Always wear eye protection when cleaning the battery to prevent the caustic deposits from entering your eyes.

Mains electricity (household current in the US)

When using an electric power tool, inspection light, etc., which operates on household current, always make sure that the tool is correctly connected to its plug and that, where necessary, it is properly grounded. Do not use such items in damp conditions and, again, do not create a spark or apply excessive heat in the vicinity of fuel or fuel vapor.

Secondary ignition system voltage

A severe electric shock can result from touching certain parts of the ignition system (such as the spark plug wires) when the engine is running or being cranked, particularly if components are damp or the insulation is defective. In the case of an electronic ignition system, the secondary system voltage is much higher and could prove fatal.

Models covered by this manual

All popular carburettor types:
DAF, DCD, DFA, DFV, DFD, DFE, DFM, DFT, DGV, DIF, IDA, IDF, IDS, IDT, DCNF, DCOE, DFAV, DFTA, DGAS, DGAV, IDAP and IDTP carburettors

Designed to complement the existing range of Haynes Owners Workshop Manuals, each Carburettor Manual covers a specific series of carburettors. Written with the home mechanic in mind, each sets out to give a detailed insight into the often mysterious workings of the modern carburettor, guiding the user in step-by-step fashion through every aspect of overhaul, maintenance and tuning. In order to achieve this, the author undertakes considerable research into fuel systems and specific carburettor history, talking to the manufacturer, dealers, repair specialists and users.

In this age of ever-increasing fuel costs, it becomes even more important that this precision instrument is tuned correctly for both maximum performance and economy. With the mine of information contained within these pages, the amateur mechanic will find more than adequate details applicable to the specific carburettor fitted to his or her vehicle, thus enabling these objectives to be reached.

- **Theory and practice of carburettors**
- **Maintenance and servicing**
- **Detailed overhaul and renovation procedures**
- **Tuning**
- **Application and reference tables**

ABCDE
FGHIJ
K
2

ISBN 1 85010 061 6

'These are really worthwhile manuals which can save you a lot of money.'
Autocar

'Haynes manuals are outstanding for giving the learner mechanic an easy to follow guide to doing most any type of repair or maintenance work on his or her car.'
Road & Track

'These authentic manuals are actually written from practical experience ...'
Car Mechanics

'Excellent value for money, beginners and experts should find it equally useful, overall a mine of information'
Motor

'It is thus opportune that a simply splendid Owners Workshop Manual has just come out. Every imaginable job is illustrated ...'
Autosport

'For the home mechanic Haynes DIY workshop manuals show clearly step-by-step service operations in pictures.'
Sunday Mirror

0 38345 00393 6

HAYNES MANUALS EXPLAIN BEST GO BY THE BOOK

Haynes ®

WEBER Owners workshop manual

Il periodo trattato va dal 1979 al 1986

Il manuale è in lingua INGLESE

Il catalogo è in formato PDF, come questo file.

E' formato da 193 pagine, tutte stampabili.

E' richiesto un contributo pari a 15 euro con cui vi verrà spedito un CD imballato in modo adeguato.

La spedizione avverrà con posta prioritaria, se desiderate una spedizione raccomandata è necessario aggiungere 5 euro di spese postali.

Eventuali richieste devono essere inviate a info@iw1axr.eu

Non dimenticatevi di specificare i manuale desiderato, il Vostro indirizzo e il sistema di pagamento che più gradite.

Grazie dell'attenzione, a presto.