



Leyland

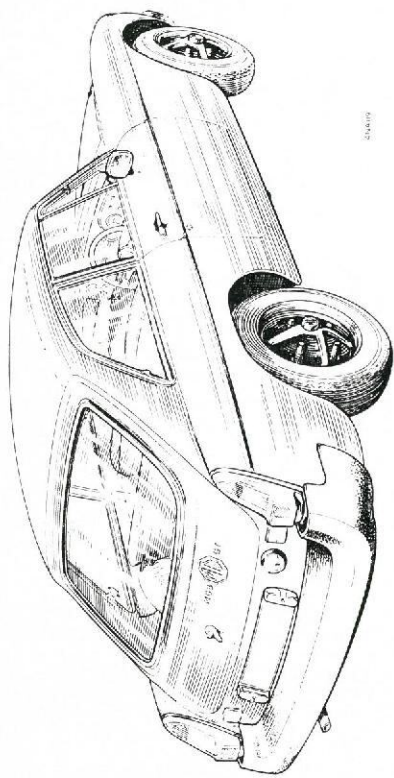


Special Tuning for your

MGB

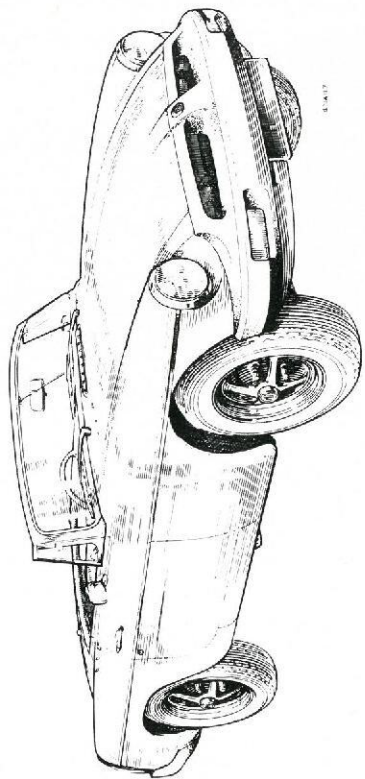


THE 'MGB' GT



200000

THE 'MGB' TOURER



200000

FOREWORD

This Tuning Booklet deals specifically with the Series MGB.

The 'MGB' as delivered from the Factory in its standard form is tuned to give performance consistent with complete reliability, and in compliance with various territorial regulations. There is, however, a demand from enthusiasts all over the world for information on methods of improving the performance for competitive and road purposes, and it is to meet this demand that this booklet has been prepared.

It must be clearly understood, however, that, whereas it is a simple matter to increase the power output of the engine, this increase in power must inevitably carry with it a tendency to reduce reliability. It is for this reason that the terms of the Owners Service Statement on a new MG expressly exclude any super-tuning of the kind described in this booklet, but this does not mean that tuning in this way will necessarily make the car hopelessly unreliable. In fact, it may be assumed that it will be at least as reliable as other cars of similar performance.

This booklet is laid out to give details for progressively increasing the power. With the above ideas firmly in mind, you should select the simplest tuning method which will give the performance required.

Tuning hints are included for racing enthusiasts who want to go to the limit and who have facilities to modify or make up special parts for their cars. We hope this section will be of use to them.

In certain countries various special regulations are in force covering safety, air pollution and noise. The company cannot therefore accept responsibility for any modifications, whether or not listed in this book, which may contravene these regulations if carried out on the instructions of the owner.

Most competitive events are run under rules agreed by the F.I.A. which limit modifications for certain groups or categories. As soon as improvements are incorporated into production or become available as special parts, the necessary steps are taken to have these parts approved for competition and included on the homologation forms.

However, whilst every care is taken, no responsibility can be accepted for ensuring that any specifications or modifications comply with the F.I.A. Regulations or homologation forms. Copies of the forms of recognition are available **only** from the R.A.C. Motor Sport Division, 31 Belgrave Square, London SW1X 8QH who will also be able to advise on any queries concerning eligibility of modified cars.

All parts mentioned in this booklet can be obtained from your Leyland ST Distributor/Stockist. Ensure that the full part number is quoted.

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GETTING THE BEST FROM YOUR 'MGB'

The engine fitted to your 'MGB' is a highly developed unit and it is essential that you should know something about the specialized maintenance it requires if you are to maintain it at the peak of its mechanical efficiency.

Special recommendations on the sparking plugs, ignition settings, and fuel to be used are given by the manufacturers, and it is stressed that failures are bound to occur if these are not strictly adhered to. Particular care is needed with this engine owing to its high compression ratio, which makes it extremely sensitive to variations in fuel, ignition timing, and the heat range of the sparking plugs.

In lower compression engines a much wider range of fuels can be tolerated without causing serious damage to the engine, and ignition settings will stand variations of a reasonable amount. Also, even if the incorrect sparking plugs are used, no more damage may be incurred than burnt-out plugs or leaky valves. But with an engine having a very high compression ratio the range of fuels, sparking plugs, and ignition settings is much narrower and it is essential that the mixture should always be correct, and particularly never overweat at maximum load or power.

High-compression engines are very sensitive to variations in spark advance (over-advance) and to fuel/air ratio (mixture). Variations in these settings will increase the combustion temperature, and if the variation is excessive pre-ignition will cause high shock waves, resulting in damage to the engine.

Workshop Manual

A comprehensive Workshop Manual, Part No. AKD 3259, is available, and should be used in conjunction with this booklet.

Choice of fuel

The octane number of a motor fuel is an indication given by the fuel technicians of its knock resistance. High-octane fuels have been produced to improve the efficiency of engines by allowing them to operate on high compression ratios, resulting in better fuel economy and greater power. Owing to the high compression ratio of the 'MGB' engines, fuels with an octane rating below 98 are not suitable; should it be necessary to use a fuel with a lower octane number, the car must be used very carefully until the correct fuel can be obtained.

It is necessary to use Super grade fuels in the 100-octane range unless Premium fuels of minimum 98-octane Research are available.

When fitted with low compression engine (ratio 8.0 : 1)

Premium fuels of minimum 93-octane Research up to 97 octane are required, with preference to 95/97.

Super grade fuels in the 100-octane range can be used if preferred.

Sparking plugs

The correct grade of sparking plug for use under normal driving conditions is the Champion N-9Y. Plugs of a lower heat range (hotter running) should not be used, otherwise pre-ignition will occur, with consequent rise in combustion temperature and resulting engine damage. For competition work or hard driving where high output is consistently sustained the Champion N64Y

GETTING THE BEST FROM YOUR 'MGB'

sparkling plug should be used. This is a cooler-running plug and will ensure lower combustion temperatures and an increased margin of safety. Accumulated deposits of carbon, leaking or cracked insulators, and thin electrodes are all causes of pre-ignition. The plugs should therefore be examined, cleaned, and adjusted at the specified intervals and defective ones renewed.

Static ignition settings

It is of the utmost importance that the correct setting should always be maintained. It will be appreciated that any variation in the contact breaker gap will affect the ignition setting. After adjusting the contact breaker gap to the correct setting it is advisable to check the ignition timing, and to correct it if necessary.

An accurate check can be carried out by a very simple electrical method. To do this, connect a 12-volt lamp between the low-tension terminal on the side of the distributor and a good earth point on the engine.

With the ignition switched on and the sparking plugs removed, turn the crankshaft until the crankshaft pulley pointer is exactly at the correct number of degrees.

If the ignition timing is correct the lamp will light at exactly this point. Any discrepancy in the ignition setting can be rectified by turning the vernier adjusting nut on the distributor until the test lamp lights at exactly the correct setting. If pinking should occur due to the use of a fuel of a lower range than our recommendations, retarding the ignition 2 to 3° can be tolerated. Under no circumstances should the ignition be advanced beyond the correct setting.

Centre-lock wire wheel

This system must be properly treated in order to give 100 per cent service. Observation of the following hints will ensure complete satisfaction.

When wheels are replaced, remove any foreign matter that would prevent the wheel from properly seating and cover both conical surfaces and the serrations in the hub, also the coned surface and threads in the locknut, with a light coating of grease. Hammer tight and re-check after 50 miles (80 km.).

When a forced change is made on the road, remove and grease the hub as soon as convenient. Once a year remove the wheels for examination and regreasing.

Always hammer the locknuts tight. Lift the car on the jack before using the hammer. The locknuts are designed for self-locking, but they should not on that account be permitted to run untightened, because there is, in such case, a possibility of damaging the splines.

GENERAL DATA

Engine

Type	18G/18GA (3 main bearing), 18GB/18GD 18GF/18GG/18V (5 main bearing)
Number of cylinders ..	4
Bore	3.16 in. (80.26 mm.)
Stroke	3.5 in. (89 mm.)
Capacity	1798 c.c. (109.8 cu. in.)
Firing order	1, 3, 4, 2
Compression ratio: 18G-18GG	H.C. 8.8 : 1 (L.C. 8 : 1)
18V	H.C. 9.0 : 1 (L.C. 8.2 : 1)
Capacity of combustion chamber (valves fitted) ..	42.5 to 43.5 c.c. (2.59 to 2.65 cu. in.)
Valve operation	Overhead by push-rod
Safe maximum r.p.m. ..	6,000
Valve crash r.p.m.	6,230
B.H.P.	H.C. 95 (L.C. 91) at 5,400
B.M.E.P.	152 at 3,100
Torque (lb. ft.)	
H.C.	110 (15.2 kg. m.) at 3,000 r.p.m.
L.C.	105 (14.5 kg. m.) at 3,000 r.p.m.
Octane rating	Minimum requirements for knock-free operation. H.C. 98+, L.C. 93+
Cooling system	Thermo-siphon, pump- and fan-assisted

Crankshaft

Main journal diameter ..	2.126 to 2.127 in. (54.01 to 54.02 mm.)
Minimum regrind diameter..	2.086 in. (52.984 mm.)
Crankpin journal diameter..	1.8759 to 1.8764 in. (47.65 to 47.66 mm.)
Crankpin minimum regrind diameter	1.8359 in. (46.64 mm.)

Main bearings

Number and type	18G/18GA—3 thinwall, 18GB/18GD/18GF/ 18GG/18V—5 thinwall
Material	
Bottom half	Steel-backed copper-lead
Top half	Steel-backed copper-lead
Length	
Front, centre, and rear ..	1.125 in. (28.575 mm.)
Intermediates (18GB only)	.785 in. (22.23 mm.)
End-clearance .. .. .	.002 to .003 in. (.051 to .076 mm.)
End-thrust	Taken by thrust washers at centre main bearing
Running clearance .. .. .	.001 to .0027 in. (.025 to .0688 mm.)

GENERAL DATA

Connecting rods

18G/18GA/18GB	Angular—split big-end
18GD/18GF/18GG/18V	Horizontal split big-end
18G/18GA/18GB	Bushed small end
18GD/18GF/18GG/18V	Press fit small end
Length between centres	6·5 in. (165·1 mm.)

Big-end bearings

Material top half	Steel-backed copper-lead
Material bottom half	Steel-backed copper-lead
Bearing side-clearance	·008 to ·012 in. (.203 to ·305 mm.)
Bearing diametrical clearance	·001 to ·0027 in. (.025 to ·0688 mm.)

Gudgeon pin bore:

18GB/18GD/18GF/18GG/18V	·8126 to ·8129 in. (19·68 to 19·95 mm.)
18G/18GA	·7499 to ·7501 in. (19·04 to 19·05 mm.)

Pistons

Type	Aluminium alloy
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Clearances:

18G/18GA:

Bottom of skirt	·0018 to ·0024 in. (.045 to ·060 mm.)
Top of skirt	·0036 to ·0048 in. (.091 to ·121 mm.)

18GB/18GD/18GF/18GG/18V:

Bottom of skirt	·006 to ·0012 in. (.015 to ·030 mm.)
Top of skirt	·0021 to ·0033 in. (.053 to ·084 mm.)

Piston rings

Compression: Plain	Top ring (chrome-plated)
Tapered	Second and third rings
Width	·0615 to ·0625 in. (1·56 to 1·58 mm.)
Thickness	·137 in. (3·48 mm.)
Fitted gap	·012 to ·017 in. (.304 to ·431 mm.)
Clearance in groove	·0015 to ·0035 in. (.038 to ·089 mm.)
Oil control ring	Slotted scraper
Width	·1552 to ·1562 in. (3·94 to 3·99 mm.)
Thickness	·137 in. (3·48 mm.)
Fitted gap	·012 to ·017 in. (.304 to ·431 mm.)
Clearance in groove	·0016 to ·0036 in. (.040 to ·091 mm.)

GENERAL DATA

Gudgeon pin

18G/18GA

Type	..	..	..	Clamped
Fit (in piston)	..	..	..	Free fit to 20° C. (68° F.)
Diameter	..	..	..	.75 in. (19.05 mm.)

18GB/18GD/18GF

Type	..	..	..	Fully floating
Fit (in piston)	..	..	..	.0001 in. to .00035 in. (.0025 to .007 mm.)
Fit (in bush)	..	..	..	Hand push

18GD/18GG/18V

Type	..	..	..	Press fit in connecting rod
Fit (in piston)	..	..	..	Hand push
Diameter	..	..	..	.8125 to .8127 in. (20.63 to 20.64 mm.)

Cylinder head

Cylinder head depth	..	3 $\frac{1}{4}$	+	.015 in.	(80.6	+	.400 mm.)	-	.000 in.	-	.000 mm.)
Thickness of cylinder head gasket	..	..	..	..	.023 in.	..	(.584 mm.)	..	..	..	compressed
Capacity of cylinder head gasket	..	..	..	..	3.208	..	c.c.	..	..	..
Capacity of combustion space: 18G/18GG	..	..	..	..	42.5/43.5	..	c.c. (valves fitted)	..	..	..
18V	..	..	..	..	38.5/39.5	..	c.c.	..	..	..
Capacity of piston head below block face	..	..	..	..	H.C. 10.87	..	c.c. (L.C. 17.43	..	..	..	c.c.)
(including capacity of piston concavity)	..	..	..	..	H.C. 6.25	..	c.c. (L.C. 12.8	..	..	..	c.c.)
Capacity of plug centre hole	..	..	..	..	.2	..	c.c.	..	..	..
Inlet and exhaust manifold gasket	..	..	..	..	Part No. 1G 2417	..	..	..	..	..
Valve seat angle in cylinder head	..	..	..	..	45°	..	..	..	..	..

Valves and valve gear

Seat angle

Inlet and exhaust	..	45½°	(seat angle in cylinder head 45°)
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Head diameter

Inlet:

18G/18GA/18GB/18GG	..	1.562 to 1.567	in. (38.67 to 38.8	mm.)
18V	1.625 to 1.630	in. (41.27 to 41.40
Exhaust	..	..	1.343 to 1.348	in. (34.11 to 34.23

GENERAL DATA

Valves and valve gear—continued

Stem diameter

Inlet	..	..	..	·3422 to ·3427 in. (8·692 to 8·709 mm.)
Exhaust	·34175 to ·34225 in. (8·680 to 8·693 mm.)

Valve lift (clearance set

in.)	·3645 in. (9·26 mm.)
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Cam lift	·250 in. (6·35 mm.)
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Throat diameter

Inlet	1·3125 in. (33·33 mm.)
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Exhaust	1·156 in. (29·36 mm.)
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Valve stem to guide clearance

Inlet	·00155 to ·00255 in. (·0394 to ·0648 mm.)
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Exhaust	·00200 to ·00300 in. (·051 to ·076 mm.)
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Valve rocker clearance

Running	·015 in. (·38 mm.) cold
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Timing

Inlet and exhaust	·021 in. (·53 mm.)
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Timing markings	Dimples on timing wheels
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Chain pitch and number of

pitches	$\frac{3}{8}$ in. (9·52 mm.), 52 pitches
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Inlet valve

Opens	16° B.T.D.C.
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Closes	56° A.B.D.C.
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Exhaust valve

Opens	51° B.B.D.C.
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Closes	21° A.T.D.C.
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Valve guides

Length			<i>Early cars</i>	<i>Later cars</i>
Inlet	1 $\frac{7}{8}$ in. (47·63 mm.)
Exhaust	2 $\frac{1}{8}$ in. (56·96 mm.)

Diameter

Inlet and exhaust

Outside	·5635 to ·5640 in. (14·3129 to 14·3256 mm.)
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Inside	·34425 to ·34475 in. (8·74269 to 8·75665 mm.)
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Fitted height above head	·625 in. (15·87 mm.) short inlet guides
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Fitted height above head	·75 in. (19 mm.) longer inlet guides
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Valve springs

Free length

Inner	1 $\frac{3}{8}$ in. (50 mm.)
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Outer	2 $\frac{3}{8}$ in. (54·372 mm.)
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GENERAL DATA

Valve springs—*continued*

Fitted length

Inner	1 $\frac{7}{8}$ in. (36.51 mm.)
Outer	1 $\frac{8}{16}$ in. (39.69 mm.)

Number of working coils

Inner	..	..	..	6 $\frac{1}{2}$
Outer	..	..	..	4 $\frac{1}{2}$

Pressure

Valve open	..	..	..	Inner 50 lb. (22.7 kg.) Outer 117 lb. (53.08 kg.)
Valve closed	..	..	..	Inner 30 lb. (13.6 kg.) Outer 72 $\frac{1}{2}$ lb. (32.89 kg.)

Tappets

Type	..	..	..	Flat base. Barrel type
Diameter				
Body	..	..	..	$\frac{11}{16}$ in. (20.64 mm.)
Working face	..	..	..	$\frac{1}{8}$ in. (14.29 mm.)
Length	..	..	..	2.293 to 2.303 in. (58.25 to 58.5 mm.)

Rockers

Outside diameter (before fitting)	..	..	..	.751 in. (19.07 mm.)
Inside diameter (reamed in position)	..	..	..	.616 to .620 in. (15.65 to 15.74 mm.)
Bore of rocker arms	..	..	..	.7485 to .7495 in. (19.01 to 19.04 mm.)
Rocker ratio	..	..	..	1.426 : 1

Camshaft

Journal diameters

Front	..	..	..	1.78875 to 1.78925 in. (45.43 to 45.44 mm.)
Centre	..	..	..	1.72875 to 1.72925 in. (43.91 to 43.92 mm.)
Rear	..	..	..	1.62275 to 1.62325 in. (41.22 to 41.23 mm.)
End-float	..	..	..	.003 to .007 in. (.076 to .178 mm.)

Bearings—number and type 3. Thinwall steel-backed copper-lead

Outside diameter (before fitting)

Front	..	..	..	1.920 in. (48.76 mm.)
Centre	..	..	..	1.860 in. (47.24 mm.)
Rear	..	..	..	1.754 in. (44.55 mm.)

Inside diameter (reamed in position)

Front	..	..	..	1.79025 to 1.79075 in. (45.472 to 45.485 mm.)
Centre	..	..	..	1.73025 to 1.73075 in. (43.948 to 43.961 mm.)
Rear	..	..	..	1.62425 to 1.62475 in. (41.256 to 41.269 mm.)
Diametrical clearance	..	..	..	.001 to .002 in. (.0254 to .0508 mm.)

GENERAL DATA

Engine lubrication system

Oil pump

Type Eccentric rotor

Relief pressure valve

operates 70 lb./sq. in. (4.9 kg./cm.²)

Relief valve spring

Free length 3 in. (76.2 mm.)

Fitted length 2 $\frac{3}{32}$ in. (54.77 mm.) at 16 lb. (7.26 kg.) load

Identification colour .. Red spot

Oil filter

Type Tecalemit

Capacity $\frac{1}{2}$ pint (.6 U.S. pint, .28 litre)

Oil pressure

Normal running

Minimum 10 lb./sq. in. (.7 kg./cm.²)

Maximum 80 lb./sq. in. (5.6 kg./cm.²)

Torque wrench settings

Cylinder head nuts 45-50 lb. ft. (6.2-6.9 kg. m.)

Main bearing nuts 70 lb. ft. (9.7 kg. m.)

Connecting rod set screws .. 40-45 lb. ft. (5.5-6.2 kg. m.)

Clutch assembly to flywheel 25-30 lb. ft. (3.45-4.1 kg. m.)

Flywheel bolts 40 lb. ft. (5.5 kg. m.)

Gudgeon pin set screws .. 25 lb. ft. (3.45 kg. m.)

Fuel system

Carburettor

Make and type S.U. twin HS4 semi-downdraught

Diameter 1 $\frac{1}{2}$ in. (38.1 mm.)

Needle No. 5 (standard), No. 6 (rich), No. 21 (weak)

Jet090 in. (2.29 mm.)

Carburettor piston .. Part No. AUC 2061

Piston spring Red (Part No. AUC 4387)

18V: Make and type .. S.U./HIF4 (twin)

Needle AAU

Air cleaner

Make and type Coopers Mechanical Joints Ltd., Steel canister, paper element (replaceable)

Fuel pump

Make and type S.U. electric, high-pressure

Delivery test 10 gal. per hr. (12 U.S. gal., 45.4 litres per hr.)

Suction lift 33 in. (83.8 cm.)

Output lift 48 in. (121.9 cm.)

GENERAL DATA

Cooling system

Type	Pressurized radiator, thermo-siphon, pump- and fan-assisted
Filler cap spring pressure ..	7 lb. (3.175 kg.)

Ignition system

Sparking plugs	Champion N-9Y
Size	14 mm.
Plug gap .. .. .	.024 to .026 in. (.61 to .66 mm.)
Coil	Lucas HA12
Distributor	Lucas, Type 25D4
Distributor contact points gap .. .. .	.014 to .016 in. (.35 to .40 mm.)
Suppressors type	Lucas No. 78106A fitted on each H.T. cable
Timing	H.C. 10° B.T.D.C. (L.C. 8° B.T.D.C.) (static)
Emission control units 18V	5° B.T.D.C. (static)

Clutch

Make and type	Borg & Beck 8 in. (20.3 cm.) diaphragm spring. Strap drive
Diameter	8 in. (20.3 cm.)
Facing material	Wound yarn—Borglite
Damper springs	6
Colour	Black/light green

Gearbox (Standard and Overdrive) 18G/18GA/18GB

Number of forward speeds..	4
Synchromesh	Second, third, and fourth gears
Overdrive .. .. .	.802

Ratios

Top	1.0000 : 1
Third	1.3736 : 1
Second	2.2143 : 1
First	3.6363 : 1
Reverse	4.7552 : 1

Overall ratios

Overdrive	3.135 : 1	<i>M.p.h. per 1,000 r.p.m.</i> 22.3
Top	3.909 : 1	17.9
Third	5.36 : 1	13.09
Second	8.65 : 1	8.11
First	14.20 : 1	4.94
Reverse	18.60 : 1	3.77

GENERAL DATA

Gearbox (Standard and Overdrive) 18G/18GA/18GB—continued

Speedometer gears ratio	..	9 : 28 (overdrive 5 : 16)	
Optional axle ratios		<i>Overall ratios</i>	<i>M.p.h. per 1,000 r.p.m.</i>
Overdrive .. ..	..	3.649 : 1	19.2
Top .. ..	..	4.55 : 1	15.4
Third .. ..	..	6.24 : 1	11.24
Second .. ..	..	9.98 : 1	7.03
First .. ..	..	16.54 : 1	4.24
Reverse .. ..	..	21.63 : 1	3.24
Overdrive .. ..	..	3.449 : 1	20.3
Top .. ..	..	4.3 : 1	16.3
Third .. ..	..	5.9 : 1	11.89
Second .. ..	..	9.52 : 1	7.37
First .. ..	..	15.63 : 1	4.4
Reverse .. ..	..	20.44 : 1	3.43
Overdrive .. ..	..	3.288 : 1	21.3
Top .. ..	..	4.1 : 1	17.1
Third .. ..	..	5.63 : 1	12.44
Second .. ..	..	9.07 : 1	7.73
First .. ..	..	14.90 : 1	4.70
Reverse .. ..	..	19.49 : 1	3.60

Gearbox (Standard and Overdrive) 18GD onwards

Number of forward gears	..	4	
Synchromesh	..	..	All forward gears
Gearbox ratios			
Reverse .. ..	..	3.095 : 1	
First .. ..	..	3.44 : 1	
Second .. ..	..	2.167 : 1	
Third .. ..	..	1.382 : 1	
Fourth .. ..	..	1.000 : 1	
Overdrive:			
Type .. ..	..	..	Laycock L.H.
Ratio .. ..	..	..	.82 : 1
Overall gear ratios			
Reverse .. ..	..	12.098 : 1	
First .. ..	..	13.45 : 1	
Second .. ..	..	8.47 : 1	
Third .. ..	..	5.4 : 1	.. .. <i>Overdrive</i> 4.43 : 1
Fourth .. ..	..	3.909 : 1	.. .. 3.2 : 1
Top gear speed per 1,000 r.p.m.			
Standard .. ..	..	..	18 m.p.h. (29 km.p.h.)
Overdrive .. ..	..	..	22 m.p.h. (35 km.p.h.)
Speedometer gear ratio			
Standard .. ..	..	..	10 : 26
Overdrive .. ..	..	..	8 : 21

GENERAL DATA

Gearbox (close-ratio) (Not suitable for 18GD onwards)

Number of forward speeds..	4	
Synchromesh		Second, third, and fourth gears
Overdrive ratio .. ..	.82	

Ratios

Top	1.0	: 1
Third	1.268	: 1
Second	1.620	: 1
First	2.450	: 1
Reverse	4.7552	: 1

Overall ratios

			<i>M.p.h. per 1,000 r.p.m.</i>
Overdrive	3.135	: 1	22.3
Top	3.909	: 1	17.9
Third	4.956	: 1	14.1
Second	6.332	: 1	11.0
First	9.577	: 1	7.3
Reverse	18.588	: 1	3.7

Speedometer gears ratio .. 9 : 28 (Overdrive 5 : 16)

Optional axle ratios

			<i>Overall ratios M.p.h. per 1,000 r.p.m.</i>
Overdrive	3.649	: 1	19.2
Top	4.55	: 1	15.4
Third	5.769	: 1	12.1
Second	7.371	: 1	9.5
First	11.147	: 1	6.3
Reverse	21.635	: 1	3.2
Overdrive	3.449	: 1	20.3
Top	4.30	: 1	16.3
Third	5.452	: 1	12.8
Second	6.966	: 1	10.0
First	10.535	: 1	6.6
Reverse	20.447	: 1	3.4
Overdrive	3.288	: 1	21.3
Top	4.10	: 1	17.1
Third	5.198	: 1	13.4
Second	6.642	: 1	10.5
First	10.045	: 1	7.0
Reverse	19.496	: 1	3.6

Steering

Type		Rack and pinion
Steering-wheel		
Turns—lock to lock ..	2.93	
Diameter	16½ in. (41.9 cm.)	
Camber angle	Front 1°	
Castor angle	7°	
King-pin inclination ..	8°	
Toe-in	⅛ to ⅜ in. (1.6 to 2.4 mm.)	
Track: Front		
		Disc wheels 49 in. (1.244 m.)
		Wire wheels 49½ in. (1.251 m.)
Rear		
		Disc wheels 49½ in. (1.251 m.)
		Wire wheels 49½ in. (1.251 m.)

GENERAL DATA

Front suspension	Tourer	GT
Type	Independent coil	
Spring detail		
Coil diameter (mean) ..	3.238 in. (82.23 mm.)	3.28 in. (83.5 mm.)
Diameter of wire ..	.498 in. (12.66 mm.)	.54 in. (14 mm.)
Free height ..	9.9 ± $\frac{1}{16}$ in. (251 mm. ± 1.6 mm.)	9.1 ± $\frac{1}{16}$ in. (231 ± 1.6 mm.)
Number of free coils ..	7.5	7.2
Static laden length ..	7 ± $\frac{1}{32}$ in. (178 mm. ± .8 mm.) at load of 1,030 lb. (467.2 kg.)	6.6 in. (168 mm.) at load of 1,193 lb. (541.5 kg.) ± 20 lb. (9.1 kg.)
Dampers (front) ..	Piston type	
Anti-roll bar (front) ..	$\frac{5}{16}$ in. (14.3 mm.) dia. standard	$\frac{5}{8}$ in. (15.9 mm.) dia. standard

Rear suspension

Type	Semi-elliptic	
Spring detail	<i>Tourer (Early type)</i>	<i>Tourer (Later type)</i>
Number of leaves ..	5 and bottom plate	6 and bottom plate
Width of leaves ..	1 $\frac{3}{4}$ in. (44.45 mm.)	1 $\frac{3}{4}$ in. (44.45 mm.)
Gauge	$\frac{7}{32}$ in. (5.56 mm.)	3 at $\frac{7}{32}$ in. (5.6 mm.), 3 at $\frac{1}{16}$ in. (4.8 mm.)
Working load (-15 lb. [7 kg.])	400 lb. (181.44 kg.)	450 lb. (204.12 kg.)
Dampers (rear)	Piston type	<i>GT</i> 510 lb. (321.6 kg.)

Propeller shaft

Type	Tubular flanged 1100 series	
Make and type of joints ..	Hardy Spicer, needle roller	
Propeller shaft length (between centres of joints) ..	27 $\frac{5}{8}$ in. (70.167 cm.) standard	28 $\frac{3}{4}$ in. (73.025 cm.) overdrive
Overall length	30 in. (76.2 cm.) standard	31 $\frac{1}{8}$ in. (79.057 cm.) overdrive
Diameter	2 in. (50.8 mm.)	

Rear axle

Type	<i>Tourer (Early)</i>	<i>Tourer (Later) and GT</i>
	'B' type, three-quarter-floating	'Tubed' type, semi-floating
Ratio		
Standard	11/43	11/43
Alternatives	9/41, 10/43, 10/41	9/38, 9/41
Adjustment	Shims	

GENERAL DATA

Electrical equipment

System	12-volt. Positive earth early cars; negative earth from Car No. 151915
Charging system	Compensated voltage control
Battery	Two 6-volt Lucas SG9E
Starter motor	Lucas 4-brush M418G
Dynamo	Lucas C40/1
Alternator	Lucas type 16ACR

Brakes

Type	Lockheed hydraulic (front and rear)
Front	Disc 10 $\frac{3}{4}$ in. dia. (27.3 cm.)
Rear	Drum 10 in. (25.4 cm.), single leading shoe
Rear linings	10 in. \times 1 $\frac{3}{4}$ in. (25.4 cm. \times 44.45 mm.)
Lining dimensions	9.6 in. \times 1 $\frac{3}{4}$ in. (24.38 cm. \times 44.45 mm.)
Lining area	
Front pads	20 sq. in. (129.03 cm. ²) total
Rear	67.2 sq. in. (433.55 cm. ²)
Material	
Front	DON 55
Rear	DON 24
Brake cylinder diameter	
Front	2 $\frac{1}{8}$ in. (53.97 mm.) dia.
Rear .. ..	.80 in. (20.32 mm.) dia.

Wheels

Type	<i>Tourer</i>	<i>GT</i>
Ventilated disc	4J \times 14 in.	5J \times 14 in.
Wire (optional)	4 $\frac{1}{2}$ J \times 14 in. and 60-spoke (Tourer and GT)	

Tyres

Standard	<i>Tourer</i>	<i>GT</i>
Size	155—14 (SP)	165—14 (SP)
Pressures (set cold)		
Front	21 lb./sq. in. (1.5 kg./cm. ²)	21 lb./sq. in. (1.5 kg./cm. ²)
Rear	24 lb./sq. in. (1.7 kg./cm. ²)	24 lb./sq. in. (1.7 kg./cm. ²)
Sustained speeds in excess of 90 m.p.h. (145 km.p.h.):		
Front	27 lb./sq. in. (1.9 kg./cm. ²)	28 lb./sq. in. (2.0 kg./cm. ²)
Rear	31 lb./sq. in. (2.2 kg./cm. ²)	31 lb./sq. in. (2.2 kg./cm. ²)

Note.—Rear tyre pressures may be increased by 2 lb./sq. in. (.14 kg./cm.²) with advantage when touring with a laden boot.

For competition work and use of racing tyres, advice may be obtained direct from Dunlop, Fort Dunlop, Erdington, Birmingham 24.

GENERAL DATA

Capacities	<i>Imp.</i>	<i>U.S.A.</i>	<i>Litres</i>
Engine sump (incl. filter) ..	7½ pts.	9 pts.	4.28
Gearbox	5½ pts.	6¾ pts.	3.12
Rear axle	2¾ pts.	3½ pts.	1.56
Cooling system (with heater)	10 pts.	12 pts.	5.67
Steering rack	¼ pt.	.39 pt.	.19
Fuel tank			
Early cars	10 gal.	12 gal.	45.4
Later cars	12 gal.	14 gal.	54.5
Brake system	1 pt.	1.2 pt.	.568
Oil cooler	¾ pt.	.9 pt.	.42

General dimensions

Wheelbase	91 in. (231.14 cm.)	
Over-all length	153 ³ / ₁₆ in. (389.13 cm.)	
Over-all width	59 ¹¹ / ₁₆ in. (152.28 cm.)	
Over-all height	49 ³ / ₈ in. (125.41 cm.)	
Ground clearance	5 in. (12.70 cm.)	
Weight:	<i>Tourer</i>	<i>GT</i>
(Unladen)	1,920 lb. (871 kg.)	2,190 lb. (993 kg.)
Turning circles	32 ft. (9.754 m.)	

Electrical system

After Car No. 151915, all cars were changed to NEGATIVE EARTH. When fitting polarity-conscious electrical equipment ensure that it is NEGATIVE EARTH.

TUNING

Stage 1 Road tune

An increase of some 4 b.h.p. may be achieved by the fitting of twin 45 mm. (1.75 in.) diameter S.U. carburetters to the standard engine.

The larger carburetters can be obtained under Part No. C-AUD 505 and all the necessary parts and instructions for fitting these are included in installation kit number STN 0041.

Ignition timing: 8° B.T.D.C.

Carburation: KP needles. Blue spring, .100 in. jets.

Pluspac 'B' Road tune—STN 0062

105 b.h.p. approximately at 5,500 r.p.m. can be achieved by fitting Pluspac 'B', STN 0062, which comprises the twin 45 mm (1.75 in) S.U. carburetters and fitting kit as used in the Stage 1 plus camshaft C-AEH 864.

The ignition timing should be set to 8° B.T.D.C. and TE needles AUD 1347 used in the carburetters with blue springs and flare pipes.

An indication of the improvement to be expected by the fitting of this Pluspac is shown in the following chart.

Acceleration through gears from rest

<i>M.P.H.</i>	<i>Km.P.H.</i>	<i>Standard</i>	<i>Pluspac 'B'</i>
0-50	0-80	8.2 seconds	7.4 seconds
0-60	0-96	11.8 seconds	10.3 seconds
0-70	0-113	15.9 seconds	14.4 seconds
0-80	0-129	21.4 seconds	18.6 seconds

Top gear acceleration

30-50	48-80	8.8 seconds	9.6 seconds
50-70	80-113	10.5 seconds	8.9 seconds
70-90	113-145	16.1 seconds	10.1 seconds

Maximum lap speed	107.6 m.p.h. (173.1 km.p.h.)	112 m.p.h. (190.2 km.p.h.)
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TUNING

Pluspac 'S' Road tune (112 b.h.p. approx.)

Compression ratio 9·7 : 1

A complete 'S' Pluspac may be obtained under part number C-AJJ 4106 which consists of the following parts:

C-AUD 505	Twin 45 mm. S.U. carburetters
STN 0041	Installation kit (includes inlet manifold)
C-AHT 100A	Cylinder head (35 c.c.)
C-AEH 768	Head gasket
C-AEH 864	Camshaft
C-37H 4208	N64Y sparking plugs
GEG 504	Sump gasket
12H 1319	Timing cover gasket
AEC 340	Lock-washer—timing chain adjuster
1G 1319	Lock washer—crankshaft pulley
2A 759	Lock washer—camshaft sprocket

Camshaft C-AEH 864 gives 6·35 mm. (0·252 in.) cam lift. Inlet opens 36° B.T.D.C., closes 52° A.B.D.C. Exhaust opens 56° B.B.D.C., closes 32° A.T.D.C. In assembly, check that the camshaft identification ring does not foul the connecting rod. Tappet settings 0·43 mm. (0·017 in.) hot.

The carburetters are fitted with ·100 jets, SY needles and light blue springs.

No air cleaners are arranged for the carburetters, but extension pipes C-AHT 392 to reduce the turbulence at the carburetter mouth are included in the installation kit.

Important Note

The carburetter joints are made of neoprene and must not be overtightened. Some movement of the carburetters against the double coil spring washers must be possible at all times, this is why lock-nuts are provided. Overtightening will result in the joints being squeezed into the port causing considerable restriction and engine misfire.

Check the valves at full lift to ensure that the exhaust valves do not foul the top face of the cylinder block; if so, the block must be undercut to clear the valve head and give a minimum lift clearance of 1·59 mm. (.062 in.). Use a 48·9 mm. (1·53 in.) diameter flat cutter with a 1·59 mm. (.062 in.) radius at the corner of the cutter.

Performance Figures (Courtesy of 'Motor')

						Pluspac 'S'	Standard
Max. lap speed	..	..	..	..	..	112·6 m.p.h.	107·6 m.p.h.
Flying $\frac{1}{4}$ mile	..	..	..	..	..	115·3 m.p.h.	105·0 m.p.h.
Acceleration through gears from rest:							
0-50 m.p.h.	0-80 km.p.h.	..	..	..	..	7·0 secs.	8·2 secs.
0-60 m.p.h.	0-96 km.p.h.	..	..	..	..	9·9 secs.	11·8 secs.
0-70 m.p.h.	0-113 km.p.h.	..	..	..	..	13·5 secs.	15·9 secs.
0-80 m.p.h.	0-129 km.p.h.	..	..	..	..	17·8 secs.	21·4 secs.
0-90 m.p.h.	0-145 km.p.h.	..	..	..	..	24·1 secs.	30·2 secs.
0-100 m.p.h.	0-161 km.p.h.	..	..	..	..	34·2 secs.	46·3 secs.
Top gear acceleration:							
30-50 m.p.h.	48-80 km.p.h.	..	..	..	..	10·3 secs.	8·8 secs.
50-70 m.p.h.	80-113 km.p.h.	..	..	..	..	9·2 secs.	10·5 secs.
70-90 m.p.h.	113-145 km.p.h.	..	..	..	..	12·0 secs.	16·1 secs.
Touring fuel consumption	..	..	..	..	..	30·8 m.p.g.	33·0 m.p.g.

Stage 4 Road (18GB engines onwards) Competition tune

Compression ratio 11·1 : 1

Fit cylinder head assembly C-AHT 100A.

Standard valves and guides may be used successfully, but for consistent performance fit bronze Hidural inlet and exhaust valve guides and high-duty $1\frac{5}{16}$ in. dia. inlet and $1\frac{1}{2}$ in. dia. exhaust valves in Nimonic material. The valve guides are already fitted to polished head C-AHT 100A.

Use valve springs—outer C-AHH 7264 and inner C-AHH 7265, also the special valve cotter (pairs) C-AEH 761, the valve spring top cup C-AEH 760, and the bottom cup C-AEH 801.

Do not fit the metal oil shroud or the valve stem rubber oil seal that is used on the standard engine.

The valve springs put a heavy load on the rocker shaft, especially at the ends where it is overhung, and, although it is not essential, it is desirable to fit the special front and rear rocker shaft brackets which support the end rockers from both sides Part Nos. C-AEH 762 and C-AEH 763. Do not refit the springs which hold the rockers apart, but in place of these fit the tubular steel distance pieces C-AEH 764 (1 off) and C-AEH 765 (2 off), leaving an end-float of ·076 to ·127 mm. (·003 to ·005 in.). Standard rocker shaft, valve rockers, and the two centre rocker shaft brackets are used.

The standard tappet adjusting screws may be used, but if the possibility of fracture is to be eliminated, then fit the special screws C-AEH 766 which are solid and have no holes drilled in them: the oiling of the ball will be satisfactory without these holes.

Use the special camshaft C-AEH 864 with a tappet setting of ·457 mm. (·017 in.) hot.

Fit nitrided crankshaft C-AEH 822 (5 bearing) with main bearing set 18G 8022 and big-end bearing set C-18G 8022.

In order to transmit the increased b.h.p. it is advisable to fit the uprated driven plate C-AHT 345 and competition pressure plate assembly C-BHA 4873. For racing use driven plate C-AHT 409.

For high engine r.p.m. the complete rotating assembly should be dynamically balanced; this includes flywheel, pressure plate, front pulley and crankshaft.

For improved exhaust efficiency fit the extractor exhaust manifold C-AHH 7103.

For durability, when using the special camshaft, it is a benefit to use the steel timing chain sprockets 12H 244 and C-AEH 771. On late engines use Duplex timing chain kit C-AJJ 4123.

In the centre of the cylinder head face two large core holes will be found; thread these and fit water-tight aluminium plugs, which should be faced off carefully to the head face. This will prevent water loss if the cylinder head lifts under arduous conditions. Use the special cylinder head gasket C-AEH 768.

TUNING

Stage 4—continued

Thread and plug the one small hole in the centre of the cylinder block face that is opposite to the cylinder head aluminium plug.

To increase water flow through the head drill out to 14.29 mm. (.562 in.) dia. the two water holes at the rear end of the cylinder block face.

Fit high-compression flat top competition pistons C-AEH 853. These will fit the standard connecting rods.

To increase the oil pressure fit a packing piece in the end of the oil release valve cap behind the release valve spring; this should be 5.08 mm. (.200 in.) thick by 12.3 mm. (.484 in.) dia. or two packings 2.54 mm. (.100 in.) thick (Part No. AEH 798). 18GB units already have one 2.54 mm. (.100 in.) packing fitted. See page 40 for further details on oil filter head modifications.

Fit the large 45 mm. (1.75 in.) S.U. carburetters as in Stage 3.

Spark plugs for road and competition work should be Champion N-64Y.

Use 100 minimum octane fuel, ignition timing set at 5° to 8° B.T.D.C.

The engine should develop approximately the following brake-horse-power:

<i>R.P.M.</i>	<i>B.H.P.</i>	<i>R.P.M.</i>	<i>B.H.P.</i>
3,000	62	5,500	120
4,000	89	6,000	121
5,000	111	6,500	119

Stage 5 Competition tune

Compression ratio 11.6 to 11.8 : 1

Prepare your engine as Stage 4, but in place of the S.U. 45 mm. (1.75 in.) carburetters, fit a 45 DCOE 13 Weber twin-choke carburetter C-AEH 785. An installation kit C-AJJ 3312 is available containing the manifold and all necessary parts to fit this carburetter. See page 30 for particulars of settings. The improvement to be gained by fitting the Weber carburetter, is marginal with some slight loss at the lower r.p.m.

The carburetter is mounted on synthetic rubber 'O' ring gaskets using double-coil spring washers to prevent vibration of the carburetter mechanism and disturbance of the fuel-to-air ratio. Each fixing nut should be drilled and wired in pairs to prevent them coming slack. Tighten the nuts up fairly firmly, but by gripping the carburetter some slight free movement should be felt.

The steady rod to the rear plate should be adjusted to the free position so that the bolts go easily through the fork ends and brackets.

Tighten bolts solid and lock up fork locknuts.

Fit camshaft C-AEH 770 with a tappet setting of .475 mm. (.018 in.) hot. This camshaft has a lift of 8.0 mm. (.315 in.) and a valve lift of 11.5 mm. (.452 in.). The inlet period is 300° and the exhaust 300°.

Timing: Inlet opens 50° B.T.D.C., inlet closes 70° A.B.D.C.

Exhaust opens 75° B.B.D.C., exhaust closes 45° A.T.D.C.

The high lift camshaft can be used with the standard push-rods and tappets satisfactorily, but cover for travel of the cam is only barely sufficient over the base of the standard tappet.

This can be overcome by boring the tappet holes in the cylinder block to a diameter of $23.81 \pm_{-0.05}^{+0.13}$ mm. ($.9375 \pm_{-0.002}^{+0.005}$ in.) for a length of 79.38 mm. ($3\frac{1}{8}$ in.) from the centre line of the camshaft and fitting larger tappets of 24 mm. ($\frac{15}{16}$ in.) diameter, Part No. 12B 1363. This will necessitate the use of push-rod Part No. 12B 1364.

For maximum power, bore the engine + 2.00 mm. (.080 in.) which gives a total capacity of 1892 c.c. Part No. of pistons C-AJJ 3375 with circlips or C-AHT 386 with press fit gudgeon pin.

Cylinder head C-AHT 552 is also advised for maximum power. The cylinder head has a volume of 39 c.c. and is fitted with large valves, inlet 42.8 mm. (1.69 in.), exhaust 36.5 mm. (1.44 in.). Both valves are of Nimonic material.

Use competition distributor Part No. C-BHA 4415.

Ignition timing should be set at 5° to 8° B.T.D.C. static or 14° B.T.D.C. stroboscopic at 1,000 r.p.m.

For bench testing use Champion N-57R plugs, but on the race circuit you may be able to use softer plugs. If the circuit is short you may find N3 in cylinders 1 and 4, and N-62R in cylinders 2 and 3 will be suitable.

If the circuit is long you may require N-62R in cylinders 1 and 4 and N-57R in cylinders 2 and 3. The centre cylinders are inclined to run hotter due to the proximity of the two exhaust valves.

For rallying use N64Y sparking plugs.

TUNING

Stage 6 Competition tune

Compression ratio 11·6 to 11·8 : 1

Tune as for Stage 5, but fit twin 51 mm. (2 in.) HS8 S.U. carburetters.

The larger carburetters C-AUD 279 should be fitted to a large bore inlet manifold which is contained in the installation kit C-AJJ 3374. Also fit flare pipes C-AHT 440.

Recommended needles: UDE standard, UVD weak, UVP rich.

Use Champion spark plugs as listed for Stage 4.

<i>R.P.M.</i>	<i>B.H.P. taken at Gearbox Tail Flange</i>		
	<i>Stage 5 with Weber Carburetter</i>	<i>Stage 5 with Weber 38 choke 175 main 160 air corrected</i>	<i>Stage 6 with 2 in. S.U. Carb. (Two)</i>
3,000	65	64	—
3,500	82	81	85
4,000	96	95	100
4,500	109	108	112
5,000	120	120	123
5,500	128	127·5	132
6,000	130	131	139
6,500	127	128	137

Stage 7 Competition tune

Compression ratio 11·6 to 11·8 : 1

Tune as for Stage 6.

Camshaft C-AEH 862 and C-AEH 863 having even wider overlap are available, but will only be suitable for sprint-type events where maximum power is required at fairly high revolutions. Pick-up and low speed torque will be poor using these camshafts, and wear on the clutch will consequently be very severe.

Timing:

	<i>C-AEH 862</i>	<i>C-AEH 863</i>
Inlet opens B.T.D.C.	60°	60°
Inlet closes A.B.D.C.	80°	80°
Exhaust opens B.B.D.C.	75°	85°
Exhaust closes A.T.D.C.	45°	55°

OTHER SPECIAL ITEMS

Brakes

After many consecutive applications of the brakes during competition driving some brake fade may be experienced with the standard linings. Competition front disc pads and rear brake-shoe linings or lined shoes are available (see list). The rear linings are made to a thickness suitable for grinding to radius after fitment. The front pads are of a suitable heavy-duty material. With fair competition driving these linings will be free from fade, but will give a harder pedal effort on application.

When the lining friction value is altered from that of the standard car it may be found that changing the rear wheel cylinders to ones of smaller size (15.87 mm. (.625 in.) dia.) will improve the front to rear brake ratio.

As these wheel cylinders have a dowel on the fitting face, it will be necessary to drill a hole in the back plate to match this dowel.

Braze a steel plug in the existing hole and face off level with the plate before drilling the new hole. The size of the hole is 4.32 to 4.45 mm. (.170 to .175 in.) dia. and drilled 14.68 mm. (.578 in.) above the centre of the cylinder mounting hole and 8.89 mm. (.350 in.) offset from the radial centre-line of the cylinder mounting hole.

When using your car on a racing circuit always remove the dust shields from the front disc brakes. This will enable the discs and brakes to run at a lower temperature and will decrease the possibility of brake fade.

Balancing of road wheel and tyre assemblies

To obtain the smoothest steering, free from all steering-wheel kick, and to eliminate any tendency to front-wheel patter, especially at speeds around 70 m.p.h. (113 km.p.h.) and over, it will be found beneficial to have the front road wheel and tyre assemblies statically and dynamically balanced. This usually results in balance weights being fitted on both sides of the rims, but this dynamic balancing is well worth while. Balance may require re-checking every few thousand miles if the car suffers brake locking, etc., as this may again put the tyres out of balance enough for the effect to be felt.

It is advisable to keep front tyres in good condition and free from uneven tread wear. This can sometimes be done by changing tyres from front to rear before uneven wear develops. Pick the best tyres for use at the front (or those that have even tread wear and run true) before they are dynamically balanced. Balancing a tyre which has flats or uneven wear is not usually very successful. In some cases the tread can be buffed true, but this is not an economic way of using rubber.

Valves and guides

The standard valves are of high quality, but special valves are available in Nimonic alloy—inlet C-AEH 757 and exhaust C-AEH 758. These must be used in conjunction with special spring collars C-AEH 760, also special cotters C-AEH 761 to suit the half-round groove in the valve stem. If triple valve springs are used, top collar C-AEH 7313 must be used. These valves should be used in conjunction with bronze Hidural guides for both the inlet and exhaust

OTHER SPECIAL ITEMS

valves, inlet C-AEH 755 and exhaust C-AEH 756. The inlet guide is 27 mm. (.062 in.) long and the exhaust 33.4 mm. (.312 in.) long. They should be pressed into the head so that they are left standing out between 19.4 and 19.8 mm. (0.765 and 0.781 in.). Polished cylinder head C-AHT 100A is supplied with standard valves but Hidural bronze guides.

Cylinder head gasket

When the compression is raised it is necessary to use a reinforced competition cylinder head gasket C-AEH 768 constructed from .229 mm. (.009 in.) copper and steel with internal reinforcements. As the cylinder block and head faces may suffer some distortion in the early life of the engine it is advisable to check these faces for flatness before fitting the new gasket. If the faces are distorted they should be finely surface ground, and a certain amount of careful lapping or flat scraping is worth while. Do not lap excessively as this will only produce an uneven surface. Check them finally together with marking.

Before replacing the cylinder head studs slightly countersink (not too heavily) the tops of the threaded holes in the cylinder block. This will enable the head to pull down around the studs and seal more efficiently.

To maintain the clamping pressure of the cylinder head onto the gasket it is advantageous to remove the flat washers under the 11 cylinder head nuts and replace these with special disc washer set C-AHT 288.

Valve springs

The valve bounce r.p.m. on the standard engine is 6,230 r.p.m. and the valve springs, operating mechanism, and drive are safely stressed to maintain this.

If for competition purposes it is desired to raise the valve bounce period, the appropriate springs may be selected from the following table:

Part No. outer springs	lb.	Part No. inner springs	lb.	Total lb. full lift	Valve bounce r.p.m.	
					Standard camshaft	Comp. camshaft
1H 1111*	117	1H 723*	50	167	6,230	6,500
1H 1111	117	C-1H 1112	57	174	6,360	6,600
C-AHH 7264	140	1H 723	50	190	6,480	6,700
C-AHH 7264	140	C-1H 1112	57	197	6,600	6,750
C-AHH 7264	140	C-AHH 7265	70	210	6,680	6,800

* Standard engine.

It is advised that these springs be used only for competition as if used under everyday conditions the cams and followers will have a shorter service life. The springs will not necessarily give an increase in brake-horse-power, but will extend the same horse-power up to valve bounce. This is sometimes useful in enabling a lower gear to be retained, still maintaining the same maximum speed, with increased power for acceleration.

OTHER SPECIAL ITEMS

Rear axle ratios

With several axle ratios available, and the standard and close-ratio gears it is possible to obtain a combination suitable for most competition purposes. Ensure special equipment is available when dismantling 'Tubed' axles, and follow instructions in the Workshop Manual. The 'Tubed' axle, originally fitted only to the GT, was fitted to the Tourer from Car No. 132923 (wire wheels) and 132916 (disc wheels).

When changing the crown wheel and pinion, it should be noted that there are 18 different sizes of distance collar (2 off required) and eight pinion thrust washers (1 off required) which are selective.

ALTERNATIVE GEARBOX RATIOS

There are no special gears available for 18G, 18GA and 18GB engines fitted with three-speed synchromesh gearboxes. The ratios of the all-synchromesh-type gearbox, as fitted to the 18GD engines onwards, are closer than those of the earlier type. The straight-cut gear set Part No. C-AJJ 4034 are standard all-synchromesh ratios, but they are much stronger and are recommended for competition applications. It is possible to obtain close gearbox ratios by the fitment of the MGB GT V8 gears to any of the all-synchromesh-type gearboxes. They are not suitable for the early type gearboxes.

			<i>Three-speed synchromesh ratios</i>	<i>All-synchromesh and gear set C-AJJ 4034 ratios</i>	<i>MGB GT V8 ratios</i>
First	..	..	3.64 : 1	3.44 : 1	3.036 : 1
Second	..	..	2.21 : 1	2.167 : 1	1.973 : 1
Third	..	..	1.37 : 1	1.382 : 1	1.258 : 1
Top ..	..	..	1.00 : 1	1.00 : 1	1.000 : 1
Reverse	..	..	4.76 : 1	3.095 : 1	2.819 : 1

Final drive ratios

MGB Tourers up to Chassis No. G-HN3-132923 were fitted with a banjo type axle. Alternative ratios for this type of axle are:

<i>Ratio</i>	<i>No. of teeth</i>	<i>CW & P Part No.</i>
4.55 : 1	9/41	88G 284
4.3 : 1	10/43	88G 283
3.909 : 1	11/43	BTB 653 (Standard ratio)

Late MGB Tourers and all GT models are fitted with tubed axles. Differential cage BTB 840 has to be fitted with the alternative ratios as listed below:

<i>Ratio</i>	<i>No. of teeth</i>	<i>CW & Part No.</i>	<i>Differential cage</i>
3.07 : 1	14/43	BTB 900	BTB 840
3.307 : 1	13/43	BTB 841	BTB 840
3.907 : 1	11/43	BTB 856	BTB 866 (Standard ratio)

NOTE: The 3.071 : 1 ratio was fitted together with differential cage BTB 840 standard on the MGC and is now fitted to the MGB GT V8.

OTHER SPECIAL ITEMS

Fuel pump

Check the fuel flow of your petrol pump by removing the two float-chamber tops complete with the fuel lines. Unclip the main fuel line and reassemble it alongside the car so that the two float-chamber tops (complete with needles and levers) can be held over a 2-gal. (2.4 U.S. gal., 9.1-litre), or larger can. Switch on the pump and check the time for 1 gal. (9.6 U.S. pints, 4.55 litres) to flow. The standard engine uses a maximum of approx. 7.2 gal. (8.6 U.S. gal., 32.76 litres) an hour, and the engine tuned to Stage 6 uses approximately 9 gal. (10.8 U.S. gal., 40.95 litres) an hour. A good pump may flow at 13 gal. (15.6 U.S. gal., 59.15 litres) an hour, but a pump needing attention may only flow at 6 gal. (7.2 U.S. gal., 27.3 litres) an hour.

If a pump is required which will give a flow with a wide safety margin S.U. fuel pump (Part No. AUA 173) is available. The mounting bracket will need slight alteration to mount this pump and the fuel lines reset to suit. Alternatively two standard fuel pumps could be used.

Clutch

With increased power output a competition clutch cover assembly C-BHA 4873 having more torque capacity, etc., may be required. It is desirable to ventilate the clutch pit for competition purposes. This may be done by removing the drain split pin in the base of the bell housing and drilling the hole out to 15.9 mm. (.625 in.) dia. Discard the rubber bellows from the clutch operating lever. Drill a hole 31.7 mm. (1.25 in.) dia. at the top centre of the bell housing 76.2 mm. (3 in.) down from the bolting flange and make up and fit a 22 S.W.G. sheet-metal square box cover over this hole 50.8 mm. \times 50.8 mm. \times 15.9 mm. (2 in. \times 2 in. \times .625 in.) deep with an open end 15.9 mm. \times 50.8 mm. (.640 in. \times 2 in.) towards the clutch lever side of the gearbox and the top, bottom, and other end closed in. A flange 9.5 mm. (.375 in.) wide can be made top and bottom to fix the cover to the bell housing with four 3.2 mm. (.125 in.) dia. rivets. A driven plate with riveted and bonded linings should be used. Race plate C-AHT 409. Road/Rally plate C-AHT 345.

Crankshaft bearings

The standard main and big-end bearings have suitable close clearances for the quietness of the running of the standard engine. When using the engine for racing purposes, especially above 6,000 r.p.m., it is desirable to use both main and big-end bearings with increased initial clearances. The increased clearance bearings of the lead-indium type are:

18G/18GA

Main bearings (set of six halves), C-8G 8843 (bearing stamped V.P. 4769), and big-end bearings (set of eight halves), 8G 2259.

18GB onwards

For standard crankshaft, use C-8G 8843, plus C-18G 8021 (intermediate main bearings), and big-end bearings C-18G 8022. For competition hardened crankshaft C-AEH 822 use **only** main bearing set C-18G 8103, which have additional grooves.

OTHER SPECIAL ITEMS

Aerodynamic Pacs

Research on the air dam and spoiler shape was carried out in the M.I.R.A. full-size wind tunnel and it was found the drag was reduced, also the upward force decreased which gives a slight saving in fuel, greater stability and improved performance.

The front air dam STR 0189 which fits under the bumper, after removal of the front body apron, of both current and early cars is available separately. It divides the oncoming air and smooths it along the body shape and enhances the car's appearance. An illustration of this is shown on the front cover.

Rear spoiler STR 0190 is mounted on the rear door below the window and is designed to give greater downward thrust at speed and improve stability.

Oil cooler

An aluminium-alloy oil cooler for road use is supplied together with high-duty flexible hoses and fittings, for mounting behind the radiator grille in Pac STN 0035.

A larger oil cooler, C-ARO 9875, is essential for competition use.

An oil cooler cover, C-AHT 181, is also available to save disconnecting the oil cooler in winter. The cover will clip onto any size oil cooler.

OTHER SPECIAL ITEMS

Weber carburetter 45 DCOE (Part No. C-AEH 785)

This will require a special inlet manifold and parts as contained in installation kit C-AJJ 3312.

The carburetter is mounted on synthetic rubber 'O' ring gaskets to prevent vibration of the carburetter mechanism and disturbance of the fuel-to-air ratio.

Under each carburetter fixing nut a double-coil spring washer should be fitted; each fixing nut should be drilled and wired in pairs to prevent them coming slack. Tighten the nuts up fairly firmly, but by gripping the carburetter some slight free movement should be felt.

The steady rod is fitted from the inlet manifold to the rear plate, adjust the rod at both ends so that the bolts go easily through the forks and brackets. Tighten the bolts solid and lock up the fork locknuts.

The settings supplied in the carburetters should be as below:

Auxiliary venturi	..	..	5.000 mm.
Chokes	..	..	40 mm.
Main jet	..	..	1.85 mm.
Air correction jet	..	..	1.60 mm.
Emulsion tubes	..	..	F16
Idling jets	..	..	.60/F8
Pump jets	..	..	.60

Needle valve 2.25 mm. must be spring-loaded type.

Level between the float and cover gasket to be 5 mm.

When checking the level between the float and the cover gasket it is **essential** that the float is allowed to hang vertically so the 5 mm. is measured **before** the spring in the needle valve is compressed. If the lid is held horizontal, a false setting will result.

The pump inlet valve should have a hole of 2.00 mm. in the top and an exhaust hole in the side of 1.00 mm. dia. The accelerator pump operating rod should measure 6.35 cm. (2.5 in.) total length end to end. These settings should be found correct for Stage 5, **but non-approved manifolds may upset carburation.**

For endurance running in long-distance races a richer 175 main is beneficial.

The spring-loaded needle valve prevents mixture variation due to vibration.

If the pick-up condition can be tolerated, the power can be slightly increased at the top end by fitting 38 or 40 mm. chokes and 175 main jets with a 160 air jet; again for long distance a 180 or 185 main used with a 160 air jet will maintain performance, but note that it slightly decreases the power at the lower range.

It is sometimes found that to use a 3.5 auxiliary venturi in place of the 5.00 will give improved pick-up conditions, but this is a matter of trial under the local conditions. When fitting the special operating cable for the accelerator, it will be necessary to remove the cable reaction pillar above the pedal, and to slot this approximately 1.9 mm. (.075 in.) wide from end to end, on one side to enable the inner cable to be assembled.

OTHER SPECIAL ITEMS

SUSPENSION TUNING

Modifications to the suspension will normally affect the handling characteristics of the car and give either more 'oversteer' or 'understeer'.

These terms are recognizable as follows:

Understeer—The vehicle will tend to go straight on when the front wheels are turned on lock; i.e. the slip angle of the front tyres is greater than that of the rear.

Oversteer—The vehicle will tend to rotate when the front wheels are turned on lock; i.e. the slip angle of the rear tyres is greater than that of the front.

Factors tending towards understeer:

1. Stiffer front springs.
2. Fitting a front anti-roll bar, or increasing the diameter of bar.
3. Lower front suspension (premature contact of front bump stops).
4. Increasing rear tyre pressure above recommended figures.
5. Decreasing front tyre pressures. **MUST EQUAL AT LEAST** recommended figures.

Factors tending towards oversteer:

1. Stiffer rear springs.
2. Reducing size of front anti-roll bar, or fitting one to rear if available.
3. Raising front suspension (or renewing front springs if weakened).
4. Increasing front tyre pressure above recommended figures.
5. Decreasing rear tyre pressures. **MUST EQUAL AT LEAST** recommended figures.
6. Lowering rear suspension (premature contact of rear bump stops).

Road springs

Two main factors should be considered when selecting road springs for suspension tuning: (i) the stiffness of the spring, and (ii) the working load of the spring.

(i) The stiffness of the spring is expressed in lb. per inch (or kg. per cm.) which means that one inch of deflection will return a load equal to the rate. Note that this rate is effective at the wheel in the case of rear non-independent axles, but is a function of the independent suspension geometry in the case of the front spring.

(ii) The working load of the spring is determined by the type of use to which the car will be put. A rally car carrying extra fuel and tyres over rough country will require a spring with a high load capacity. For short-circuit racing a low-load capacity spring will be required.

OTHER SPECIAL ITEMS

It should be noted that springs which have lost their load capacity due to 'settling', can produce the result of a lowered car. This is particularly noticeable in the case of rear springs where premature contact between the rear axle and the bump stops will produce oversteer tendencies.

Road springs

<i>Part No.</i>	<i>Type</i>	<i>Rate (lb./in.)</i>	<i>Working load (lb.)</i>	<i>Deflection at working load (in.)</i>	<i>Fitted height (in.)</i>
AHH 6451	Coil	348	1030	2.965	7.0
BHH 1225	Coil	372	1026	2.76	7.44
BHH 5789	Coil	480	1193	2.49	6.6
BHH 1007	Coil	480	1190	2.48	6.84
C-AHT 21	Coil	480	1193	2.49	6.14
AHH 7080	Leaf	93	450 (flat)	4.97	
AHH 6453	Leaf	99	400 (flat)	4.04	
C-AHH 8343	Leaf	100	375 (flat)	3.75	
BHH 1767	Leaf	110	496	4.48	
AHC 31	Leaf	99	510 (flat)	3.20	
BHH 1771	Leaf	110	498	4.53	
AHH 7346	Leaf	124	542 (flat)	4.37	
C-AHT 20	Leaf	124	542 1" neg.	3.37	

For standard application refer to P.C.M.I. reader.

Anti-roll bars

§14.3 mm. ($\frac{9}{16}$ in.) AHH 7329 (2 off bearing AHH 6541 also required).

†15.9 mm. ($\frac{5}{8}$ in.) C-AHH 7593 (includes bearings).

18 mm. ($\frac{3}{4}$ in.) C-AHH 7924 (includes bearings and locators).

Installation kit C-AJJ 3306 is required if the car has not previously been fitted with an anti-roll bar, and can be used with any of the above anti-roll bars.

† Fitted to 'MGB' GT and 'MGB' GT V8.

§ Fitted to all 'MGB' Tourers from Car No. 108039.

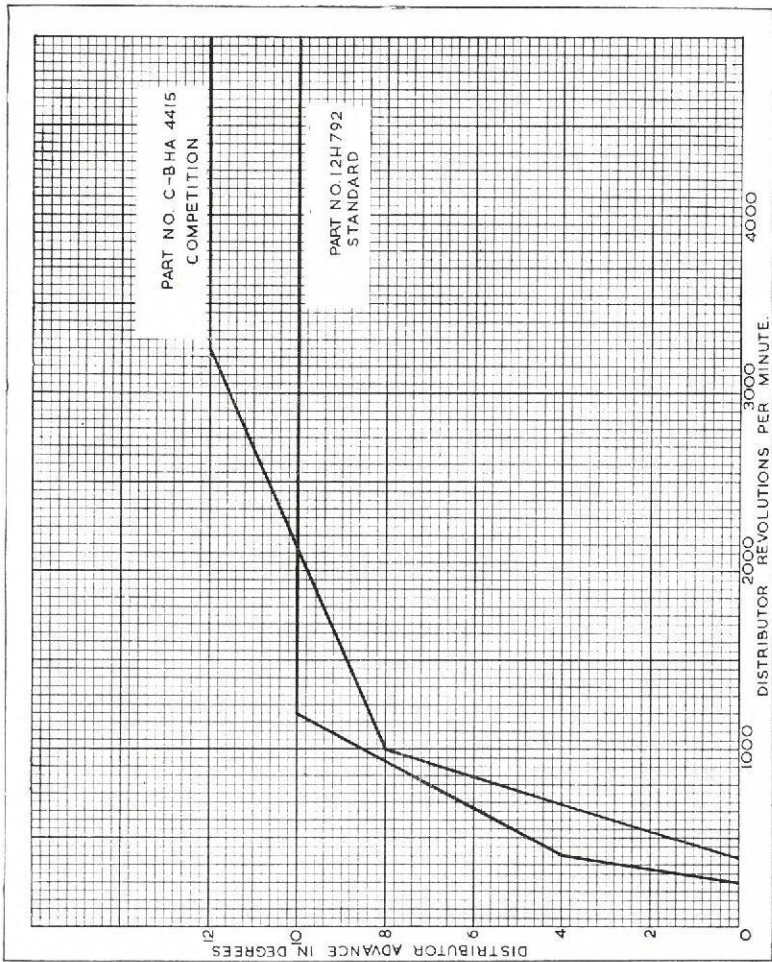
Shock absorbers

For competition work it may be desired to fit shock absorbers with a stiffer setting as follows:

Shock absorber—front	..	..	..	..	C-AHH 7104 2 off
Shock absorber—rear R.H.	..	..	..	..	C-AHH 7105 1 off
Shock absorber—rear L.H.	..	..	..	..	C-AHH 7106 1 off

New shock absorbers can be changed from standard to stiff setting by fitting valve assembly—front C-AHH 7217, 2 off and valve assembly—rear C-AHH 7218, 2 off. This is not advisable if any wear has taken place.

OTHER SPECIAL ITEMS



A9569B

Fig. 1
Distributor advance curves

Distributor

The special distributor used in Stage 4 has a 32 oz. spring, no vacuum advance and an advance curve as illustrated in Fig. 1. The Part No. is C-BHA 4415.

OTHER SPECIAL ITEMS

Tyres and tyre pressure

All testing at the works is carried out on Dunlop tyres and consequently no information is available on the effect of fitting other makes of tyre. Any queries of this nature should be directed to the tyre manufacturer concerned.

Advice on the use of Dunlop racing tyres and recommended pressure for competition use may be obtained from the Competition Department, Dunlop Ltd., Fort Dunlop, Erdington, Birmingham 24, England.

Sparking plugs

The standard plug was Champion N5, but is now N-9Y. For competition purposes N-64Y is recommended, or if a colder grade of plug is required use N-62R, or colder N-57R.

Dynamo

For long-distance races it is preferable to run the dynamo or alternator at a slower speed by the fitting of a large pulley C-AEA 535 and suitable drive belt.

Exhaust system

The twin exhaust manifold down pipes and twin silencers are very efficient but for competition purposes a lightweight steel tube free-flow manifold is available, Part No. C-AHH 7103, also the centre silencer can be removed and replaced by a section of plain pipe 51 mm. (2 in.) outside diameter and approximately 1.2 mm. (.048 in.) thick. The tail pipe and rear silencer should be retained.

The noise level will, of course, be increased, therefore any regulations in force should be considered.

Fly-off hand brake

To convert your hand-brake to the fly-off type, the following are required:

Pawl	..	..	..	..	..	..	..	..	C-AHH 7223
Operating rod—early cars	..	..	..	..	..	..	..	..	C-AHH 7222
									from Car No. 115596 and
									all GHN/D-4 cars
	..	..	..	..	..	..	..	..	C-AHC 551

Headlamp cowls (Sebring)

If regulations permit, Perspex headlamp cowls can be fitted. The necessary parts and instructions are contained in kit C-AJJ 3307. These prevent stone damage to the light units, as well as improving air flow in this area.

OTHER SPECIAL ITEMS

Crankshaft

The standard crankshaft is quite satisfactory up to Pluspac 'S' tune, but with continued high duty in due course will show some wear, and may need renewing at intervals. For all competition stages of tune, a nitrided heavy-duty crankshaft C-AEH 822 must be used which should be balanced with the other rotating parts.

Timing chain sprockets

With high r.p.m. and the use of high-lift camshafts the sprockets have to withstand a much heavier duty. The standard sprockets are cast iron, but steel sprockets for both crankshaft and camshaft are listed on page 43.

Note—Mini-Cooper 'S' camshaft sprockets do not give correct valve timing.

Engine oil sump

Especially in long-distance racing, the oil level may drop to a position where oil surge on violent cornering and braking may cause a temporary but complete loss of oil pressure. This could be seriously detrimental to the engine and may result in bearing failure. It is advisable to increase the oil capacity above the oil pump inlet and to fit a baffle in the oil sump to prevent the oil surging away from the pump inlet. This can be done by fitting the deep sump C-AHT 832 18GB and later engines only.

Fit the correct packing piece C-AEH 847 between the pump strainer and pump extension, using an extra gasket and longer bolts. This will lower the oil pick-up to the correct position.

Weld an extension piece onto the end of your oil dipstick so that the original oil level is maintained, or use the stick as it is, and make a new maximum high-level mark 25.4 or 31.8 mm. (1 or 1¼ in.) above the existing one.

For short circuits, where oil levels may not drop, the standard depth of sump should be found satisfactory, but the surge baffle should be made up and fitted as illustrated.

Gearbox dipstick and oil seal

To ensure that no oil leaks occur from the gearbox during the arduous conditions of competition work you can fit a gearbox dipstick (Part No. AEC 3683) which is retained by rubber sealing rings.

The dipstick will need alteration by cutting off 61.9 mm. (2 $\frac{7}{16}$ in.) and re-marking 'HIGH' and 'LOW' levels (as old dipstick); this will then make it suitable for the 'MGB' gearbox.

Also ascertain if the front gearbox cover is fitted with a high-duty mainshaft oil seal 22H 475; at the same time check the front gearbox cover in which the seal is mounted for perfect flatness and refit with jointing compound. This will ensure that no gearbox oil will get through onto the clutch facings.

Water thermostat and fan

For sustained maximum power and speed, such as in road-racing conditions, it is advantageous to remove the thermostat. This will ensure the maximum water flow only if thermostat blanking sleeve kit C-AJJ 4012 is fitted.

The fan should also be removed and the bolts refitted with flat washers.

OTHER SPECIAL ITEMS

Oil pump (*Standard*)

The oil pressure may be increased by packing the oil relief valve spring; this is done by fitting a circular steel packing of 12.3 mm. ($\frac{3}{4}$ in.) dia. in the end of the release valve cap and behind the relief valve spring. These packings may be of 2.54, 5.08, 7.62, or 10.16 mm. (.100, .200, .300, or .400 in.) thick, or multiples of the .100 in. (2.54 mm.) packing can be used.

Under the cap two fibre gaskets are fitted; one of these can be removed, or, better, both removed and replaced with one copper gasket (Part No. 6K 431).

Between 70 and 80 lb./sq. in. (4.92 and 5.62 kg./cm.²) and up to 100 lb./sq. in. (7.03 kg./cm.²) is a good pressure and dropping to 30/40 lb./sq. in. (2.11/2.81 kg./cm.²) is satisfactory.

Sometimes the oil pressure increases up to, say, 5,500 r.p.m. and drops off in pressure beyond this speed. This can be prevented by machining the pump cover and making twin inlet ports to the pump. (See Fig. 2 to machine early pumps.)

A point which should be carefully checked is the oil pump strainer. The threaded attachment plate is spot-welded to the inside face of the strainer top plate. If the strainer top plate is not flat, or if the attachment plate has not pulled up perfectly to the under side of the top plate, an air leak can occur between the attachment plate and the top plate. Ensure that the top plate is flat over the gasket area, and to make sure that no air leak can occur carefully warm the whole strainer up and tin around the hole in the top plate to the attachment plate so that the bottom corner joint is sealed. Under normal conditions this position is under oil level, but when oil surge occurs, as in competition work, it may become uncovered.

Oil filter

It is not essential, but it gives some slight improvement in the oil flow, to machine an undercut in the face of the top casting of the early type filter head; this allows an unrestricted flow of oil from the square feed hole. (See Fig. 3 for details.) You must remove the circular plate from the casting to do this; lever the plate off carefully, and ensure that it is flat before replacing and peening over.

Torque wrench settings

When tightening the cylinder head nuts to 50 ft. lb. (6.91 m. kg.) ensure that they are correctly and evenly tightened.

The main bearing nuts should be tightened to 70/75 ft. lb. (9.68/10.37 m. kg.).

Big-end bolts should be tightened carefully to 40/45 ft. lb. (5.53/6.22 m. kg.) only; overtightening to more than 45 ft. lb. (6.22 m. kg.) will only cause fracture of the bolts in operation.

Tighten the flywheel bolts to 40 ft. lb. (5.53 m. kg.).

Tighten the gudgeon pin bolts to 25 ft. lb. (3.46 m. kg.) and clutch bolts to 25/30 ft. lb. (3.46/4.15 m. kg.).

OTHER SPECIAL ITEMS

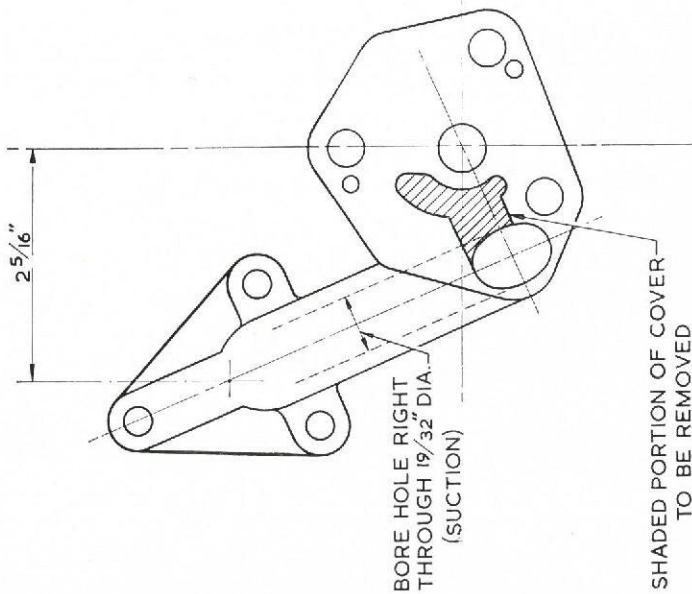
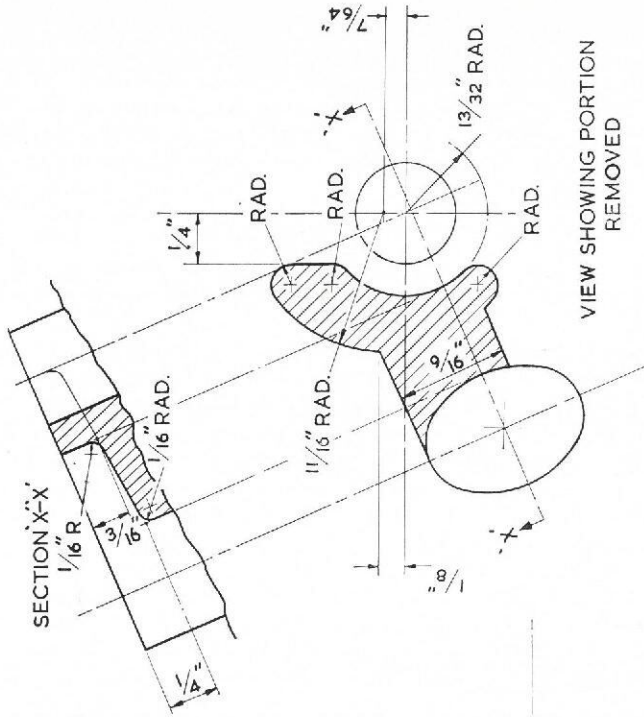


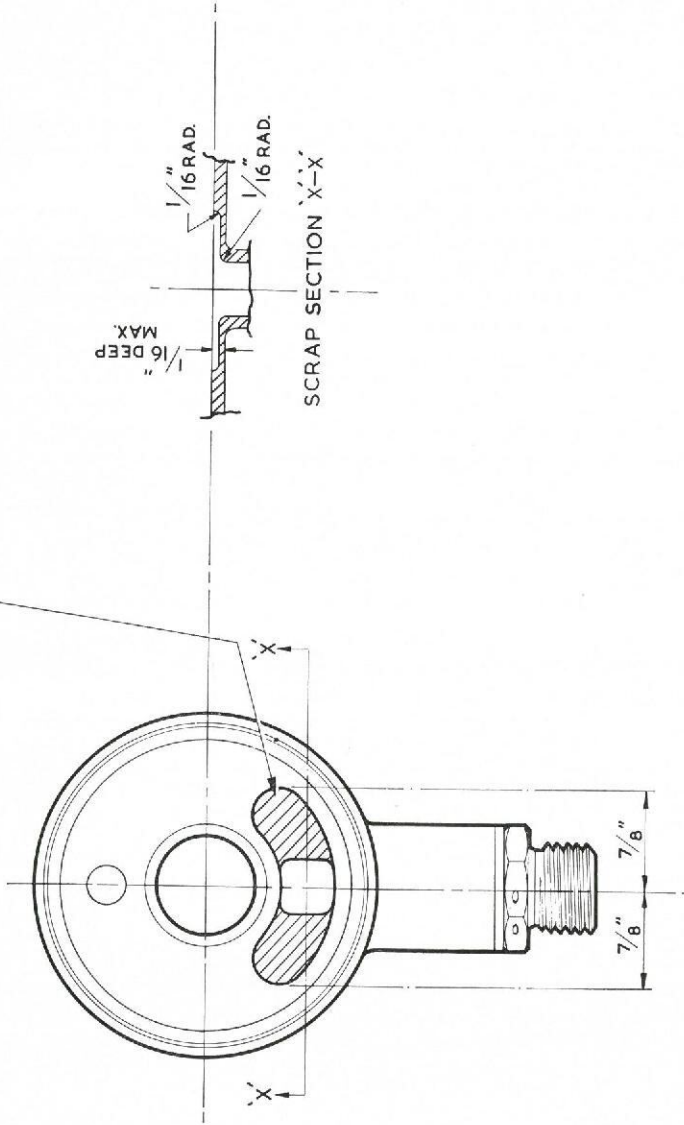
Fig. 2

Diagram showing portion of the 18G/18GA oil pump cover removed
 Note. Part of this machining is already incorporated on 18GB engines onwards

A.9517

OTHER SPECIAL ITEMS

SHADED PORTION OF OIL FILTER HEAD TO BE REMOVED



A.9518

Fig. 3
Diagram showing portion of oil filter head removed

PLUSPARTS AND PLUSPACS

General	Part No.	Qty./car
Bonnet securing straps leather	C-AJJ 3381	1 set
Sebring headlamp cowl kit	C-AJJ 3307	1
*Roll-over bar—rally (GT only)	STR 0146	1
*Roll-over bar—race (GT only)	STR 0145	1
*Roll-over bar—front cage (GT only)	STR 0147	1
*Front air dam	STR 0189	1
*Rear spoiler	STR 0190	1
Brakes		
Brake pads set (Ferodo D.S.11 competition facings) ..	C-8G 8834	1
*Rear brake-shoe and lining assembly (Ferodo V.G.95/1 competition facings)	C-8G 8828	2
*Rear brake lining (with rivets) (Ferodo V.G. 95/1 competition facings)	C-8G 8829	1
Rear wheel brake cylinder assembly—15.9 mm. (.625 in.) dia.	17H 8773	2
*Pawl, hand brake lever (for fly-off hand brake) ..	C-AHH 7223	1
Pawl rod (for fly-off hand brake)—early cars ..	C-AHH 7222	1
*Pawl rod (for fly-off hand brake)—later cars ..	C-AHT 551	1
Dual brake master cylinder kit	C-AJJ 4048	1
D.S.11 brake pad set (MGB, GT, V8)	C-AHT 639	1
Suspension		
*Shock absorbers (competition setting)—front	C-AHH 7104	2
*Shock absorbers (competition setting)—rear R.H. ..	C-AHH 7105	1
*Shock absorbers (competition setting)—rear L.H. ..	C-AHH 7106	1
*Shock absorber valve assembly (competition setting)—front	C-AHH 7217	2
*Shock absorber valve assembly (competition setting)—rear	C-AHH 7218	2
*Front coil springs	C-AHT 21	2
Rear road springs	C-AHH 8343	2
*Rear road springs	C-AHT 20	2
Anti-roll bar installation kit	C-AJJ 3306	1
Alternative 15.9 mm. (.625 in.) dia. anti-roll bar (with bearings)	C-AHH 7593	1
Alternative 19 mm. (.75 in.) dia. anti-roll bar	C-AHH 7924	1
Clutch		
Competition clutch cover assembly (18GB onwards)	C-BHA 4873	1
Clutch driven plate, road/rally	C-AHT 345	1
Clutch driven plate—race	C-AHT 409	1

PLUSPARTS AND PLUSPACS

Engine	Part No.	Qty./car
Crankshaft (nitrided 18GB onwards)	C-AEH 822	1
Main bearing set for C-AEH 822	C-18G 8103	1
Main bearing set (racing clearances) (18G/18GA)	C-8G 8843	1
Valve guide—inlet (Hidural)	C-AEH 755	4
Valve guide—exhaust (Hidural)	C-AEH 756	4
Inlet valve—39.7 mm. (1.562 in.) dia. (Nimonic)	C-AEH 757	4
Inlet valve—42.8 mm. (1.687 in.) dia. (Nimonic)	C-AEH 860	4
Exhaust valve—34.1 mm. (1.343 in.) dia. (Nimonic)	C-AEH 758	4
Exhaust valve—36.5 mm. (1.437 in.) dia. (Nimonic)	C-AEH 861	4
Valve spring—inner (57 lb. [25.9 kg.])	C-1H 1112	8
Valve spring—outer (140 lb. [63.5 kg.])	C-AHH 7264	8
Valve spring—inner (60 lb. [27.2 kg.])	C-AHH 7265	8
Valve spring top cup } for Nimonic valve	C-AEH 760	8
Valve spring bottom cup } and double springs	C-AEH 801	8
Valve collets—pairs	C-AEH 761	8
Rocker shaft bracket—front	C-AEH 762	1
Rocker shaft bracket—rear	C-AEH 763	1
Distance piece for rocker—long	C-AEH 764	1
Distance piece for rockers—short	C-AEH 765	2
Tappet adjusting screw (undrilled)	C-AEH 766	8
Push-rod	C-AEH 767	8
Cylinder head gasket (competition type)	C-AEH 768	1
Camshaft—road tune	C-AEH 864	1
Camshaft—race	C-AEH 770	1
Camshaft—sprint	C-AEH 863	1
Camshaft—super sprint	C-AEH 862	1
Steel camshaft chain wheel	C-AEH 771	1
Connecting rod bearing set (18GB onwards)	C-18G 8022	1
Piston ring—top	C-AEH 738	4
Piston ring—second and third	C-AEH 854	8
Piston ring—scraper	C-12H 759	4
Gudgeon pin	C-AEH 741	4
Circlip	C-AEH 742	8
Piston, with gudgeon pin and rings (18GB onwards)	C-AEH 853	4
Piston ring—top	C-AEH 738	4
Piston ring—second and third	C-AEH 854	8
Piston ring—scraper	C-12H 759	4
Piston—forged set (+.080 in. only)	C-AJJ 3375	1
Piston—ring set (+.080 in. only)	C-AHT 255	1
Cylinder head—polished (with valves, etc.)	C-AHT 100A	1
Deep sump (18GB onwards)	C-AEH 832	1
Packing piece for oil pump strainer (18G/GA)	C-AHH 7238	1
Packing piece for oil pump strainer (18GB onwards)	C-AEH 847	1
Cylinder head assy.—race	C-AHT 552	1
Disc washer set (cylinder head)	C-AHT 288	1

PLUSPARTS AND PLUSPACS

Engine	<i>Part No.</i>	<i>Qty./car</i>
Weber carburetter assembly 45 DCOE	C-AEH 785	1
Weber carburetter installation kit complete with manifold	C-AJJ 3312	1
Exhaust manifold (lightweight free flow)	C-AHH 7103	1
Pulley—dynamo/alternator (reduced speed)	C-AEA 535	1
Distributor (Competition tune)	C-BHA 4415	1
Carburetters—51 mm. (2 in.) S.U. pair	C-AUD 279	1
Installation kit—51 mm. (2 in.) S.U. carburetters	C-AJJ 3374	1
Intake trumpets—51 mm. (2 in.) S.U. carburetters	C-AHT 440	2
Carburetters—45 mm. (1.75 in.) S.U. pair	C-AUD 505	1
Installation kit—45 mm. (1.75 in.) S.U. carburetters	STN 0041	1
Intake trumpet	C-AHT 392	2
Thermostat blanking sleeve kit	C-AJJ 4012	1
*Competition oil cooler	C-ARO 9875	1
Oil cooler cover	C-AHT 181	1

Gearbox

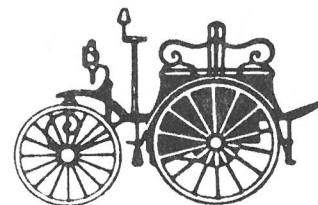
*Straight cut gear set (18 GD onwards)	C-AJJ 4034	1
(1st 3.44 : 1, 2nd 2.16 : 1, 3rd 1.38 : 1, Rev. 3.09 : 1)		

MGB, GT, V8

Plusparts marked * apply also to V8 models.

NOTES

C-AKD 4034L



MGB

**Special tuning
for your
MGB**

221.13

Sys. nr. 14017