

SECTION O

SPECIAL TUNING FOR MG MIDGET ENGINE

TYPE XPAG (As fitted to Series TB and TC Cars) and

TYPE XPAG/TD (As fitted to Series TD Cars)

NOTE: All dimensions are in inches unless otherwise stated.

The M.G. Midget as delivered from the factory in its standard form is tuned to give maximum performance with "pump" petrol consistent with complete reliability and reasonable freedom from pinking. There is, however, a more or less continuous demand from enthusiasts all over the world for information on methods of improving the performance for competitive purposes, and it is to meet this demand that this section has been prepared.

It must clearly be understood, however, that, whereas it is a simple matter to increase the power output of the engine, this cannot be achieved without the use of fuel having better anti-detonant qualities than ordinary "pump" petrol. In addition, this increase in power must inevitably carry with it a tendency to reduced reliability.

It is for this reason that the terms of the guarantee on a new M.G. expressly exclude any super-tuning of the kind to be described 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 section is laid out so as to give details of progressively increasing power. With the above ideas firmly in mind, the enthusiast should select the simplest tuning method which will give him the performance he requires, remembering all the time that here, as elsewhere, **Power Costs Money.**

STANDARD ENGINE DATA.

Bore: 66.5 mm.

Stroke: 90 mm.

Capacity: 1,250 c.c.

Firing order: 1, 3, 4, 2.

Sparking Plugs: Champion L.10.S.

Compression Ratio: 7.25 to 1.

Valve timing: Inlet opens 10° B.T.D.C. Closes 57°
A.B.D.C. Exhaust opens 52° B.B.D.C.
Closes 24° A.T.D.C.

Valve lift: 8 mm. inlet and exhaust.

Tappet clearance: .019 hot.

Contact breaker points: .010 to .012.

Ignition timing: T.D.C.

Octane rating: Minimum requirements for knock-free operations = 74 octane. For maximum power = 82 octane.

Carburetters: Twin S.U. 1¼ bore.

Carburettor jet: .090.

Type XPAG Carburettor needles: Standard E.S., Richer—DK., Weaker—E.F.

Type XPAG/TD Carburettor needles: Standard E.S., Richer—E.M., Weaker—A.P.

B.M.E.P.: 125 at 2,600 r.p.m.

Power:

B.H.P.:	R.P.M.:
11.00	1,000
23.50	2,000
36.00	3,000
47.00	4,000
54.00	5,000
54.00	5,200
52.50	5,500
47.00	6,000

Safe maximum r.p.m.: 5,700.

Valve crash r.p.m.: 6,000.

Capacity of combustion space: 45.5 c.c.

Cylinder head depth: Top to bottom face: 3.0177.

Thickness of cylinder head gasket: .045.

Capacity of cylinder head gasket: Approximately 4.5 c.c. compressed.

CAR DATA: Series TB and TC.

Gear	Overall ratios	M.P.H. per 1,000 r.p.m.
Top	5.125 to 1	15.84
3rd	6.93 to 1	11.74
2nd	10.00 to 1	8.13
1st	17.32 to 1	4.68

Rear axle ratio: 5.125 to 1.

Dimensions:

Overall length	11' 7½"
Overall width	4' 8"
Overall height (hood up)	4' 5"
Wheelbase	7' 10"
Track	3' 9"
Weight	15½ cwt.
Tyre Size	4.50—19
Tyre Pressures (front tyres)	24 lbs.
Tyre Pressures (rear tyres)	26 lbs.
Front wheel toe-in	3/16

Capacities:

Water system	1¾ gallons
Gearbox	1½ pints
Rear axle	2 pints
Petrol tank	13½ gallons
Engine sump	9 pints

