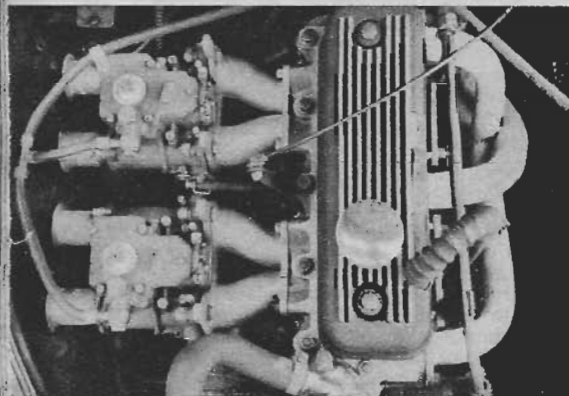


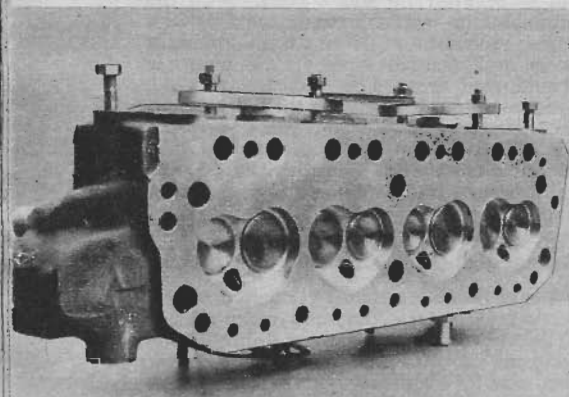
Three figure 'magnette-ism'

The H.R.G.-Derrington cross-flow head

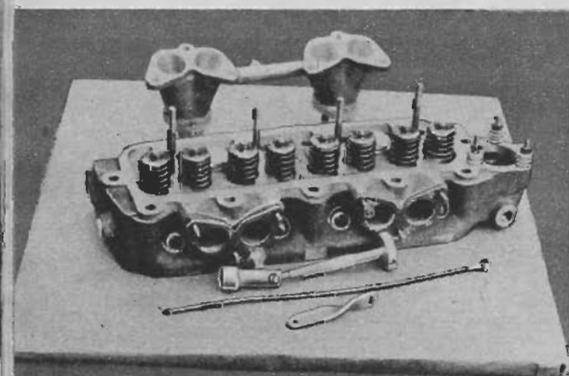
conversion kit test



Clearly crossflow, the alloy head uses two twin-choke Webers and a full-flow exhaust



The head casting weighs 24lb. and should resist distortion. Valves are standard size



Complete with valves, S.U. inlets—even a plug spanner—the head unit costs £68 10s.

EXTRACTING more power from production car engines is now big business, mainly because "conversions" are cheaper than buying out-and-out performance cars direct from the manufacturers. Practically any sound car can be tuned to accelerate faster and cruise higher in the speed range. Given attention to the suspension and brakes as well such a car is often even safer than the production model.

Yet sacrifices are few. The fuel consumption need not be drastically raised nor engine wear accelerated excessively. A case in point is the 1955 M.G. Magnette. In standard form this 1.5-litre 4/5-seater saloon has a maximum speed of around 80 m.p.h., with the engine turning at some 5,200 r.p.m. We recently tested a similar car which had been tuned by V. W. Derrington Ltd., 159 and 161, London Road, Kingston-upon-Thames, Surrey, and found it capable of 107 m.p.h. in overdrive top gear. And at this speed the engine was turning at only 4,500 r.p.m.

Standard exterior

Externally the test Magnette was indistinguishable from the production car although the driving compartment with its lightweight seats (7½ lb. each; just a tenth of the weight of the standard seat) and a large chronometric rev-counter suggested there was more under the bonnet than the standard 60 b.h.p. unit. There was. While no dynamometer tests have been conducted on this actual engine, it is calculated to produce some 107 b.h.p. (net) at 4,500 r.p.m. Much of the increment is due to the H.R.G.-Derrington alloy cross-flow cylinder head and a pair of twin-choke 40 DCOE Weber carburetors. Their respective prices are £68 10s. and £52 10s., the Webers being complete with inlet manifold. This same layout is suitable for all B.M.C. 1500 c.c. "B" series engines with the exception of the early Austin A.50 and A.55. On the Magnette the existing S.U. carburetors are usually fitted instead of the Webers, as a twin S.U. set-up fits the inlet pipes.

Advisable, but not essential, is a £9 set of high-compression flat-top pistons. An M.G.A. camshaft was fitted to the test car in a bid to improve the high-speed touring efficiency, although this again is not strictly necessary for moderate improvements in

performance. On an exchange basis, a special camshaft is available for £6 5s. Exhaust is taken care of by a three-branch full-flow manifold (£14), and the test car had a Peco exhaust booster.

Woodhead-Monroe shock absorbers were used to stiffen both suspension systems and an anti-roll bar was fitted at the front. The drum brakes had anti-fade linings and were fitted with a booster to reduce pedal pressure. To augment the high gearing of the Laycock-de Normanville overdrive (£64), a ZB M.G. back axle with a ratio of 4.55:1 was fitted. The total cost of all the "extras" was around £240. Initially this may look steep; but tuning is generally done stage by stage. Also, this particular car had tuning taken practically to racing standards.

No choke was fitted to the test car, but adequate cold starting was achieved by priming the accelerator pumps on the Webers by a couple of stabs of the throttle before operating the starter. Four ram intakes on the carburetors meant a fair amount of intake noise, while a healthy bark from the exhaust when the throttle was opened could be heard outside, but not inside.

Low-speed torque

Probably the greatest attribute of this conversion was the low-speed torque available. Using super-grade fuel it was possible to pull away from 1,000 r.p.m. in top gear without pinking. Good heat dissipation from the alloy head kept the engine temperature normal in stop-start traffic, and with light throttle openings the fuel consumption was a miserly 31.5 m.p.g. Use of the performance, of course, raised the consumption to around 26 m.p.g.

On the open road the stiffened suspension gave a rock-steady feel throughout the whole speed range, and with the levelling influence of the anti-roll bar cornering was practically of "sports car" standard, while retaining a high level of saloon car comfort.

As for cruising, an engine speed of 4,000 r.p.m. in overdrive top gives 95 m.p.h. Assuming you have enough open road, and can ignore the looks of amazement as you overtake, you could carry on at this rate all day. There is, quite definitely, more than a little magnetism about this Magnette.

PERFORMANCE DATA

0-30 m.p.h.	4.2 sec.	1st gear max.	26 m.p.h.	20-40 m.p.h. (1st and 2nd)	4.6 sec.
0-40 "	6.5 "	2nd "	45 "	30-50 "	(2nd and 3rd) 6.6 "
0-50 "	10.2 "	3rd "	68 "	40-60 "	(3rd only) 8.0 "
0-60 "	13.8 "	3rd O/D "	86 "	50-70 "	(3rd and top) 9.0 "
0-70 "	18.6 "	Top gear "	90 "	50-70 "	(top only) 10.0 "
0-80 "	24.0 "	Top O/D "	107 "	60-80 "	(3rd and top) 9.4 "

Petrol consumption (open road) 26 m.p.g. N.B. 5,000 r.p.m. was not exceeded in any gear.