



THE 1960 YIMKIN

INTEREST during the past season has shown a marked swing away from the 1100 cc sports car racing class, which has been dominated for so long by one car and one engine. This year brought a considerable number of new competitors and with them, increased enthusiasm for racing in the up to 1000 cc class. One of the most successful sports cars in this category has been the little BMC "A" engined Yimkin. On many of the club circuits the car has emerged with the laurels, despite fierce competition from more powerful Ford engined cars; in fact, out of a total of 12 meetings entered, the Yimkin was beaten only twice. A record such as this owes a great deal to good handling qualities as well as driving prowess.

The basis of the Yimkin is a frame of 18 and 20 gauge mild steel tubing, designed on principles used in the aircraft industry. The frame relies on certain stressed sections of the bodywork for torsional strength. All longitudinal members are composed of straight tubes, with contour hoops for the

body mounting built out from the main structure. The nose cowl, tail section, undertray and side panels are all stressed, and pop rivetted to the frame.

The bodywork itself is stark and functional in appearance, with exposed front wheels shrouded by cycle-type wings. The body contours conform closely with the layout of the main frame members, and excellent engine accessibility is obtained by a complete one-piece bonnet which exposes the "works" from scuttle to radiator. The undertray also includes a detachable panel under the sump for engine servicing. Total weight of the complete frame is claimed to be in the region of 40lbs and the positions of the engine and petrol tanks in the frame give a particularly good weight distribution.

Front suspension is conventional by current design standards, employing Standard 10 wishbones and king-posts, A35 hubs and pre-set coil spring/dampers. Steering is by modified Morris Minor rack and pinion.

At the rear, a live axle has been used in

order to reduce production and maintenance costs to the minimum. An A35 axle with a choice of either 4.5, or 4.9:1 alternative ratios, is suspended by a Watts linkage, which restricts fore and aft movement under the stresses of hard cornering and violent acceleration. Fabricated arms welded to the axle casing provide mounting points for parallel radius arms, which pivot below the casing in front, and above it to the rear. Lateral location is provided by a Panhard rod underneath.

Brakes are hydraulic taken from a Minor 1000; two leading shoe at the front, and one leading, one trailing shoe at the rear, with standard 7 inch drums. The bolt on steel wheels are 15 inch diameter, and the Dunlop racing tyres are 5.00 at the front and 5.50 at the rear.

The first car was designed by Don Sims, who decided three years ago that racing a 1750 cc Riley and a 6 cylinder Alfa was more than his bank manager could afford. He set about the design of a simple, inexpensive car using proprietary components, as a "one-off".

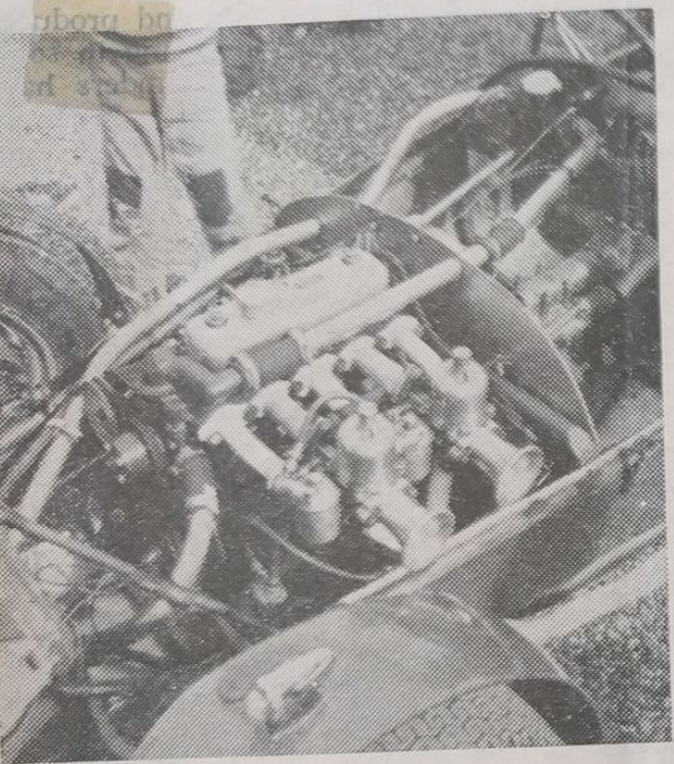
This first car was powered by a BMC engine, and proved sufficiently successful to encourage Sims, and his friend and collaborator John Parkinson, to produce a second car with a 100E Ford engine for the 1172 class. Both cars were successful and a revised version of the original design was produced in time for the 1960 racing season.

FRAME ALTERED

Powered by a two year old A40 engine developing approximately 55-60 hp, the new car incorporated several detail changes. A longer nose was designed which enabled a smaller radiator to be used. The frame was altered to use only straight tubes for the main members, and the rear suspension was modified. The result of these detail changes was to improve the already good handling qualities to a point where the spin point is very hard to find. The car's characteristics are said to be almost neutral, with excellent stability in the wet.

A close view of the Yimkin frame shows the body hoops, stressed sides and undertray.





The BMC engine installed in the Yimkin.

Handling and road holding qualities account for the car's success, for the comparatively modest power output of the "A" series engine is well below the output of the Cosworth-Ford for instance.

Tuning was accomplished with the use of only "off the peg" components. A new cylinder head was fitted, which was gas flowed,

with re-profiled ports and combustion chambers, oversize inlet valves, and double valve springs. The rocker gear was modified and lightened, but the standard push rods and cam followers were retained. The unit was overbored 60 thou., fitted with flat top pistons, and all reciprocating parts carefully matched and balanced. The flywheel was lightened slightly. Compression ratio is 10.5 to 1, and the 100 octane fuel used is fed to the twin 1½ inch SU carburettors by an SU electric fuel pump from a 4 gallon tank in the tail. This two year old engine has been used throughout the season with a minimum of maintenance.

An A35 gearbox was fitted, and although it was intended to change to close ratio gears, the standard ratio's proved adequate, since there was sufficient torque available right through the rev range.

Although the Yimkin has been raced under the sponsorship of Yimkin Engineering as a "works" entry, both the original design and the current preparation are the results of spare time work. Preparation and tuning this year have been undertaken in the small but well equipped workshops of Yimkin Engineering in Cadogan Lane, near Sloane Square. The work, however, takes second place to the demands of the tuning and car sales side of the business, and therefore a great deal of "after hours work" was entailed to get the car ready.

This in turn has prevented much of the

development work which was proposed at the beginning of this year. It was originally intended to replace the front brakes with units having larger drums; this has been dropped for the moment along with work on the engine to increase the power output. Another proposal shelved was the tilting of the engine over on its side to reduce the already small frontal area. All of this only reflects more credit on the car, for it has more than held its own this season against such cars as the Cosworth-Ford engined Marcos, Dave Warwick's DRW Ford and the new Falcon Competition Car.

The 1960 works car is now being disposed of, and work is under way for a new car which will be entered by the works, but possibly in another class. The current car will continue to be produced in both kit and ready assembled forms as a stark road car or a ready to race sports car incorporating the results of three years of intensive—and successful—club racing. Although the original Yimkin was designed around the BMC engine, the wheelbase can be extended up to 4 inches to accommodate an alternative power unit stipulated by any customer.

What form the new car will take is not revealed, but judging by the success of the current model, it should provide some interesting competition next season. The original design was christened "Yimkin", which in Arabic means "maybe" or "perhaps". Maybe a change of name is indicated?