

SPORTS CARS AT OLYMPIA

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valves of conventional location but with special cylinder design.

Cams are particularly important, and the makers of sports engines are shown to have gone to big expense in experimenting with cam and follower contours to give the maximum of lift and period of opening with the minimum of noise, and fast and powerful small engines are not now necessarily noisy, while, in this way, remarkable increases in power for a given piston displacement have been obtained.

High compressions, and revised combustion chamber design and manifold shaping and smoothing to reduce wire drawing and increase turbulence, have been thoroughly investigated to get the highest and most rapid expansion from a given weight of gas moisture drawn in.

The engines of the sports cars shown at Addison Road may be regarded as examples of the highest power-plant design which modern engineering has produced.

Carburation has been improved beyond anything which could

have been expected a couple of years ago, and most sports engines have two or three carburettors (two for a "four" and three for a "six") in order to ensure the maximum and equal weight of explosive gas in each cylinder. Synchronisation of the two or three carburettors has been brought to a fine art.

Supercharging was not so noticeable a feature of the sports cars shown as it was thought would be the case. But there will be found a few supercharged engines fitted in the bigger sports cars.

It is interesting to notice that the makers of sports cars are beginning to give some attention to noisy exhaust. The most efficient and speedy sports cars of the new range are not the noisy ones!

In the matter of gears the sports cars have, generally, been fitted with the conventional four-speed gear with direct top. The advances which have been made in synchro-mesh gears, self-changing gears and pre-selective gears have not been particularly applicable to the sports cars, the users of which do not hanker after immunity from personal control and do glory in a clean,

sharp change at speed—which can, often, in the hands of the expert, be more quickly and surely obtained by skilled handling than by the newer fool-proof automatic methods.

There have, however, been introduced twin top gears with helical toothed silent drives for the constant mesh and third speed pinions and wheels giving silence and (by reason of the dog clutch arrangement) rapid change.

In some of the bigger cars (say of 12 h.p., like the M.G. Magnette) pre-selective gears are fitted, and during the past year of strenuous racing have acquitted themselves right nobly.

Generally the sports cars at Olympia showed a marked advance on anything which has been done before, and in the streamlining of the bodies, the provision of low, rakish saloons (yet with ample interior accommodation), low sided tourers with sloping screens and good cosy all-weather equipment, smart Coupés and racing two-seaters, they show how elegance and comfort and protection can be combined with a fast chassis and a very sporting and speedy appearance.