



SPORTS CARS AT OLYMPIA BY F. HALL BRAMLEY

THE increase in the popularity of the sports car was one of the features of last month's Olympia Motor Show.

Over a score of motor manufacturers had real sports cars on their stands representing over 40 different sizes and powers of cars, and there were some big ones, too—up to five litres—the kind of machines one can seldom “let out” for more than a few seconds on average English roads.

There is shown a general tendency to keep the centre of gravity low so that road holding, and particularly stability in cornering, may be at the maximum.

In this connection one of the most important developments is the adoption of the underslung frame, allowing of the maximum lowering of the centre of gravity.

A very interesting example of this is found in the case of the M.G. Magna “L” type chassis. When engine and gearbox—the most weighty part of the chassis—are low, there may be a decided wringing strain on the chassis which might be reflected in slightly irregular transmission of the power by the helical pinion and crown wheel drive.

It has become general practice to counteract this tendency by some form of cross bracing. Very often this is triangulated—sometimes it is by big diameter

tubes as in the M.G. chassis.

The driver's and passenger's seats are now almost at the height from the ground which would represent the floor level on a sports car of a year ago. Foot wells of ample capacity are arranged to give all the depth and length of leg room required for comfort without encroaching on the ground clearance.

With the lowering of the seats has come the lowering of the saloon head; for this low loading and seating has allowed sports saloons to have low tops yet with ample inside head room.

The height of an M.G. “Salonette” sports car, from the ground to the top of the head, for example, is not more than four feet, eight inches!

Independent front springing has been adopted in some cases. But with the lighter sports cars good road holding can be obtained, even at high speeds, by the conventional type of semi-elliptic springs, so long as they are of good length and are somewhere near flat when normally loaded and are damper controlled, and this arrangement is the one generally adopted on sports cars shown at Olympia.

So much for what we may call the running chassis.

The engines of these sports cars have to produce a big power

for a small weight and small piston displacement; because the power to weight ratio must be kept high. We cannot reduce passenger or driver weight, though some of the fair sex have made, and are making, very successful progress in that direction.

The use of the latest high-grade steel alloys for both fixed and reciprocating parts has made it possible to reduce the engine weight and reciprocating weight, which means higher speeds with increased power output for a given piston displacement.

The sports car engine, as is shown at Olympia, has connecting rods of the finest material and fully machined and balanced with the greatest exactitude. Pistons, too, are of the lightest and of aluminium or a combination built up with aluminium and steel or cast iron.

Cylinder walls are of toughened or close grained metal to eliminate wear and give the finest sliding surface for the pistons, and crankshafts are entirely machined and most carefully balanced, statically and dynamically, and have extra wide webs and big and long bearings—four being a minimum as a rule.

Valves are usually overhead on sports engines, but some fine sports cars at the Show revealed side

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