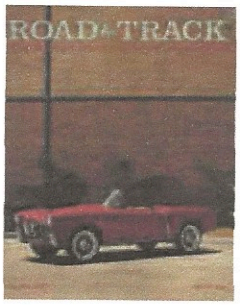
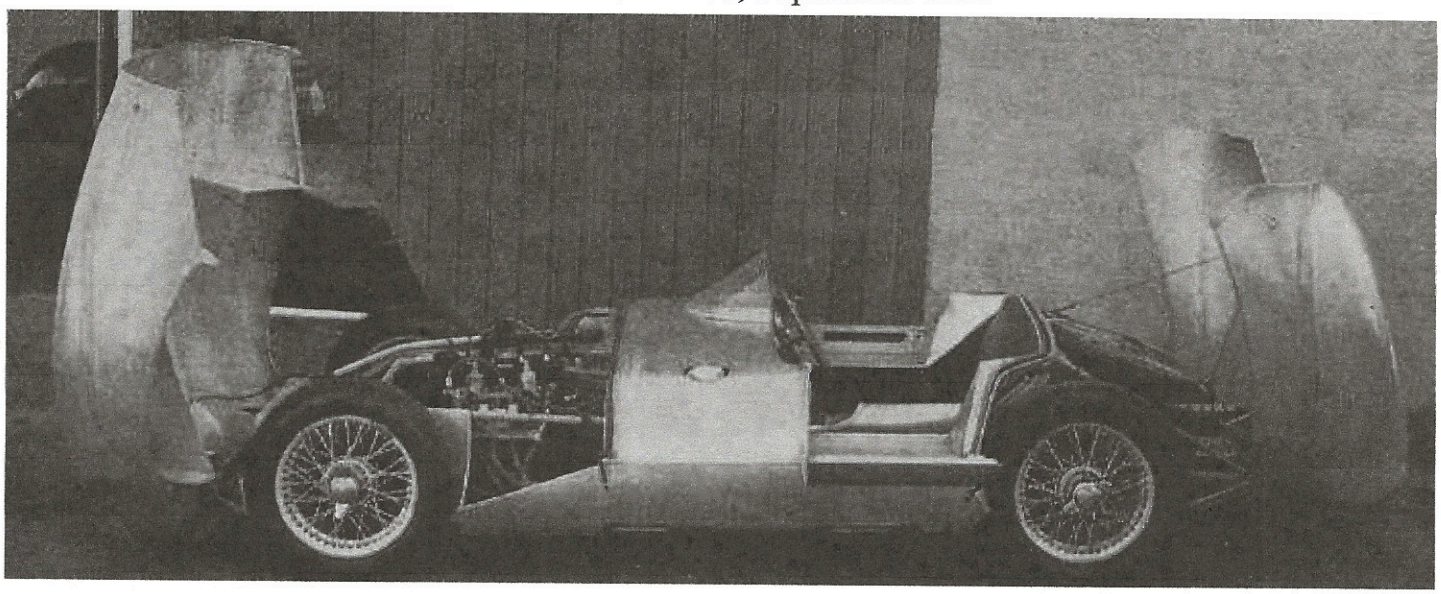


Road & Track, September 1957



Road Test

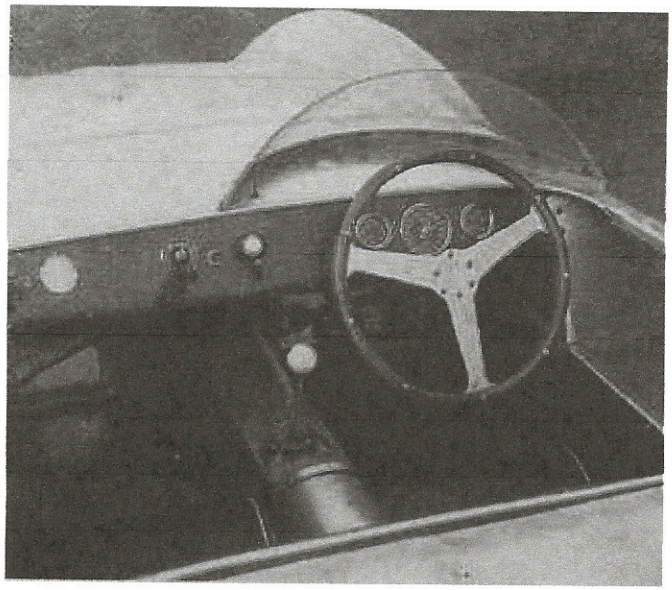
LOTUS SPORTS

Expanse of sheet metal in front of passenger will make the Lotus very popular in drive-in restaurants.

IN MARCH of this year we tested a full competition Lotus, powered by the famous Coventry-Climax engine and selling for nearly $6000. In that report we mentioned that a simpler and cheaper version, known as the "Sports" model, was also manufactured by Lotus. The report ended with "Even the lowest-priced model may not put a Lotus in every garage, but it would certainly make an interesting racing class if enough cars of this type are brought over."

This, then, is a report on the lowest-priced model, powered by an ordinary Ford "10" side-valve engine and supplied by the U.S.A. Lotus distributor. Jay Chamberlain, 2909 West Olive, Burbank, Calif.

The Lotus Sports ("Club Sports" is not correct) is very similar to the famous "11" model except for the

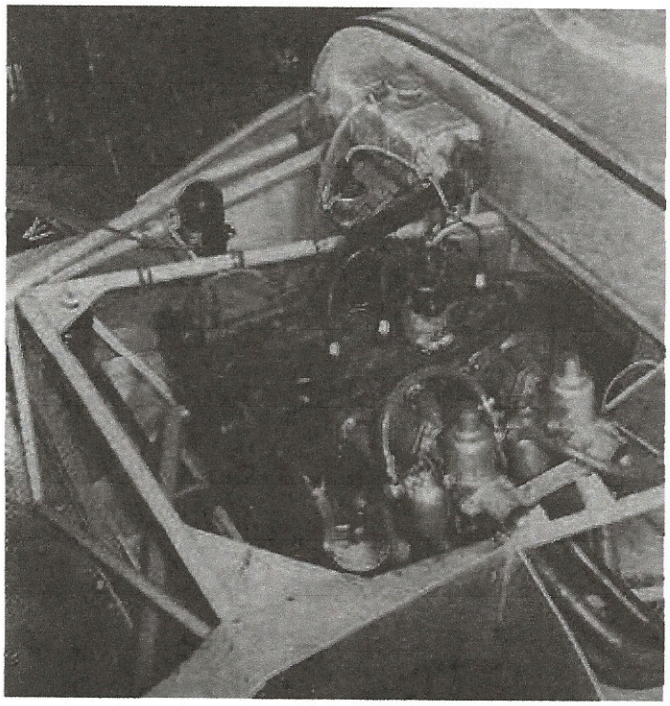


British Ford engine, three-speed transmission, solid rear axle and drum brakes. The multi-tube frame and low-pivot i. f. s. are used, and the body panels appear to be of identical contour. The racing windscreen is a simpler type, not at all unpleasing, and the rather elaborate cockpit cover and head rest of the 11 are dispensed with. A very neat full-width windshield and a not-too-bad top can be ordered (see photo in R&T for February 1957, page 26).

Parallel trailing arms support the solid rear axle, with coil springs here as well as in front. The brake system has twin master cylinders, two leading shoes, and drums nine and eight inches in diameter, front and rear. The transmission uses special close-ratio gears, giving 1.33 for second and 2.34 for first. While most Lotus (or is it Lotii?) come equipped with 4.50 section tires in front and 5.00 at the rear, our test car had 4.50-15 tires all around.

The seating position feels just right. In the cockpit area, there is a good feeling of neat, functional aluminum—comfortable, but hardly luxurious. All the controls work smoothly and easily, and the shift pattern is standard. In starting off, the high first gear (9.87:1 overall) is noticeable for the first few feet, and for an instant one wonders whether this might not be second gear. But from 5 mph upwards, the surge of power is very good indeed; the Tapley meter swings over to 510 lb/ton and 30 mph comes up in under 5 seconds, even after the initial hesitation. Slightly over 40 mph is possible in first gear (40 mph=5500 rpm), and the engine seems happy at this rate, though low gear is somewhat noisy and of course not synchronized. Second gear is relatively quiet, and gives a good boost with a peak Tapley reading equivalent to accelerating at the rate of 3. 1 mph/sec. Actually, 40 to 70 mph in second gear requires 11.9 seconds, whereas 3.1 mph/sec. would give an elapsed time of 9.68 seconds, but the Tapley reading falls off rather rapidly above 40 mph (3100 rpm). This is, of course, due to the fall-off in engine torque and the increase in wind drag, as the speed continues to increase.

I'm a stranger here myself: the little Ford engine looks vaguely uncomfortable in this environment.

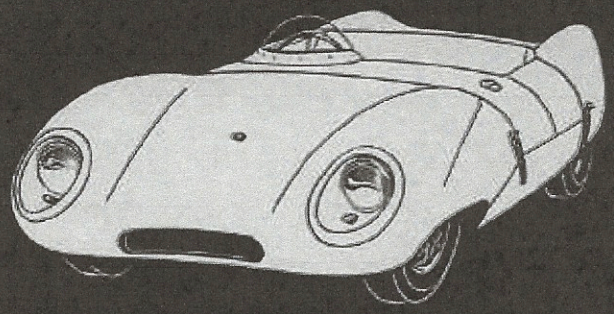


Speaking of drag figures, this car showed—after numerous tests in both directions—a total wind and rolling resistance of only 55 lb at 60 mph, as compared to 68 lb for our Lotus 11 test. From this we can calculate that the Sports model, with racing screen and two persons up, can hold 60 mph with only 9 bhp required at the flywheel.

We made only two timed high-speed runs; the second was the faster, at 99.0 mph. Perhaps a third run would have found the engine just enough freer that the magic three-figure mark could have been attained, but the engine temperature would start to climb under this treatment, and we were reluctant to risk a piston seizure. Incidentally, the speedometer was dead accurate at 99 mph and the engine was held wide open for over two miles on each run, reaching a calculated 5700 rpm at the end. (No tachometer is supplied, which seems deplorable in a sports machine of

an impractical, highly desirable combination

ROAD & TRACK ROAD TEST NO. 144



LOTUS SPORTS

SPECIFICATIONS

List price	$3690
Wheelbase, in.	85.0
Tread, f/r	46.5/47.0
Tire size	4.50-15
Curb weight, lb	970
distribution, %	55/45
Test weight	1290
Engine	4 cyl, sv
Bore & stroke	2.50 x 3.64
Displacement, cu in.	71.5
cu cm.	1172
Compression ratio	7.00
Horsepower (est.)	40
peaking speed	4600
equivalent mph	79
Torque, lb-ft	52
peaking speed	2500
equivalent mph	43
Gear ratios, overall	
3rd (high)	4.22
2nd	5.62
1st	9.87

CALCULATED DATA

Lb/hp (test wt)	32.2
Cu ft/ton mile	112
Engine revs/mile	3500
Piston travel, ft/mile	2120
Mph @ 2500 ft/min.	70.8

PERFORMANCE, Mph

Top speed, avg.	97.8
best run	99.0
2nd (5500)	71
1st (5500)	40
see charts for shift points	
Mileage range	25/40 mpg

ACCELERATION, Sec.

0-30 mph	4.8
0-40 mph	7.1
0-50 mph	10.6
0-60 mph	14.2
0-70 mph	19.0
0-80 mph	26.0
Standing start ¼ mile	19.2

TAPLEY DATA, Lb/ton

3rd	250 @ 50 mph
2nd	310 @ 40 mph
1st	510 @ 27 mph
Total drag at 60 mph, 55 lb	

SPEEDOMETER ERROR

Indicated	Actual
30 mph	28.6
40 mph	38.8
50 mph	48.7
60 mph	58.5
70 mph	68.5
80 mph	78.3
99 mph	99.0

this price.)

Our test driver was Ignacio Lozano, well known for his support of the marque Lotus. Getting the most and the best out of this car presents no special problems—it is very easy to drive, with one exception: Up to 70 mph or so the steering feels wonderful. With 1.5 turns and a 42-foot turning circle, the overall steering ratio isn't terribly quick. Nevertheless, at 90 mph the car suddenly seems to get as nervous as a wild horse, and frankly it was rather frightening. Experienced Lotus drivers say you get used to this, but for most tastes a slower gear and a smaller turning circle would be preferable.

The ride is quite firm, and on this car at least, the lack of a de Dion rear end is not felt at all. As might be expected from the weight distribution, the car understeers, but the raised roll center in front reduces the understeer to a very modest amount. Insofar as roll is concerned, there is (under normal driving conditions) no such thing. Only when the tires begin to squeak, signifying the approach of one g lateral forces, does the car lean at all perceptibly.

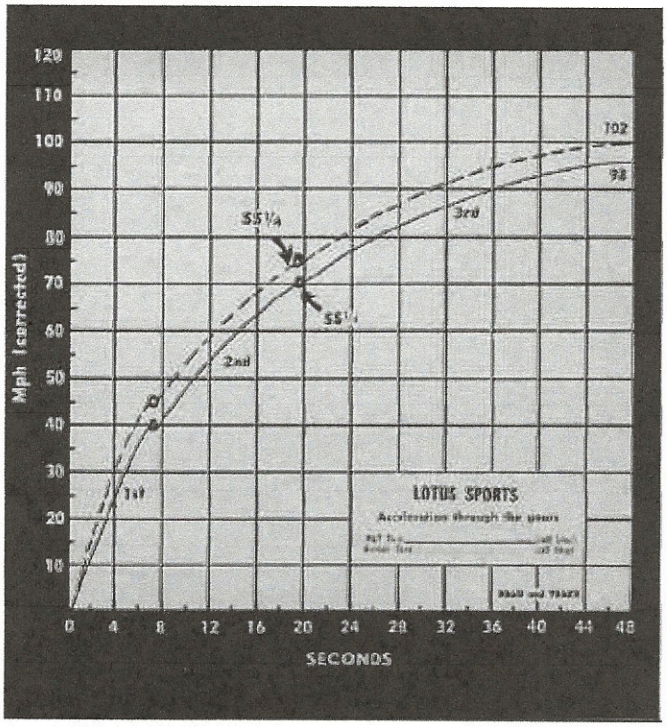
In order to show the range of performance which can be expected from a modified Lotus Sports, we have plotted the results of a British test in dotted lines against our usual acceleration graph. However, the overseas car carried a test weight approximately 200 lb below our figure, and the engine had quite a few internal modifications, including higher compression ratio, polished ports and oversize valves. Both test cars had twin S.U. carburetors. Accordingly, we have estimated that our car had about 40 bhp as compared to 45 or so for the more modified machine.

In short, and with only one or two minor complaints, we liked the Lotus Sports very much indeed. But now we must register what may sound very much like a sermon — and it is.

Here is a car for which we can discover no useful purpose whatsoever!

In two years, Lotus has built up a very good reputation in this country and sold nearly 100 machines. The cars are beautifully engineered, tremendous competition cars in their class, and cost near $5000. Now, in the new Ford-powered Sports, we have an equally fine machine. And, as we quoted earlier, it would make an interesting racing class. But as it stands now, this car is far too expensive ever to get a Ford 1172 class going. It would compete with its 1460 cc Coventry-Climax-powered cars, a daring but hopeless enterprise.

So, we add the windshield, top and side curtains, securing thereby a very fine and unique dual-purpose car? Almost, but wait. In the first place, the price is $1500 more than the Ford-10-powered Morgan 4/4, although the Lotus weighs 580 lb less. But, more importantly, the Lotus has so little ground clearance that anything larger than a pebble



in the street will rake the belly pan from stem to stern. Enclosed front wheels would make parking a matter of finding a space vacated by an Imperial, and what American bumpers would do to that beautiful but unprotected aluminum would be sheer slaughter. Coil springs having at least one inch more loaded height and 5.00 tires would increase the ground clearance to a sensible minimum of 6.5 in. The front fenders could be cut away to give a turning circle of 30 to 32 ft, but that isn't easy.

We would be so bold as to suggest a redesigned 1172 cc car, and possibly a larger all-out competition machine offered for sale at about the same price, without an engine or gearbox. And what would we damn Yanks install for power? An American V-8!

Web editor's note: Many Eleven Sports were built but the test car, chassis #234, was the only one officially imported to the USA by Chamberlain. Over the years most Sports models were converted to use other engines and very few – if any – original Ford 1172 Elevens exist today.

BACK to Design & Production

HOME to www.lotuseleven.org