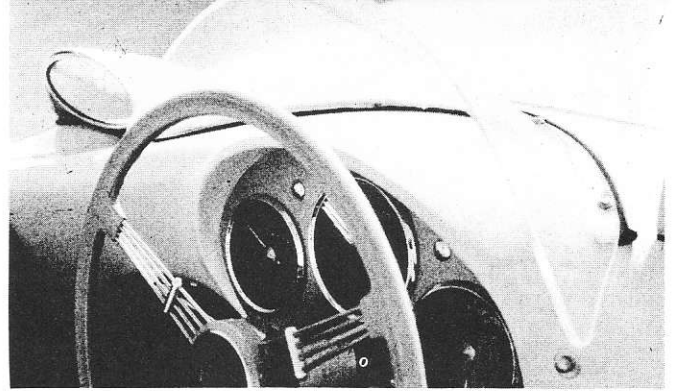




Owner Porter puts his R.R. cap on backwards for the high speed runs.



The aero-screen is small but effective in keeping air-blast off the driver.

Road Test: **PORSCHE 550 SPYDER**

"CHANGE is progress," as the saying goes, and this axiom applies particularly well to the field of competition sports cars. Introduced a little over two years ago, the Porsche Spyder type 550/1500 RS immediately proved itself to be a formidable competitor in the under 1500 category, and the Stuttgart factory soon made the car available to enthusiasts the world over.

To date, over 100 of these beautifully engineered machines have been built and sold, and it is pertinent to note that despite the oft-mentioned "edge" of factory-prepared machines, the 550 Spyder has completely dominated its class, both here and abroad, even in the hands of private owners.

Although we could have tested one of the ex-factory team cars, we felt that the performance data of an absolutely stock, privately owned machine would be a more interesting, more honest test, truly indicative of what kind of performance can be purchased "off the shelf." Many of the Spyderys now winning the big races are slightly modified and obviously out-perform the normal 550, but at least you can buy a car such as this. However, a new competition model to replace the 550 is rumored to be in the offing.

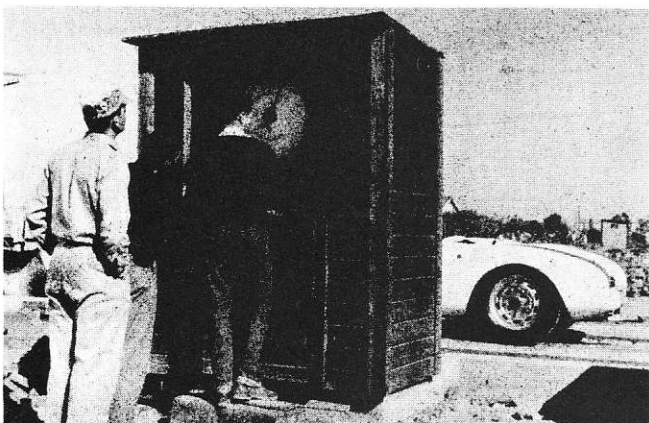
Our test car was generously supplied (and capably driven) by its owner-enthusiast, John H. Porter, Jr. of Newport Beach, California. This machine has run in practically every California event offered during the past two years and the odometer read 8400 miles, when we began the test. Mechanically, it is exactly as purchased with two exceptions. The brakes are the latest (larger) type and, as tested, it was set-up with the short-track gear ratios

just as it came off the course at Palm Springs. The axle gears were 34/7 (4.855), giving a final drive ratio in 4th gear of 4.66 to one in place of the standard catalogued ratio of 3.56. In effect this alteration gives substantially better acceleration but limits the ultimate top speed capability to the driver's decision as to what constitutes a safe engine revolution rate.

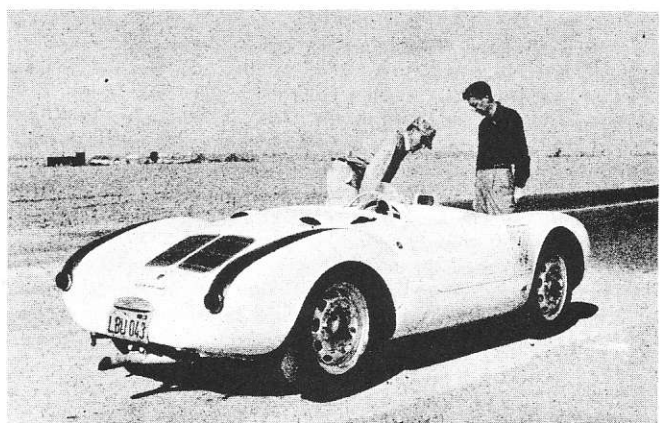
Accordingly, we made only one high-speed run, and with the tachometer at nearly 7500 rpm the car recorded 121.6 mph. The factory states that the car is capable of 140 mph and there is no reason to doubt this figure—given the "high-speed" rear axle ratio. The car was tested with about 10 gallons of normal premium fuel in the tank and no fuel consumption checks were made. The owner drives the car occasionally on the highway and reports up to 16 mpg with as low as 10 mpg under the stress of competition. The curb weight given (1510 lbs.) was a little surprising but was taken with a full fuel tank (24 gallons). Weight with no fuel would be 1366 lbs. or slightly less than the catalogued "empty" weight given as 1407 lbs.

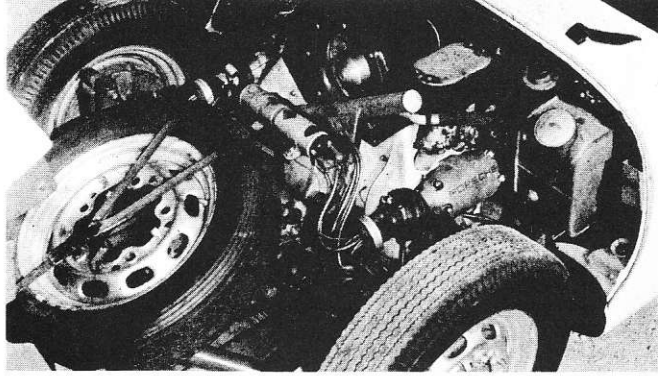
Aside from the truly remarkable acceleration figures given in both tabular and graphic forms, the most interesting feature of the 550 is, without a doubt, the engine. This unit was described in R & T as far back as May, 1954 and further described in January, 1956. Suffice it to say that the combination of a very short stroke, the Hirth roller bearing crankshaft, and no less than four overhead camshafts (two for each cylinder bank) makes for a very free-running power plant and one which never seems to be approaching

The weighing-in ceremonies on State certified scales. 1510 lbs. with full tank.



Porter explains to the editor that he has no trouble with retreads.





Despite all the machinery being at the rear the weight distribution is 48/52.

Top contender in the 1500cc class

the bursting point, even if 7500 rpm is exceeded occasionally. This speed was in fact used as a rev limit and is equivalent to a piston speed of only 3245 fpm.

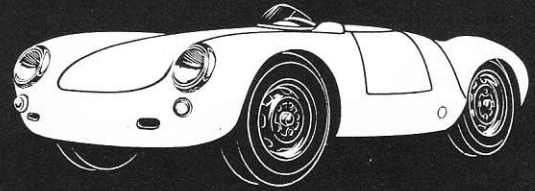
In addition to the engine's phenomenal ability to rev smoothly and safely at over 7500 rpm, it should be mentioned that the unit is remarkably tractable for use off the race circuit. True, the tachometer is plainly marked so as to indicate that the engine should be operated between 4000 and 7500 rpm—no more, no less. Actually the unit idles at 1200 rpm and pulls steadily in any gear from this point. However, when accelerating, the engine feels rather tame until 3500 rpm is reached at which point the Tapley meter advances rapidly to a much higher reading and continues to increase slowly until approximately 5500 rpm (the torque peaking speed) is attained.

Driving the 550 is very little different from handling a stock production Porsche Speedster or coupe. The steering is the same (2.3 turns, lock to lock), and the control of clutch, brakes, and gear lever will feel familiar to any Porsche owner. Furthermore, the seats are very similar to those supplied with the Speedsters and are quite comfortable except for the obvious fact that the passenger is rather exposed to the elements. Of course the performance literally forces you back in the seat, but surprisingly the thrill wears off rather quickly, especially on a lonely road with little or no traffic. In congested areas one quickly learns that this car gets above the legal speed limit so easily in 2nd gear that one is very likely to misjudge the speed. The first time this happens the brakes come into their own, for they are among the best we have ever tried. Applied hard at over 100 mph they bring the speed down so rapidly that the passenger stays seated only with difficulty. Competition experience with the 550 has proven that these brakes are virtually trouble-free and among the best when it comes to fade immunity.

The steering characteristic is near-neutral with the usual high performance car feature of a rear-end breakaway controllable by the throttle foot. Both the above and the 48/52 % fore-and-aft weight distribution were somewhat surprising to us, as we expected some oversteer and a weight distribution closer to 45/55. However, as is well known, the 550 engine lies ahead of the rear axle, the gearbox behind—the exact reverse of a "normal" Porsche. This new twist and the initial negative camber of the rear wheels accounts for the good handling of the 550. We did not drive the car enough to make any evaluation of the low polar moment, but it would appear that the more central concentration of masses does make for a machine which responds very quickly to the driver's merest whim—the old idea that you can almost literally "wish" a good-handling car through a fast curve.

Combining as it does, terrific performance, faultless handling and excellent brakes, it is no wonder that the Porsche Spyder type 550/1500 RS is the car to beat these days, in its class. ●

R & T ROAD TEST NO. 123



PORSCHE 550 SPYDER

SPECIFICATIONS

List price	\$6800
Wheelbase, in.	82.7
Tread, f/r	50.8/49.2
Tire size, f/r	5.00/5.25-16
Curb weight, lbs.	1510
distribution, %	48/52
Test weight	1770

PERFORMANCE, Mph

Top speed, one-way	121.6
3rd (7500)	97.5
2nd (7500)	68
1st (7500)	38
see chart for shift points	
Mileage range	10/16 mpg

ACCELERATION, Secs.

0-30 mph	2.6
0-40 mph	4.6
0-50 mph	6.2
0-60 mph	8.2
0-70 mph	11.6
0-80 mph	15.0
0-90 mph	19.6
0-100 mph	25.2
standing start 1/4 mile	16.1

Engine	flat 4, dohc
Bore & stroke	3.35 x 2.60
Displacement, cu in.	91.4
cu cm.	1498
Compression ratio	9.50
Horsepower	137
peaking speed	6200
equivalent mph	103
Torque, ft.-lbs.	95.5
peaking speed	5500
equivalent mph	91.4

Gear ratios, overall	
4th	4.66
3rd	5.95
2nd	8.56
1st	15.4

TAPLEY DATA, Lbs/ton

4th	220 @ 85 mph
3rd	360 @ 67 mph
2nd	540 @ 50 mph
1st	off-scale
Total drag at 60 mph, 69 lbs.	

CALCULATED DATA

Lbs/hp (test wt.)	12.9
Cu. ft/ton mile	108
Engine revs/mile	3610
Piston travel, ft/mi.	1560
Mph @ 2500 fpm	96.1

SPEEDO ERROR

Indicated	Actual
30 mph	30.0
40 mph	39.6
50 mph	48.7
60 mph	57.5
80 mph	75.6
100 mph	95.8
123 mph	121.6

