

SCI

## ROAD TEST: The Simca Aronde



Front view of Simca Aronde shows typical narrowness as with small overseas cars.

**M**OST sports cars are light, and plenty of cars in the light-car class have sports behavior; the man who drives both varieties frequently wonders where one leaves off and the other begins. The Simca Aronde 1300 is just such a borderline case. It has been raced with success in the U. S. and it feels as at home on a tricky race course as on the open road. It's as agile and responsive as a stock MG TD—has about the same acceleration, a shade more top speed, and is smoother and quieter. But Simca, in its promotion of the Aronde, does not attempt to make capital of the sporty side of this car's hybrid character.

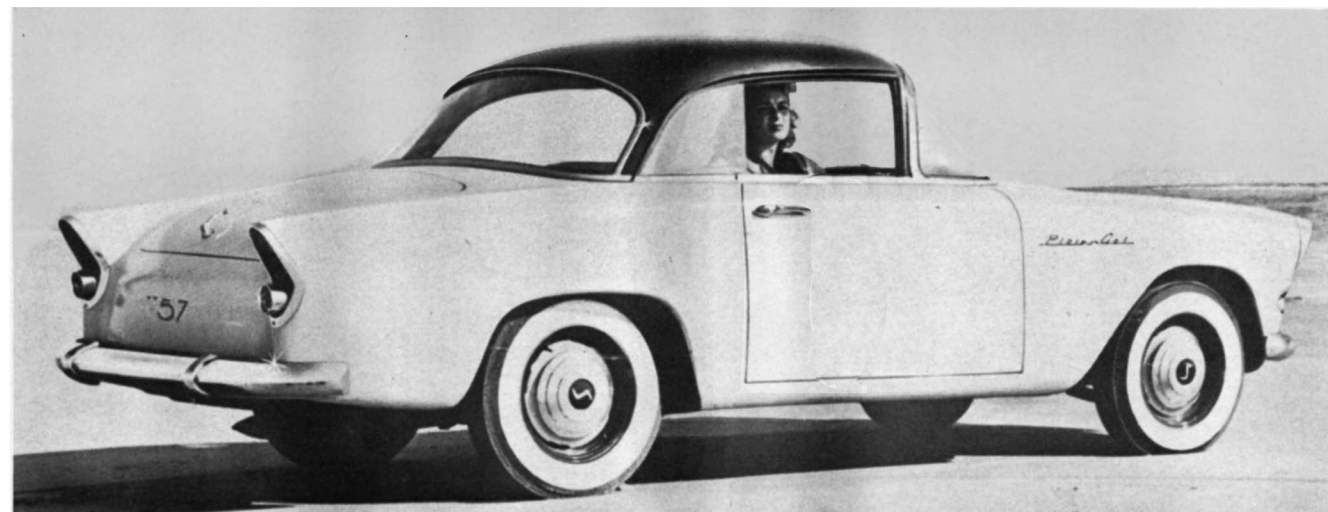
What Simca is after, of course, is the biggest possible slice of the colossal "people's car" market, and in its own definition of the philosophy underlying the Aronde's design the factory lists only utilitarian virtues: Minimum original cost, fuel and upkeep cost and maximum vehicle life and performance under all conditions. Even the Aronde's good esthetic qualities are played down in Simca's pitch to the mass-

motorist and the big emphasis is placed on the car as a workhorse.

Just how successfully the Aronde will be able to compete in the U. S. with the established English light cars and the firmly entrenched VW remains to be seen, but if sheer honest virtue is a factor it should really storm. Its speed, space, acceleration, comfort, roadability and price are all carefully aimed at making it the most car for the money built anywhere in the world.

Sports Cars Illustrated's test Aronde was the hard-top coupe, called the *Grande Large* model in France, which differs from the basic model only in trim, accessories and price. The test coincided with a great number of commuting trips between Los Angeles and the Bonneville Salt and we put 1900 miles on the car under a wide variety of road, traffic and weather conditions.

One of the things we learned on these long cross-desolation runs was that the Aronde produces a real minimum of



The 1957 Simca coupe. Envelope body and two-tone hard top are strongly reminiscent of American design — one in particular.

driver fatigue. The man who started at the wheel on the eastbound run has an old back injury that almost invariably gives him trouble after a couple of hours of herding a Detroit machine. He stayed at the wheel across the Mojave Desert and into Nevada, waiting for fatigue to set in. In the Simca, it never did. He drove all the way to Bonneville, 750 miles. The reasons for this really remarkable degree of comfort are the solid but smooth ride, seats that are deep and firm—giving good support to the back and thighs, the low level of mechanical and sonic vibration, and controls that are light but very responsive.

Another thing we learned about was the Simca's fuel economy. Across the long stretches of desert highway we cruised at an actual 60 to 65 mph and averaged 35.2 mpg—this, in spite of a small leak in the fuel line that wasn't discovered until we got back to Los Angeles. When the leak was fixed, a fast 88 mile run on highways and freeways yielded 40.8 mpg. If you drive for economy it shouldn't be at all hard to get 50 mpg in this car, and even driving flat out all the time you'd have a hard time getting less than 25 mpg.

With this kind of economy you'd hardly expect lively

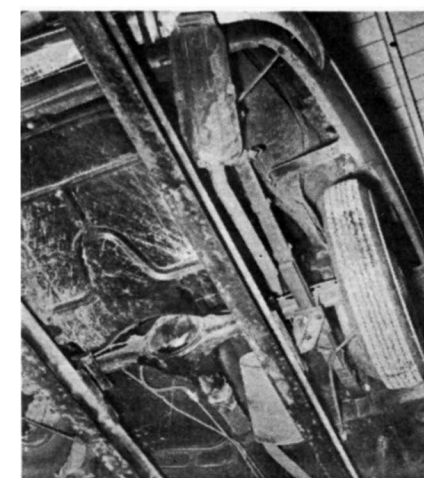
*The power plant of the Aronde seems ordinary, and looks small as 12 volt battery. However, its virtues come from its power, economy, smoothness and its revving ability.*



performance, but the Aronde has this too. The 1955 forerunner of the 1300, with a displacement of 1221 cc and three less advertised bhp than the present model, was criticized none too gently in the British automotive press for being underpowered and geared for flat, long Continental roads rather than the often rolling roads of England. Odds are, though, that this represented an excess of national zeal, because the 1300, with an increase of just 5.7 percent in displacement, 6.7 in bhp and 8.2 in torque, is one of the most capable and versatile performers in the light car field, and it's as pleasant to drive on steep mountain roads as it is on the level.

Its gear ratios are very well chosen, and synchromesh on the top three gears is foolproof; the column-shift mechanism, though admirably designed, could stand to be lighter in its operation. The loud-singing first cog lets you wind to about 21 mph before things begin to seem too tight. The silent second gear is good for an honest 40 and in third the brave little engine is perfectly willing to rev well beyond the actual 65 mph we chose as top limit in that gear. Our well loaded test car had to pull mountain passes over 6000 feet high, and for this and overtaking other cars on the

*Rear end is conventional, but of heavy duty type. 42 inch long leaf springs have eight leaves plus two 5/16 inch overload leaves.*



*Spare tire is cleverly recessed in floorboard leaving full space in trunk for luggage, tools, and other small portable items.*



## PERFORMANCE

### TOP SPEED:

Two-way average	81.8 mph
Fastest one-way run	82.6 mph

### ACCELERATION:

From zero to	Seconds
30 mph	6.0
40 mph	8.8
50 mph	13.7
60 mph	20.0
70 mph	33.3
80 mph	104.1
Standing ¼ mile	22.3
Standing mile	59.8

### SPEED RANGES IN GEARS:

I	(Reasonable) zero to 21 mph
II	5 to 40 mph
III	10 to 65 mph
IV	15 to top

### SPEEDOMETER CORRECTION:

Indicated	Actual
30	26
40	35
50	45
60	55
70	65
80	75

### FUEL CONSUMPTION:

Hard driving during test	25.4 mpg
Average driving (under 60 mph)	40.8 mpg
1900 mile average	35.3 mpg

### BRAKING EFFICIENCY:

(10 successive emergency stops from 60 mph, just short of locking wheels: with Perfometer)

1st stop	70%	Loss of braking efficiency in tenstop test: 1 inch.
2nd	68%	
3rd	68%	
4th	65%	
5th	64%	
6th	63%	
7th	60%	
8th	58%	
9th	57%	
10th	55%	

## SPECIFICATIONS

### POWER UNIT:

Type	In-line four
Valve Arrangement	Pushrod ohv
Bore and stroke (Engl. & Met.)	2.91 x 2.95 ins. 74 x 75 mm
Bore/stroke ratio	1.01 to one
Displacement (Engl. & Met.)	78.7 cu. ins. 1290 cc
Compression Ratio	7.2 to one
Carburetion by	single-throat downdraft Solex 32 PBICT
Max. bhp @ rpm	48 @ 4500
Max. torque @ rpm	66 @ 2600

### DRIVE TRAIN:

Transmission ratios I	3.72
II	2.36
III	1.47
IV	1.00
Final drive ratio (test car)	4.444
Axle torque taken by	rear springs

### CHASSIS:

Wheelbase	96 ins.
Front Tread	48.5 ins.
Rear Tread	48.5 ins.
Suspension, front	Coil spring and wishbone; ¾ in. anti-roll bar.
Suspension, rear	Semi-elliptic springs.
Shock absorbers	Double-acting telescopic.
Steering type	Gemmer worm and roller.
Steering wheel turns L to L	3
Turning diameter	31.0 ft.
Brake type	Bendix hydraulic
Brake lining area	122 sq. ins.
Tire size	5.60 x 14

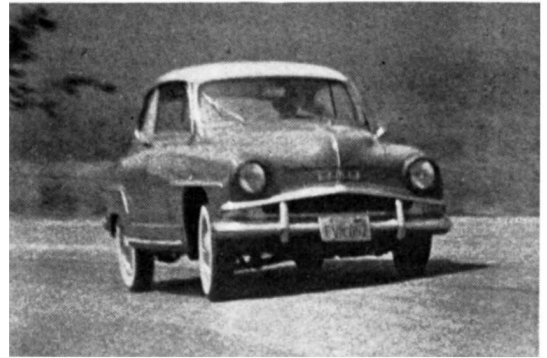
### GENERAL:

Length	162 ins.
Width	61 ins.
Height	63 ins.
Weight, test car	2100 lbs.
Weight distribution, F/R	50.1/49.9
Weight distribution, F/R, with driver and passenger	50.4/49.6
Fuel capacity—U.S. gallons	10

### RATING FACTORS:

Bhp per cu. in.	.61
Bhp per sq. in. piston area	1.80
Torque (lb-ft) per cu. in.	.84
Pounds per bhp — test car	43.8
Piston speed @ 60 mph	1856 fpm
Piston speed @ max bhp	2212 fpm
Brake lining area per ton (test car)	116 sq. ins.

*Simca bores through test curve at an actual 60 mph. Car seems to lean heavily in picture, but actually corners quite flat.*



open road we never had to drop to a lower gear than third; except for getting away from standstill, we used second only for quick departures from slow hairpin turns. In fourth gear, using a two-mile approach to the measured quarter mile, we clocked an easy 82.6 mph and it was obvious that the engine would have gone on revving higher if more space had been available.

It's enlightening to calculate just what the power plant was doing during the speed-in-gears runs. We're told that it develops its maximum bhp at 4500 rpm, at which piston speed is 2212 feet per minute. But it's actually able to deliver far higher revs than that:

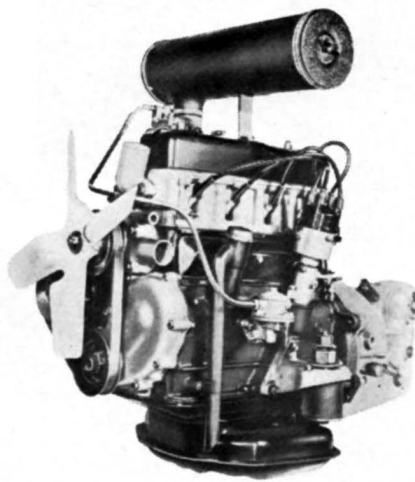
Gear	MPH	RPM	Piston Speed, FPM
I	21	4970	2440
II	40	6000	2946
III	65	6020	2956
IV	82	518	2543

We never did try to locate the 1300 engine's revving limit in actual driving. But twisting it as tight as we did, we found no clatter in the valve gear—which, on one occasion, followed the camshaft obediently out to about 6480 rpm—70 mph in Third. Like many other small, modern four-cylinder power plants, this one is notable for the nearly total lack of vibration that Detroit tells us is "what's wrong with fours." The smoothness doesn't derive from anything radical in the engine's design, but from its use of highly refined conventional principles. The 1300's stiff three-bearing crankshaft has short throws and large journals that overlap each other slightly. The crank is statically and dynamically balanced and a vibration damper is neither fitted nor missed—a good indication that all the reciprocating parts are balanced within very close limits.

Automatic choke and spark advance helped our test car's engine to fire up instantly from cold, and we had no hot-start troubles even in desert heat. The engine never detonated on regular fuel, and it consumed one quart of oil in 1900 miles; the steel-reinforced pistons have four rings.

The Aronde is built for stamina, and proof that it has this is its collection of 38 FIA international records, the longest of them for 100,000 kilometers or 62,138 miles at an average of 64.7 mph. The qualities of the car that impressed Sport Cars Illustrated's test staff even more, though, are its ride and its roadholding and handling qualities. Again,

*Leaving test curve, Aronde seems to drift through broken white line; however, turn was taken wide.*



*The Simca 9 Aronde power plant has over square bore and stroke, and normal 7.2:1 compression.*

*Here test car buzzes along at better than 60 mph on leg of cross country run. Driver fatigue was negligible on road.*



these results from no radical engineering but from the way well-tried principles have been applied in the design of the chassis.

For a car of its dimensions, the Aronde's suspension is massive. The rear semi-elliptic springs, for example, are 42 inches long in the main leaf, have eight leaves each, plus two 5/16 inch overload leaves. And each spring has a 1 3/4 inch double-acting tubular shock absorber. This sounds like truck practice, but the way it's applied in the Simca you get a ride that is soft, but doesn't pitch or roll, and irons out bad irregularities with stern authority. The ride stays the same over the car's entire speed range. It tracks well at top speed, entirely without wander or high-speed shake.

The Aronde chassis has been in production since the middle of 1951. Since that time the company has carried on a steady de-bugging operation, and such original defects as pronounced oversteer and body roll have been eliminated from the present-day Aronde. Fore and aft weight distribution is precisely at the ideal 50-50 point. Understeering tendencies are barely perceptible, and occupants of the car sense no body roll even at cornering speeds that no family sedan has any right to indulge in. The Aronde corners like a first-rate sports-touring car, and it does it so calmly and naturally—so entirely without screaming-tire, leaning-body pyrotechnics, that you often don't realize until you look at the speedometer that you're taking a familiar curve 10 or 15 mph faster than you'd want to in the average family sedan.

The Aronde's steering is light but of the sure kind that makes it a snap to dodge pebbles in the road at high speed. Because of its well balanced handling qualities it can employ an immense steering lock that gives it a small turning circle and outstanding maneuverability. By family-conveyance standards, its brakes are very good. During our ten-step brake performance and fade test only about one inch of pedal travel was lost, fade was moderate and gradual, and there was no tendency toward uneven brake operation.

Our unit-construction test car weighed just 2100 pounds with a full fuel tank. Aluminum is used lavishly throughout the machine — in the cylinder head, transmission and bell housing, various chassis parts, body hardware, external trim, and wheel covers — but the body panels are made of heavy-gauge sheet metal. This and undercoating give the car a solid, well-built feel in spite of its light weight.

*(Continued on page 65)*



*Front running detail. Anti-roll torsion bar is 3/4 inch in diameter. Note massiveness of wishbones for such a light car.*



*Deep upholstery gives excellent, firm support to back and thighs. Note lowness of floor tunnel, and integrated shift lever.*

## Simca-1300

(Continued from page 29)

The finish and interior details of our *Grande Large* model were nicely executed. The designers chose plastic upholstery for side panelling and the bolsters at the tops of the seats, but, where body-breathing is a factor, used coarse-woven fabrics that let the air circulate and give good body traction. The rake of the front-seat backs is easily adjustable by means of set screws. When these seat backs are folded forward an ingenious linkage moves the entire seat ahead to widen the passage for rear-seat entry or exit.

The car's controls are simple, attractive, and except for an out-of-the-way horn ring, handy. Our pillarless hard-top model slipped through the wind silently at high speeds and even with all the windows down had no air turbulence in the front-seat area; passengers in the rear — inevitably — felt the wind at cruising speeds. With windows up the car was quite water-tight, but the rubber seals around the luggage compartment leaked copiously—a defect that could be easily and inexpensively corrected. A high seating position and plenty of glass make for good visibility, but the rear view mirror is too small to take advantage of the broad vista at the rear — another easily remediable defect. The heater-defroster unit is well made and behaved very efficiently at the moderately low temperatures we encountered. Luggage space is good by light car standards.

Prices for the more luxurious *Aronde* models climb steeply once they leave the bread-and-butter car base point. The *Eylsée* four door, with more trim than the basic model, costs 1732 at port of entry, the two door *Grande Large* hard top is \$1949, the chic and luxurious *Coupe de Ville* two-seater is \$2595 and the equally handsome two-place convertible is \$2795. The heater and defroster cost an extra \$47 and if you want whitewall tires (which are hard to avoid getting) you pay another \$20.

But obviously the simplest four-door *De Luxe* model *Aronde* is a superb buy at its port-of-entry price of \$1623. It will outperform anything else in its price class and has spectacular fuel economy. It's larger and roomier than most, is a genuine kick to drive and gives you good passing power at level highway speeds. There's a lot of room for it in the U.S. economy and the demand here already has gone far beyond the current supply.

Griff Borgeson

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