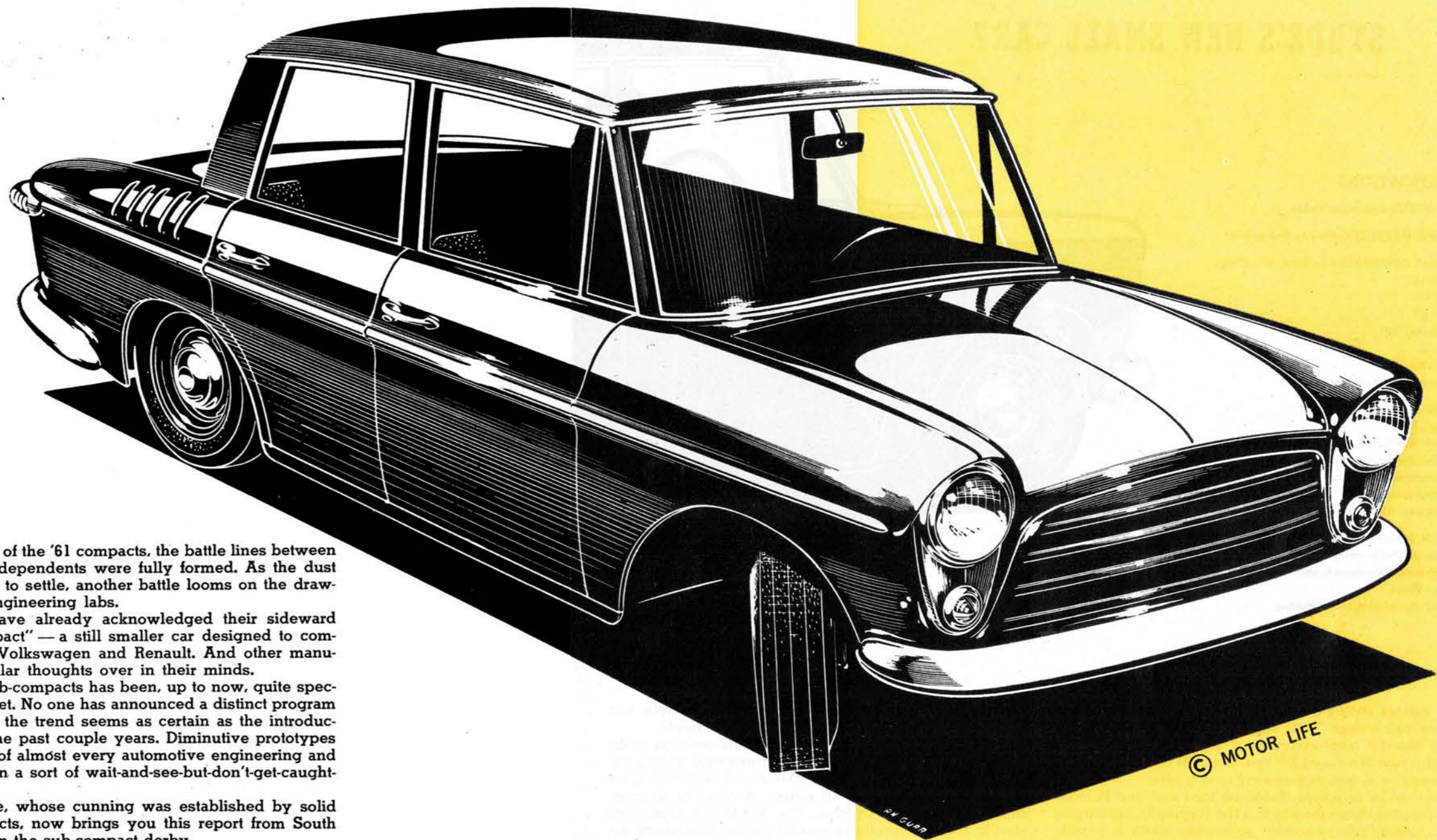


# STUDE'S NEW SMALL CAR?



With the recent unveiling of the '61 compacts, the battle lines between the Big Three and the Independents were fully formed. As the dust of the initial clash begins to settle, another battle looms on the drawing boards and in the engineering labs.

Ford and Chrysler have already acknowledged their sideward glances at the "sub-compact" — a still smaller car designed to compete more directly with Volkswagen and Renault. And other manufacturers are turning similar thoughts over in their minds.

Actual work on the sub-compacts has been, up to now, quite speculative — and highly secret. No one has announced a distinct program for introducing them. But the trend seems as certain as the introduction of the compacts in the past couple years. Diminutive prototypes stand cloaked in corners of almost every automotive engineering and styling center. It has been a sort of wait-and-see-but-don't-get-caught-short game.

MOTOR LIFE'S oracle, whose cunning was established by solid predictions of the compacts, now brings you this report from South Bend on the latest entry in the sub-compact derby.

STUDEBAKER-PACKARD, number-five member of the American Automobile Manufacturer's Association, has a small car *in the works*. It's been an on-again, off-again "secret" affair, but the fact is that S-P has been experimenting and prototyping for several years. Despite recent implications that they have "tabled" this program (for which they had set aside a reported \$25 million), it is not too unlikely that they will start production of their sub-compact sometime in the next two years.

Stude engineers were working with prototypes of "smaller-than-Lark" sedans at least two years before the Lark came out — indicating their serious interest in this field.

Studebaker, like Ford, GM and Chrysler, has excellent European connections. From an engineering standpoint, S-P has access to some of the best: Mercedes-Benz, Auto Union, Porsche and several others. Stude engineers and stylists have

made regular pilgrimages overseas. The South Bend tourists even had some prototypes made up over there, modified them here and changed them to meet standards the American public seems to want in a small car.

The result is a car that's smaller than the smallest of the two domestic compacts — Lark and Rambler American — and just larger than the two best-selling imports — Volkswagen and Renault.

Dauphine and VW have features which S-P feels are needed in their own sub-compact. But S-P also feels they lack performance and the interior roominess demanded for comfort by the average American family. These were prime considerations in designing their new sub-compact.

Studebaker will produce a car not only scaled for the average family but the new offering will be highly suited as a second car. It will do as the Number One car in a pinch.

Neither *small* in the accepted sense nor *compact* in the current mode, the car will be something in between. Thus we call it a *sub-compact*.

Here's how the car stacks up at the moment. If it makes its debut this fall, it will look and be much as our predictions show it. It's more likely, though, to come out as a 1963 model — and in this case it might be changed in minor details. As things stand, this last-minute wait might be wise in view of the almost certain introduction of the small Ford — close to a production reality now. We feel that S-P will wait to see the initial success or failure of the Ford sub-compact because the smaller firm can benefit from the larger's experience. Studebaker, being leaner and less cumbersome in its executive structure, will be able to make last-minute changes many months nearer their deadline. If some feature of the small Ford falls flat, S-P can hastily make sure their sub-

compact doesn't offend the motoring public in the same way.

We can predict that the sub-compact from South Bend will be a four- to five-passenger, aircooled, rear-engined small car with a semi-unitized body bolted to a platform chassis. Initially there will be a single model — a four-door sedan without frills — designed expressly for those who demand and need family comfort and turnpike performance. It will be economical to buy and operate. will have an 85-mph maximum and an all-day cruising speed of 65-70 mph. The car will use the lowest octane fuel and deliver a minimum of 30 mpg.

Under the platform chassis will be a four-wheel independent suspension system. This feature is the direct result of long study and experimenting with a prototype produced for S-P by Porsche more than four years ago. At first, a full torsion bar layout was used, but costs, luggage space and (to a

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continued

## SPECIFICATIONS

**BODY STYLE:** Four-door sedan

**SEATING CAPACITY:** Four to five adults

**OVERALL DIMENSIONS (approx. in inches):**

Length: 160

Width: 63

Height: 57

Wheelbase: 100

Tread: 53

Wheel size: 15

Minimum ground clearance: 6.5

## ENGINE

**Location:** Rear

**Material:** Aluminum with steel sleeves

**Type:** Four-cylinder opposed, aircooled

**Displacement:** 110 cubic inches

**Maximum rpm:** 4000

**Horsepower:** 65-75 hp

## TRANSMISSION

**Type:** In unit with swing-axle

differential; manual shift

**Speeds:** Three

**Material:** Aluminum alloy housing



lesser extent) styling have sold the engineering department on four coil springs. Tests on the proving ground and research into still other experimental designs — both here and abroad — have convinced S-P that four coils can handle every road situation as well as transverse torsion bars.

The Porsche prototype, based on tried and true Porsche principles, has shown the way to a flat (opposed), aluminum-based, four-cylinder, aircooled powerplant which is considerably larger than the engines of the VW and Dauphine. Displacement is around 110 cubic inches, with an output in the 65-75 hp range.

The new sub-compact has an overall size only slightly longer than one of the two most successful imports. Studebaker's car allows as much front legroom as either the VW or Dauphine, *more* rear legroom and headroom (the latter because of the knife-edged greenhouse and the notch-back rear deck), and about three inches more shoulder room because of a little more overall width.

The doors are thin, no more than three inches thick at the most. This, plus a styling devoid of excess "tumblehome," increases shoulder room to about 57 inches. Inside, the seats are fairly low, about midway between what is generally called "chair high" and the very squat squab of some sports cars. Seats are foam-rubber based, upholstered to give the impression of leather, and will be benches — front and rear. If Studebaker's styling and sales promotion departments have their way, the car will offer a fully reclining option. In addition to reclining seats, a radio will be this car's only

optional extra. Heater is standard, and like the VW's will work off the engine fan on a heat-exchange principle.

Stick shift is standard — an automatic transmission probably won't be offered. The lever is floor-mounted, making the front seat a two-adult affair. Dashboard instrumentation *won't* include lights — it's all gauges. Accessories are controlled by push-pull switches. The windshield wipers are electric and will operate in parallel pattern, eliminating the center blind spot.

Overall styling of the sub-compact is completely devoid of fins (by introduction time fins should be passe). Body sheet metal strength and appearance have dictated that the front and rear fenders are an inch or two higher than the corresponding decks. Wide horizontal louvers on the rear deck lid, and slanting louvers on the upper-forward sheet metal of each rear fender panel provide an air inlet to the engine.

A family relationship has been deemed necessary, and this will be accomplished by two simple and functional components. The top of the four-window greenhouse is fairly flat, ending in a knife-edge at the rear. The front of the hood (luggage deck lid) is horizontally fluted — a treatment reminiscent of the rear deck of the Hawk. The fluting at the front of the sub-compact lends rigidity to the metal as well as a certain amount of decoration.

Single headlights are set into the fenders, above the park-turn-signal lights. Flashing turn signals, self-cancelling, are standard equipment.

The windshield and rear window are slightly curved — about the same as in the Hawk. There is a distinct cost-saving possibility that these two expensive pieces of bent glass might be interchangeable. There are vents in the front door windows. The rear door windows roll down only about half-way because of the full fender cutout below.

Weather sealing has been given unusual attention and current plans are to undercoat the car as a standard assembly-line procedure. The narrow rocker panels under the doors may be aluminum — on most cars this is the first part to suffer rust. Bumpers are up to domestic parking standards, with steel as thick as on larger cars. One report has it that the bumpers, also, are interchangeable. It has already been decided that the bumpers should be high enough to meet those of larger, standard-sized cars.

A luggage capacity of at least 12 cubic feet beneath the front hood dictated the use of captive air tires to eliminate the space-wasting spare tire. Luggage room was an important consideration with the S-P people, and by putting the battery in the engine compartment and making the trunk shape as cuboid as possible, they've solved it pretty well. There won't be extra space behind the rear seat, though, as found in the VW.

The heart of the new sub-compact, the engine, has a vertical fan, well shrouded, very similar to the fan on the VW and Porsche. A single carburetor supplies the fuel mixture. The exhaust system, very brief, consists of a unique four-branch manifold feeding directly into an aluminum alloy

muffler and a single, abbreviated tailpipe of fairly large diameter.

The cylinders are deeply finned for cooling. They, too, are of an aluminum alloy, have steel liners, and are individually replaceable. The fuel tank is beneath the front hood in the prototype, but its position might be transferred to the rear, possibly in two tanks inside the rear fenders. The electrical system is 12-volt, and the gas tank will hold about 10 gallons.

To cut costs, the transmission, in unit with the engine and mounted in the rear between the halves of the swing axle, will have three ratios. These are selected to provide good initial acceleration in the first two gears, and comparatively high cruising and top speed — to give the "American performance" specified.

Of other details, the tires are slated to be 5.60x15's. There is a pleasing absence of brightwork — only the bumpers are chromed. Headlight rims and body trim are stainless steel, as are the hubcaps. Overhang is slight. Wheelbase is tentatively set at 100 inches, with a tread of 53 inches.

The Studebaker-Packard sub-compact is small in its outside dimensions. At the same time it has about the same interior roominess as the Rambler American. In shoulder room it equals the Falcon — in its flat floor it emulates the Corvair. Road clearance is good by big car standards: 6.5 inches.

Taken as a whole, this American small car embodies many of the advantages and dimensions of American large cars. It should be an interesting car to drive if the U.S. sub-compact class takes hold. •