CAR and DRIVER

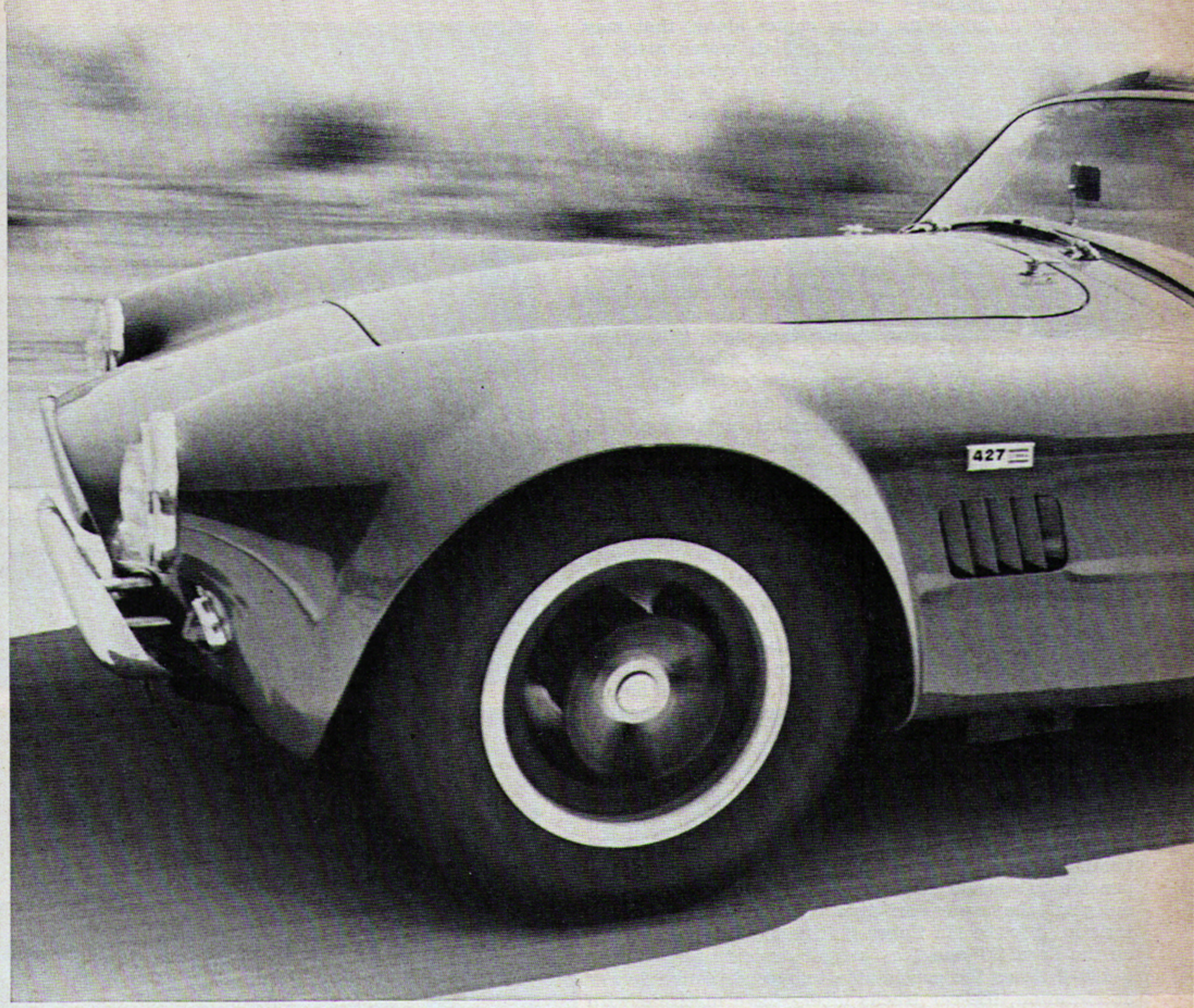
NOVEMBER 1965 • 50 CENTS

BATTLE OF THE 427s
COBRA VS STING RAY

ALL THE 1966 MODELS
GM · FORD · CHRYSLER
Road Tests & Tech Specs

NEW CAR ISSUE

OLDSMOBILE TORONADO
PROTOTYPE FOR THE FUTURE?



CAR and DRIVER ROAD TEST

COBRA 427

Not long ago, the Cobra 427 would have been the hot setup on any race track. Now it's a civilized street machine!

Several years ago, the manufacturers of a posh British grand touring car got a fair amount of mileage out of the claim that their vehicle could accelerate from 0-100 mph and brake to a complete stop in less than 25 seconds.

This was indeed an impressively brief period of time during which all that change of velocity happened, but automotive development has come a long way since then and today perhaps half a dozen production cars of one kind or another can perform on that level. What's more, there are several automobiles being produced in the United States that will break through that arbitrary 25 second barrier like the Germans through the Maginot Line. One is the 427 Sting Ray (see page 49); another, most certainly, is the new 427 Cobra from Shelby American.

Alright, you say, if 25 seconds from 0-100-0 isn't so hot anymore, what the hell is? Twenty seconds?

Forget twenty seconds.

How about 18 seconds?

Not too bad, but the Cobra can do better.

How much better, wise guy?

How about maybe 14.5 seconds? Get that, 14.5 seconds to accelerate to 100 miles an hour and then stop

CONTINUED

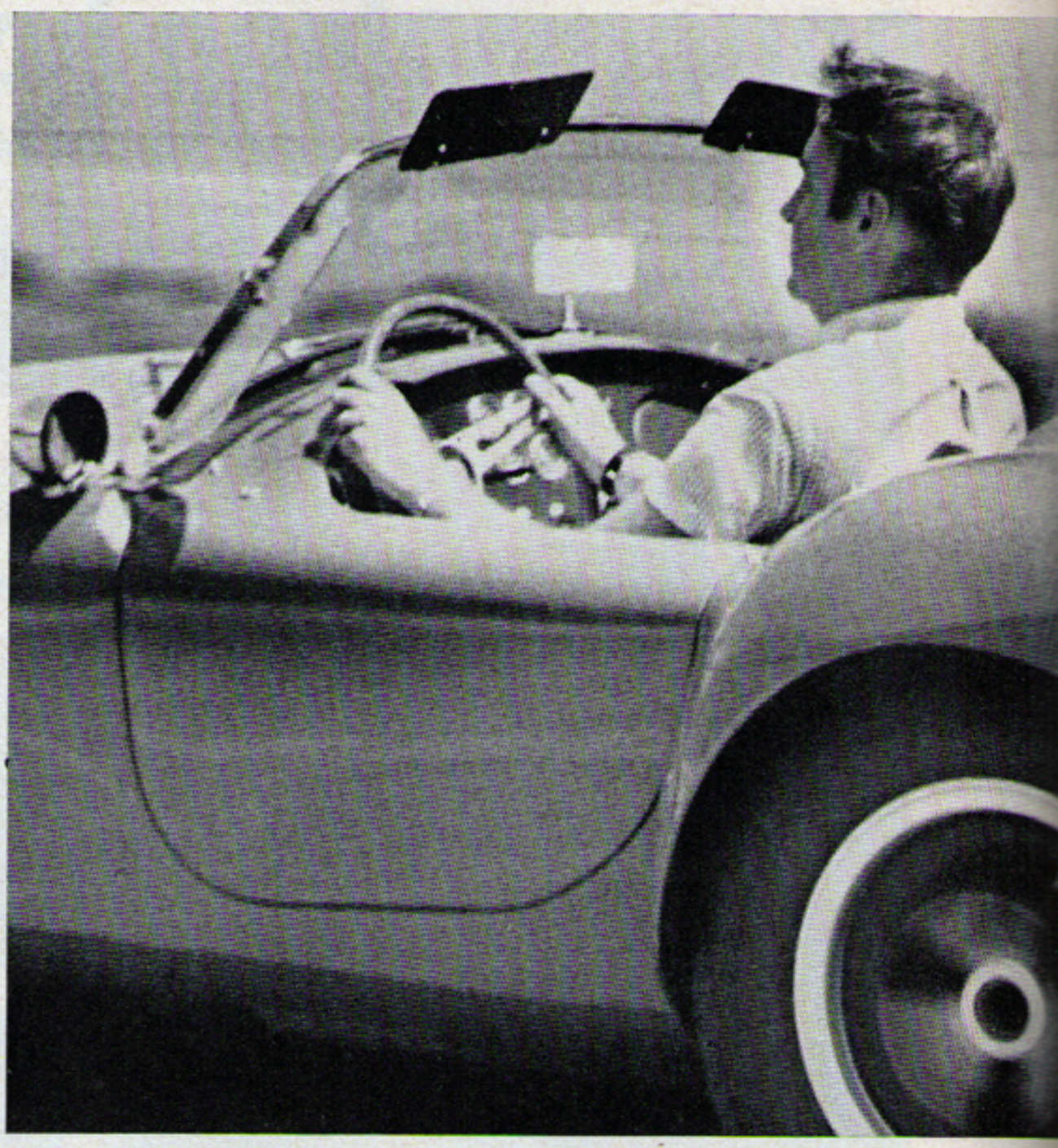
again. Until something better comes along, that may have to stand as some sort of high water mark in performance for cars that are readily available to the general public. That figure, mind you, is obtainable by the average Cobra driver with the regular 8.15 x 15 Goodyear Blue Dot street tires. Cobra test driver Ken Miles has done the job in as little as 13.8 seconds, and who knows how much improvement could be made with racing tires that would nullify some of the tremendous wheel spin?

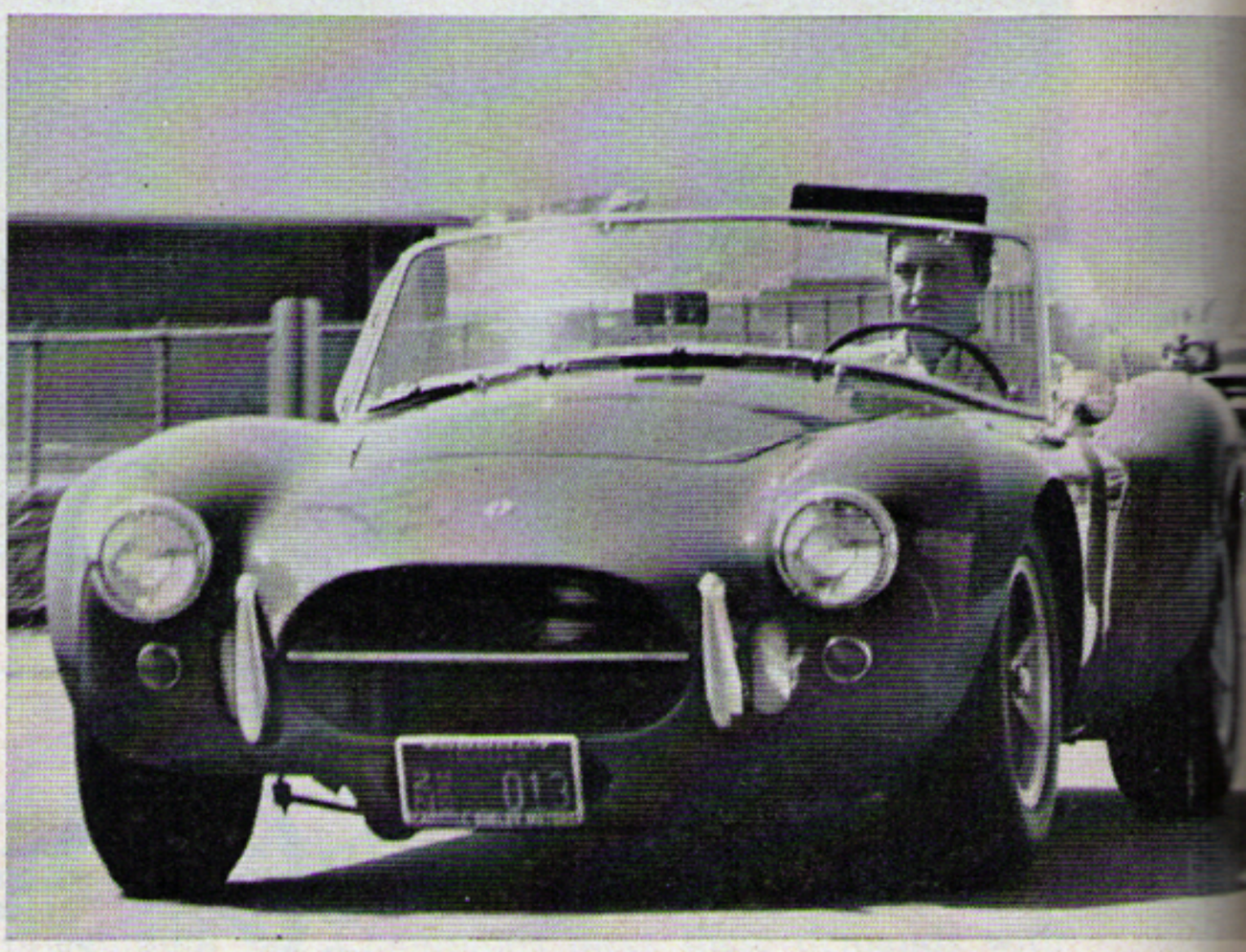
The 427 Cobra does accelerate and decelerate at unbelievable rates, as the above figures should imply. What's more, it is a more civilized machine than the original 289 Cobra that brought the fabulous Shelby organization into being four years ago. It handles properly, thanks to a completely new all-independent suspension system that is traceable to the deft hand of Klaus Arning, the Ford Motor Company genius responsible for the impeccable handling of the Ford GT.

Everyone at Shelby is more than candid about admitting that the handling of the original Cobra was considerably less than optimum. In fact, *C/D* was once informed by a Shelby lieutenant that the old tubular AC chassis had considerably less torsional rigidity than the rail frame of a Model T! Coupled with this flexible frame was an antiquated suspension system, designed in the post-war years, that utilized leaf springs and lower wishbones. One staff member recalls a particularly painful day in southern California when he was outrun down a bumpy orange grove lane by an MG 1100. "There I was, with all that Cobra horsepower, and the rear wheels were bouncing and leaping around so badly that I could barely keep the beast on the road, much less catch up to the MG. It was terrible!"

He should try the same trip in the 427. The new frame, still fabricated at AC Cars in England—but to Shelby specifications—is as stiff as a Redwood trunk and permits the equally-new coil sprung suspension to operate at maximum efficiency. Arning has designed the same anti-dive and anti-squat characteristics into the 427 Cobra that he used so successfully on the Ford GT and they contribute immensely to the 0-100-0 times the car is able to record. Under heavy acceleration, the car tracks nicely for a machine with such power, and its braking manners are magnificent. The massive Girling discs haul the car down from 100 mph-plus speeds like you've suddenly run into a sand bank, and much of this is due to the suspension's anti-dive capability. The only defect we found in the Cobra's acceleration-deceleration performance was a nasty little habit of trying to dog track when the throttle is wide open. The car will break traction to speeds beyond 100 mph and imprudent applications of power will send the tail-end slewing sideways. This apparently is an inbred trait in all front-engine automobiles with power-to-weight ratios in the 6:1 range and no amount of suspension work can eliminate it entirely. Certainly wider-base racing tires will reduce the problem, but the fact remains that the Cobra 427 is not an automobile for novices.

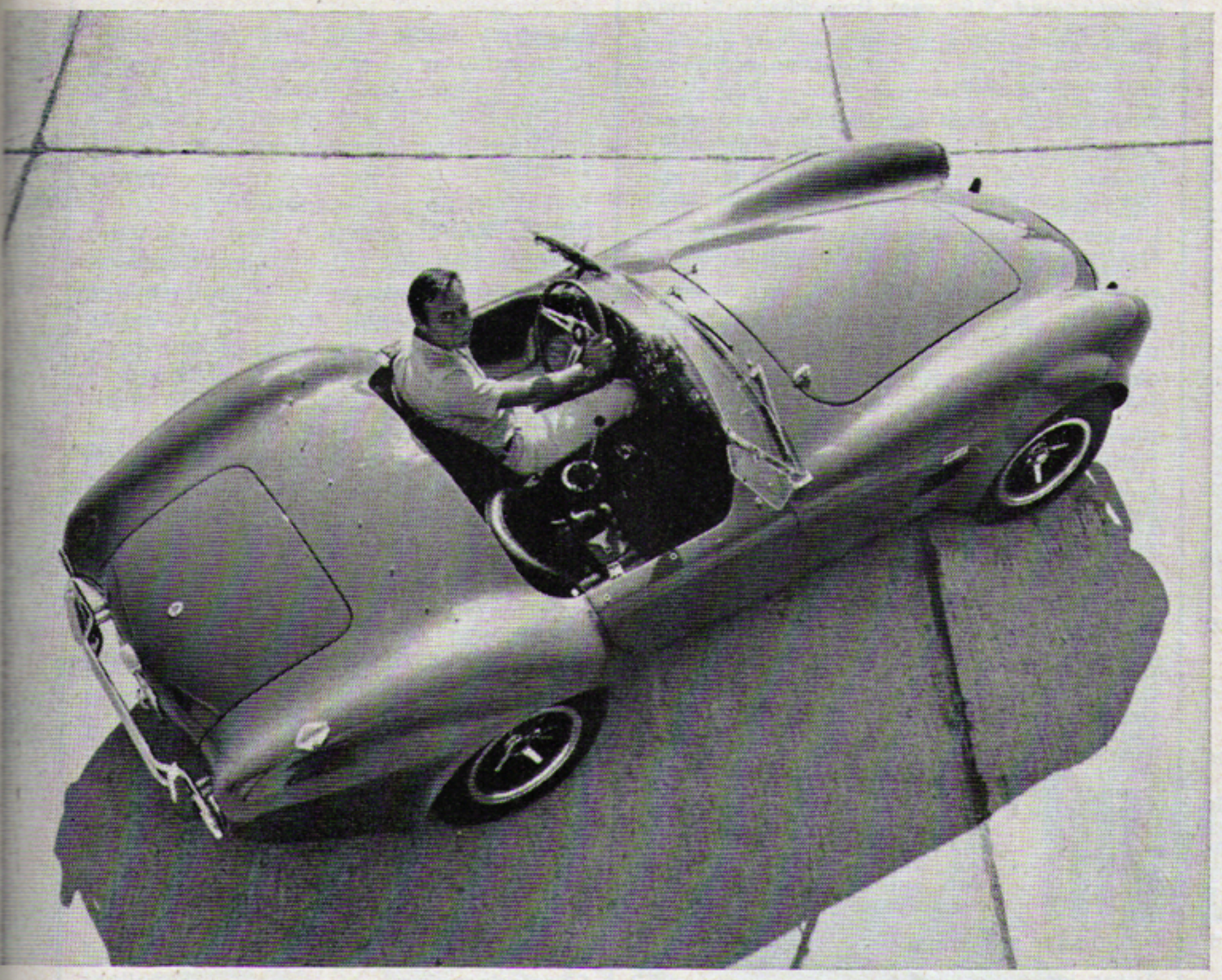
Unlike the 427 Sting Ray, the Cobra has retained its identity as a raw-boned, wind-in-the-face sports car. While the Sting Ray is a completely civilized vehicle, available with everything from multiplex FM radio to air conditioning, the Cobra comes across the counter with the same kind of side curtains that English sports cars have carried since Sir Henry Seagrave first turned an ignition key. Another feature designed to delight the Purist is the hand-operated

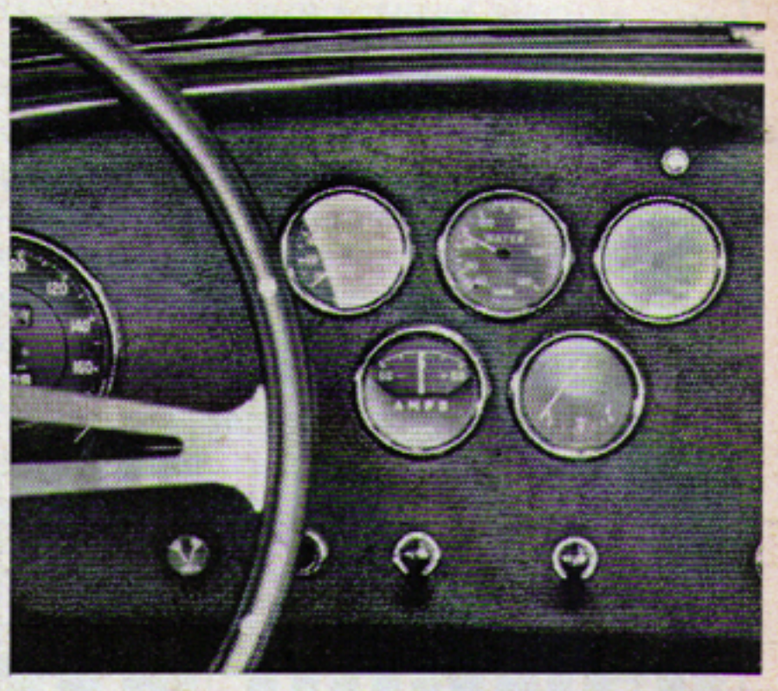


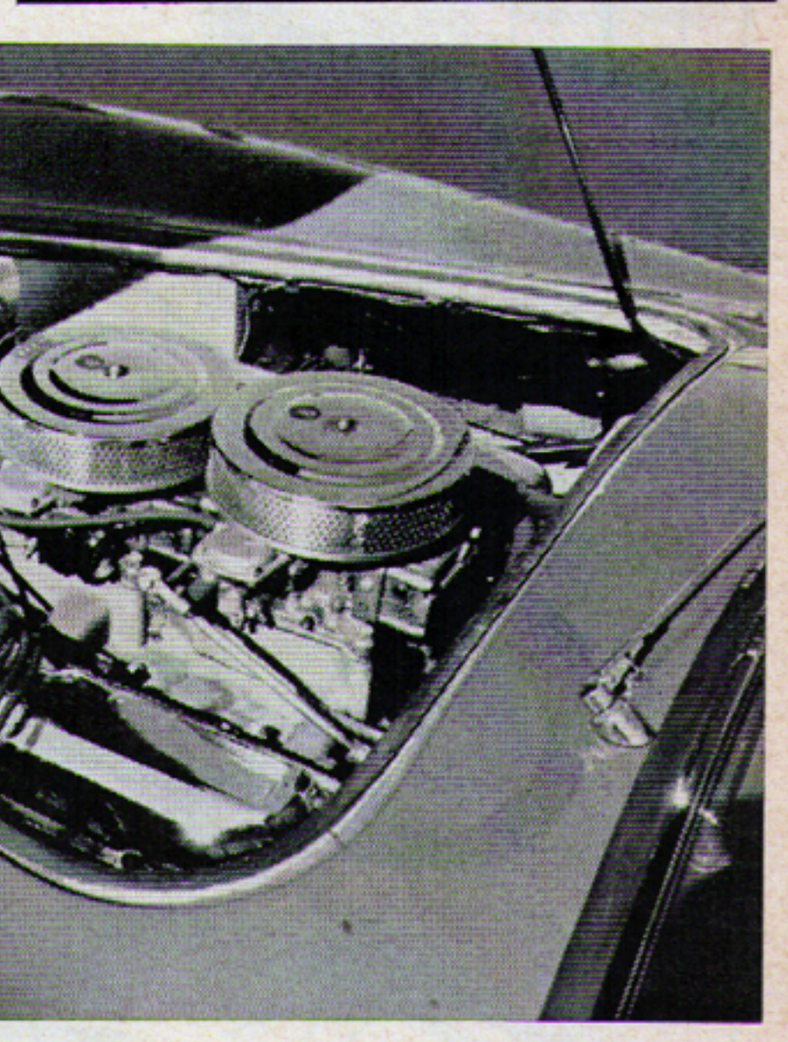


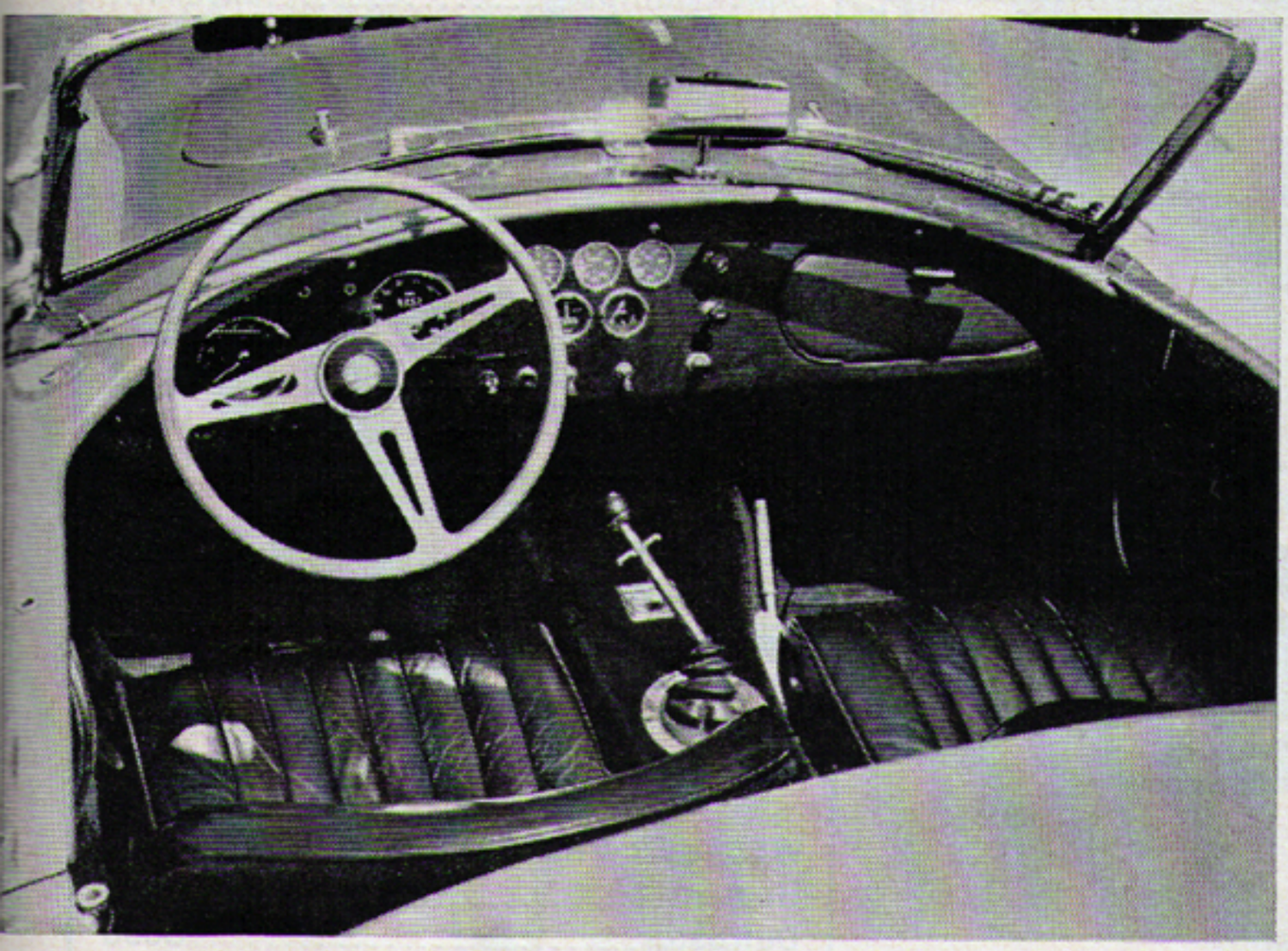
PHOTOGRAPHS: JESSE ALEXANDER

top, the erection of which may rank second only to folding up a road map for sheer, brain-addling complication. Some of the staff complained about these archaic fittings, claiming loudly that any automobile that lays claim to being contemporary should at least have roll-up windows and a power-operated top. Others defended the Cobra, arguing that its raw power, the great brakes and the advanced suspension create a vehicle with such unabashed appeal and excitement that the owner plain won't give a damn about creature comfort. He *might* object if he knew that at any moment an automobile could invade his chill, wind-buffeted world and blow his Cobra into the nearest ditch. But that just simply ain't going to happen. The driver of a 427 Cobra, at the moment this is written, has about as much fear of being passed by









a herd of stampeding Water Buffalo as he does by a faster automobile, and *that* alone can make up for a lot of uncivilized traveling.

We tested the Cobra during the same Los Angeles heat wave that contributed to the tragic race riots and found the big car to be amazingly tractable. It refused to heat up, despite several hours of chuffing along on clogged freeways, and this was a welcome contrast to the old 289s, whose temperature gauges were inclined to rise clean off the scale at anything under maybe a sustained 80 miles an hour. The installation of a thick-core, 20-quart radiator, and a bigger grille opening aid greatly in keeping things cool, but the biggest safeguard against overheating is a small fan mounted ahead of the radiator that is thermostatically actuated whenever the water temperature reaches 70 degrees Centigrade.

Heat is a factor in the cockpit, however. With that great brute of a powerplant thumping away just inches ahead of the firewall, a substantial amount of heat is bound to penetrate even the best insulated flooring, and we found that temperatures around the feet were inclined to get awfully uncomfortable after a few hours running. Shelby American engineers are attempting to correct this problem with the use of more insulation, but we wonder if there simply just isn't too much heat to overcome.

Being about seven inches wider than the old 289, the 427 is a more comfortable car; about that there should be no question. The same basic Cobra layout remains essentially unchanged in the new car, includ-

(Text continued on page 76, Specifications overleaf)

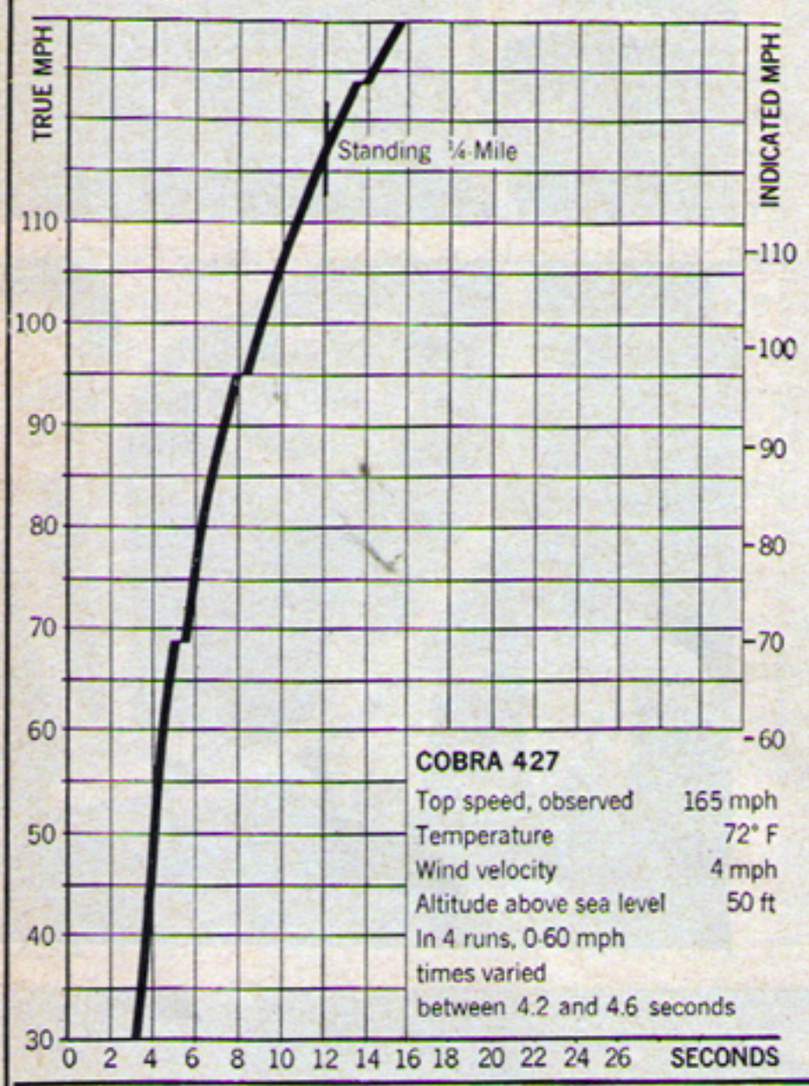
427 COBRA

Manufacturer: Shelby American Inc.
6501 W. Imperial Highway
Los Angeles, California

Price as tested: $7000 (approx.)

ACCELERATION

Zero to	Seconds
30 mph	3.2
40 mph	3.6
50 mph	3.9
60 mph	4.3
70 mph	5.5
80 mph	6.2
90 mph	7.3
100 mph	8.8
Standing ¼-mile	118 mph in 12.2



ENGINE

Water-cooled V-8, cast iron block, 5 main bearings
Bore x stroke....4.24 x 3.78 in, 107 x 96 mm
Displacement....427 cu in, 6998 cc
Compression ratio....10.4 to one
Carburetion....Two 4-bbl Holley
Valve gear. Pushrod-operated overhead valves, mechanical lifters
Power (SAE)....485 bhp @ 6500 rpm
Torque....480 lbs-ft @ 3500 rpm
Specific power output....1.14 bhp per cu in, 69.29 bhp per liter
Usable range of engine speeds..500-7000 rpm
Electrical system...12-volt, 70 amp-hr battery, 55A alternator
Fuel recommended....Premium
Mileage....9-12 mpg
Range on 18-gallon tank....162-216 miles

DRIVE TRAIN

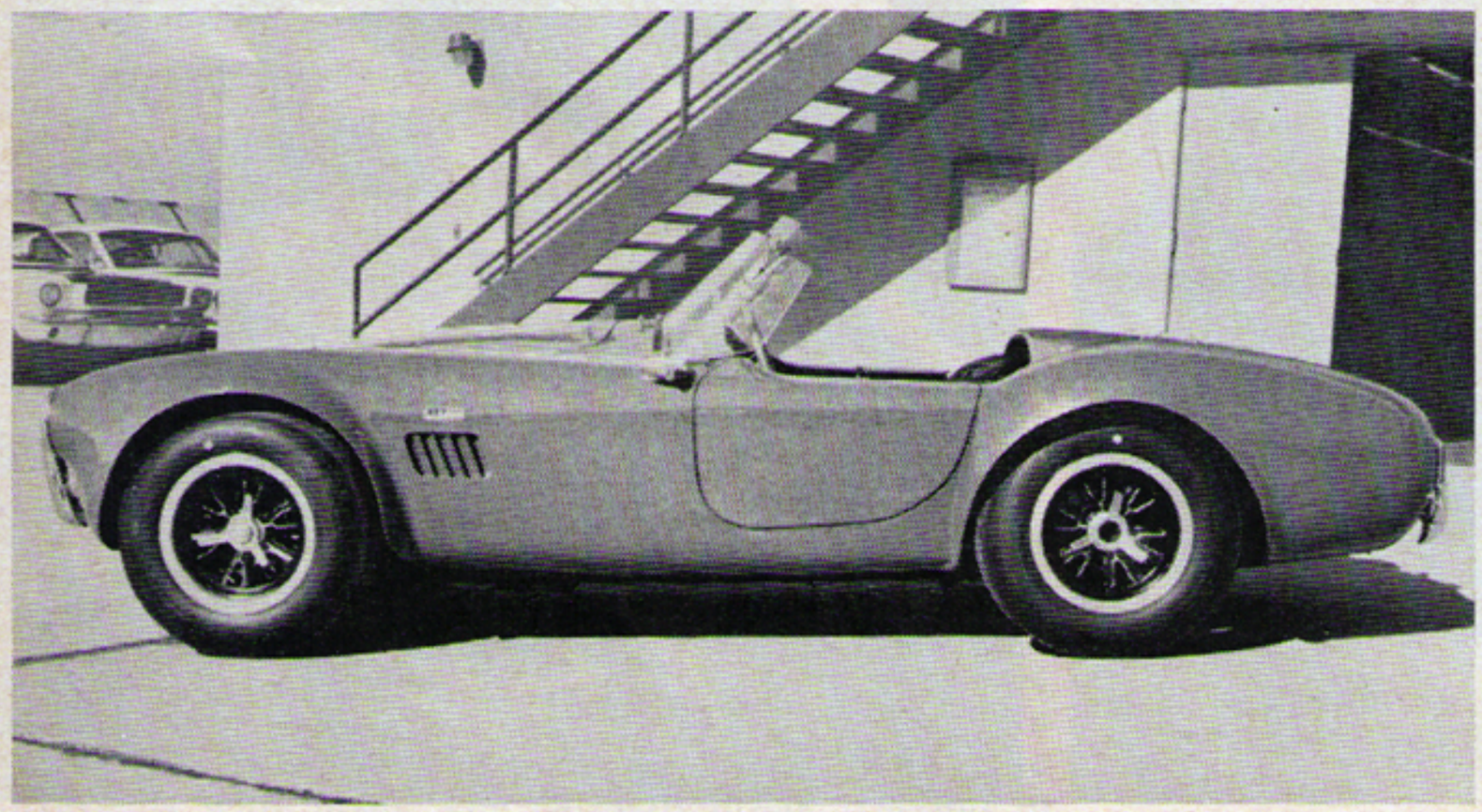
Clutch....11.5-inch single dry plate
Transmission....4-speed, all synchro

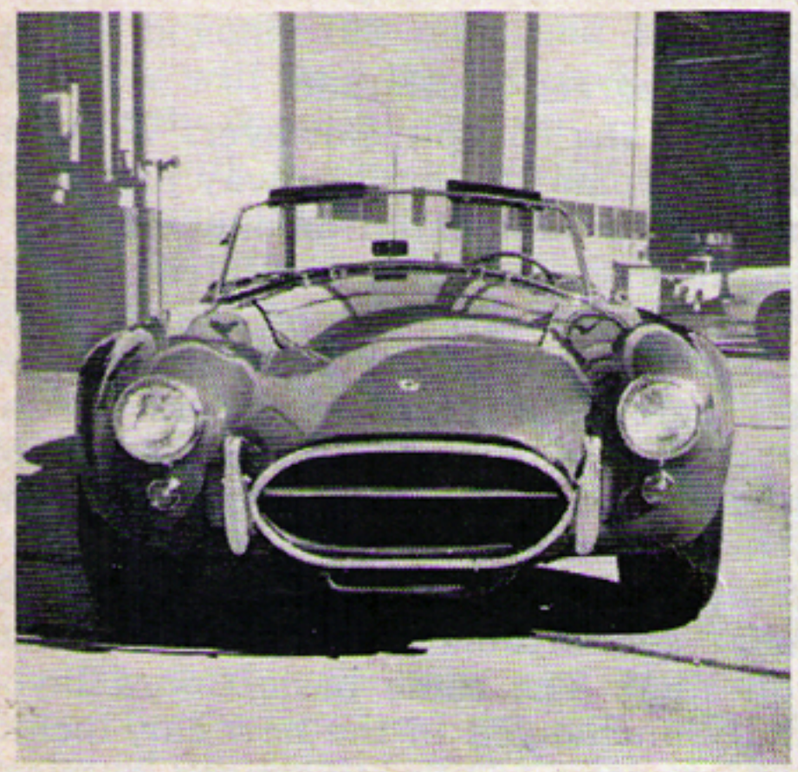
Gear	Ratio	Over-all	mph/1000 rpm	Max mph
Rev	2.32	8.21	-9.86	-69
1st	2.32	8.21	9.86	69
2nd	1.69	5.98	13.54	95
3rd	1.29	4.57	17.71	124
4th	1.00	3.54	22.91	160

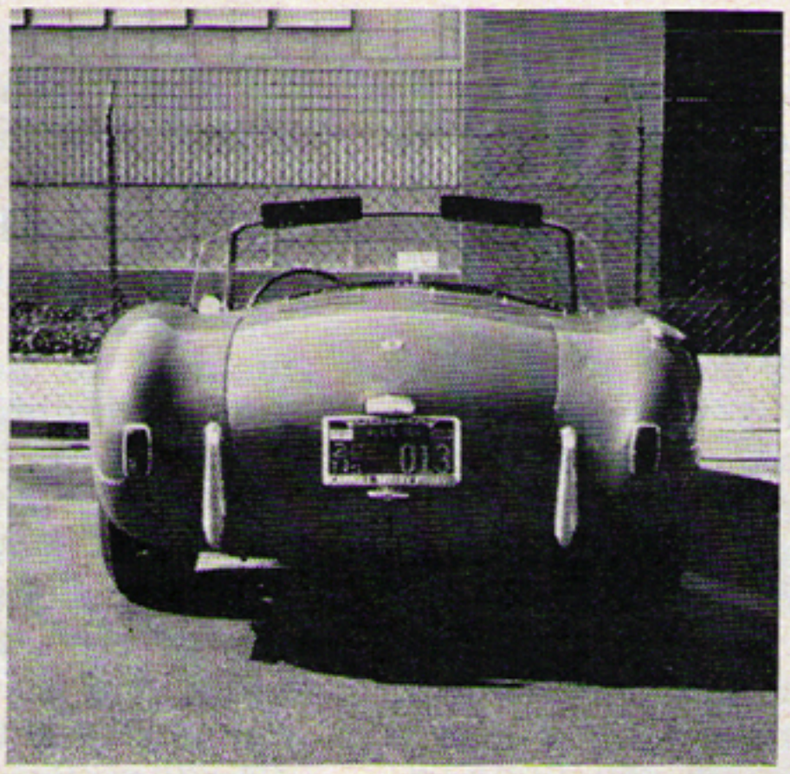
Final drive ratio....3.54 to one

CHASSIS

Wheelbase....90 in
Track....F 56, R 56 in
Length....156 in
Width....68 in
Height....49 in
Ground Clearance....4.35 in
Dry weight....2354 lbs
Curb weight....2529 lbs
Test weight....2890 lbs
Weight distribution front/rear....48/52%
Pounds per bhp (test weight)....5.95
Suspension F: Ind., unequal-length wishbones with anti-dive and anti-squat, coil springs.
R: Ind., unequal-length wishbones with anti-dive and anti-squat, coil springs.
Brakes....discs, 11.63-in front, 10.75-in rear, 580 sq in swept area
Steering....Rack and pinion
Turns, lock to lock....2.5
Turning circle....36 ft
Tires....8.15 x 15 Goodyear Blue Dot
Wheels....7½ x 15 Cast alloy







CHECK LIST

ENGINE

Starting	Good
Response	Excellent
Noise	Good
Vibration	Good

DRIVE TRAIN

Clutch action	Excellent
Transmission linkage	Excellent
Synchromesh action	Excellent
Power-to-ground transmission	Good

BRAKES

Response	Excellent
Pedal pressure	Good
Fade resistance	Excellent
Smoothness	Excellent
Directional stability	Excellent

STEERING

Response	Good
Accuracy	Good
Feedback	Good
Road feel	Good

SUSPENSION

Harshness control	Good
Roll stiffness	Excellent
Tracking	Fair
Pitch control	Good
Shock damping	Excellent

CONTROLS

Location	Good
Relationship	Good
Small controls	Good

INTERIOR

Visibility	Excellent
Instrumentation	Good
Lighting	Good
Entry/exit	Good
Front seating comfort	Good
Front seating room	Good
Rear seating comfort	—
Rear seating room	—
Storage space	Fair
Wind noise	Fair
Road noise	Fair

WEATHER PROTECTION

Heater	Good
Defroster	Good
Ventilation	Poor
Weather sealing	Good
Windshield wiper action	Good

QUALITY CONTROLS

Materials, exterior	Good
Materials, interior	Good
Exterior finish	Good
Interior finish	Good
Hardware and trim	Good

GENERAL

Service accessibility	Excellent
Luggage space	Poor
Bumper protection	Poor
Exterior lighting	Good
Resistance to crosswinds	Good

ing those hilariously antique metal brake and clutch pedals with the art nouveau "AC" emblem, but everything is simply a bit roomier. The seats are deep, comfortable leather-covered buckets that would accommodate even Goose Tatum without great difficulty. We found that a six-footer sticks a good distance up over the doors, but he's still well protected by the windshield and any vulnerability he might feel is purely psychological. The steering wheel is perfectly positioned, though the shift lever comes out of the tunnel about three inches too far aft to be described as ideal. Although this causes no real upset, a reasonably tall driver will find that he has to bend his elbow as if he was getting ready to let fly with a bowling ball whenever he wants to engage first gear.

For a car that lays valid claim to being the fastest production machine in history, the 427 Cobra is amazingly simple. Its powerplant is the standard big Ford of the type that be purchased in any Galaxie at any local dealership. "It's a big cooking engine, with a rather peaky torque curve that produces a great horsepower reading for the customer and is ideal for flexible road driving. But we tune the competition 427s much differently, with a flatter curve," says Ken Miles.

One might expect a Cobra with an engine displacing 427 cubic inches to be an absolute beast on the street. It is utterly to the contrary, with a positively placid disposition at low speeds. This faked us out completely because we expected to find a machine with a vicious, bear-trap clutch and an engine that idled something like a Double-A fuel dragster. We found the 11.5 inch Ford clutch to be no more challenging than a normal domestic unit and the engine ticked off a 700-rpm idle with style and grace. In fact, the smoothness of the Cobra at low speeds completely belies its breathtaking performance, and only when the throttle is cracked does the driver realize the reservoir of power is practically a bottomless pit. A top speed of 165 mph is possible with the car's standard 3.54:1 final drive ratio, and that should be sufficient for travel on any thoroughfare except the Mulsanne Straight.

Like the engine, the transmission is a standard Ford four-speed unit that operates like all the other domestic all-synchros on the market today. Lest there be any misunderstanding, that means we love it.

The 427 Cobra is bulkier looking than its forerunner, and if anything, looks meaner. It utilizes the same wild fender flares that first appeared on the 289 racing versions, and based on pure subjectivity, we think the 427 Cobra is maybe the toughest looking car on the road.

Everybody knows wire wheels are out and Shelby American is supplying the 427 with Halibrand knock-off, magnesium wheels as standard equipment. They are specially fabricated for the car and are painted black, save for a polished rim and highlights around the air slots. It is possible that special Shelby-manufactured magnesium wheels will replace the Halibrands later on in the year, but the latter will remain as an option throughout the expected production run of about 200 automobiles.

Nearly a year has passed since the 427 Cobra was announced, and skeptics can still be found who will tell you there ain't no such thing as a production 427 Cobra. This is nonsense. There were at least 50 of the machines at the Shelby plant when we ran our test and more were arriving from England on a daily basis. The new Cobra is a reality and only approximately $7000 cash and the insatiable desire to own the fastest car in four counties stands between you and owning one. If you can scrape up the dough, we recommend that you take the plunge. Like they say, it'll never hurt you. Or at least it shouldn't. **C/D**