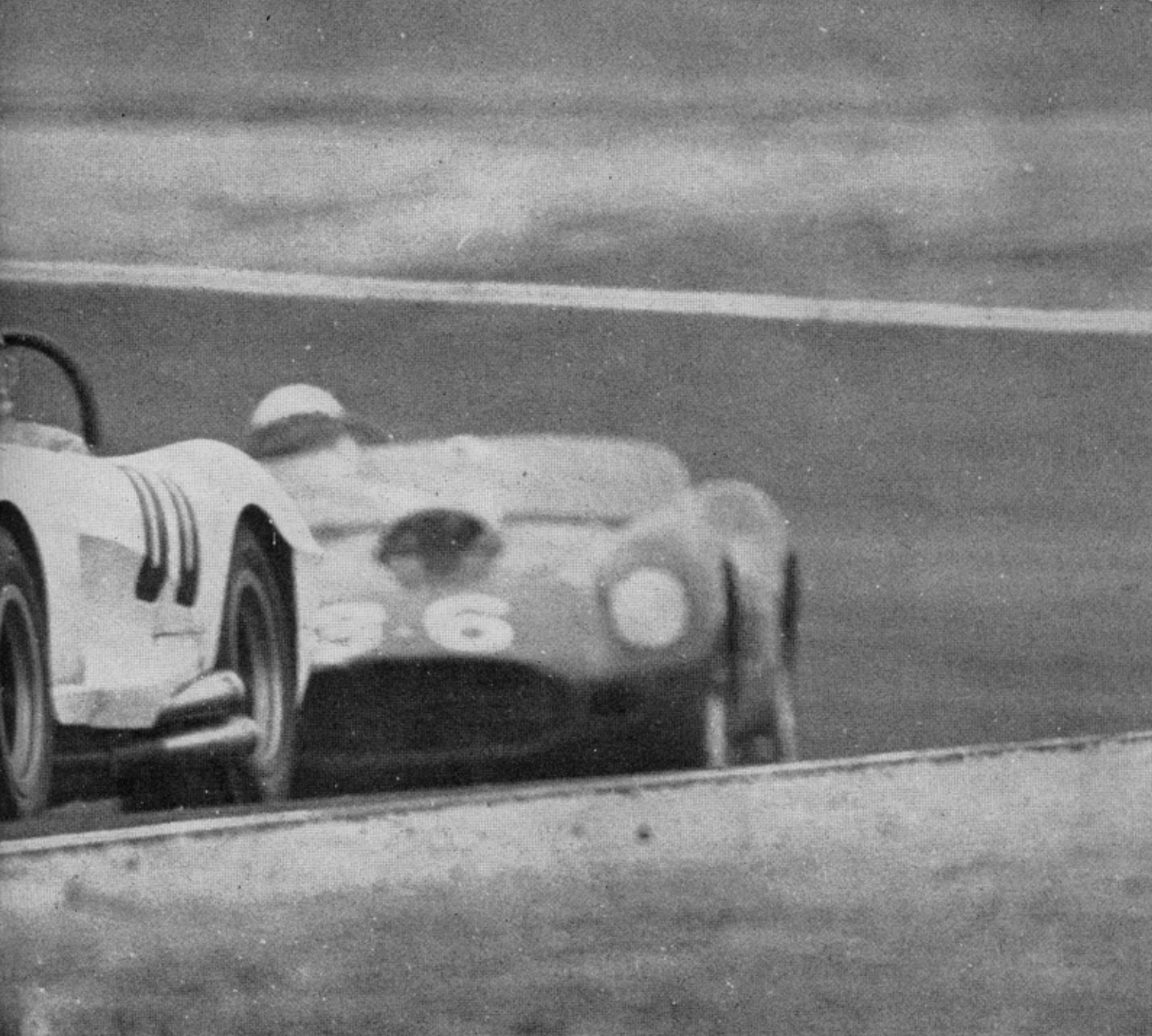




*TECHNICAL REPORT BY PETE BIRO:*

*A Very Special*

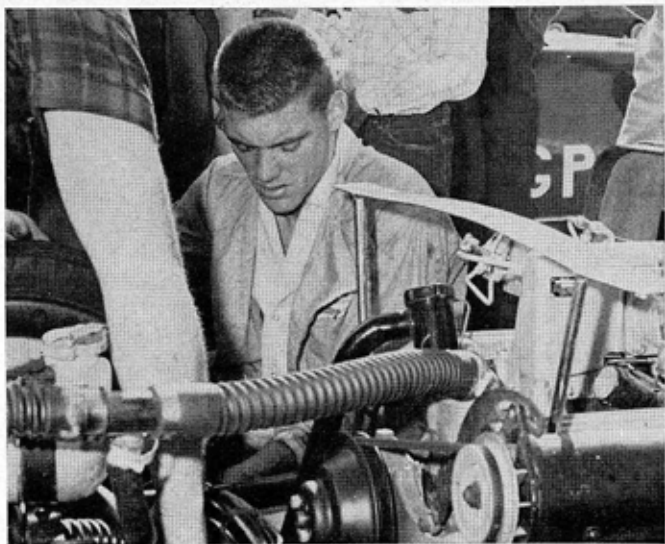
# **CORVETTE SPECIAL**



*Many people have had the same thoughts: If only the Corvette weighed a thousand or so pounds less . . .*

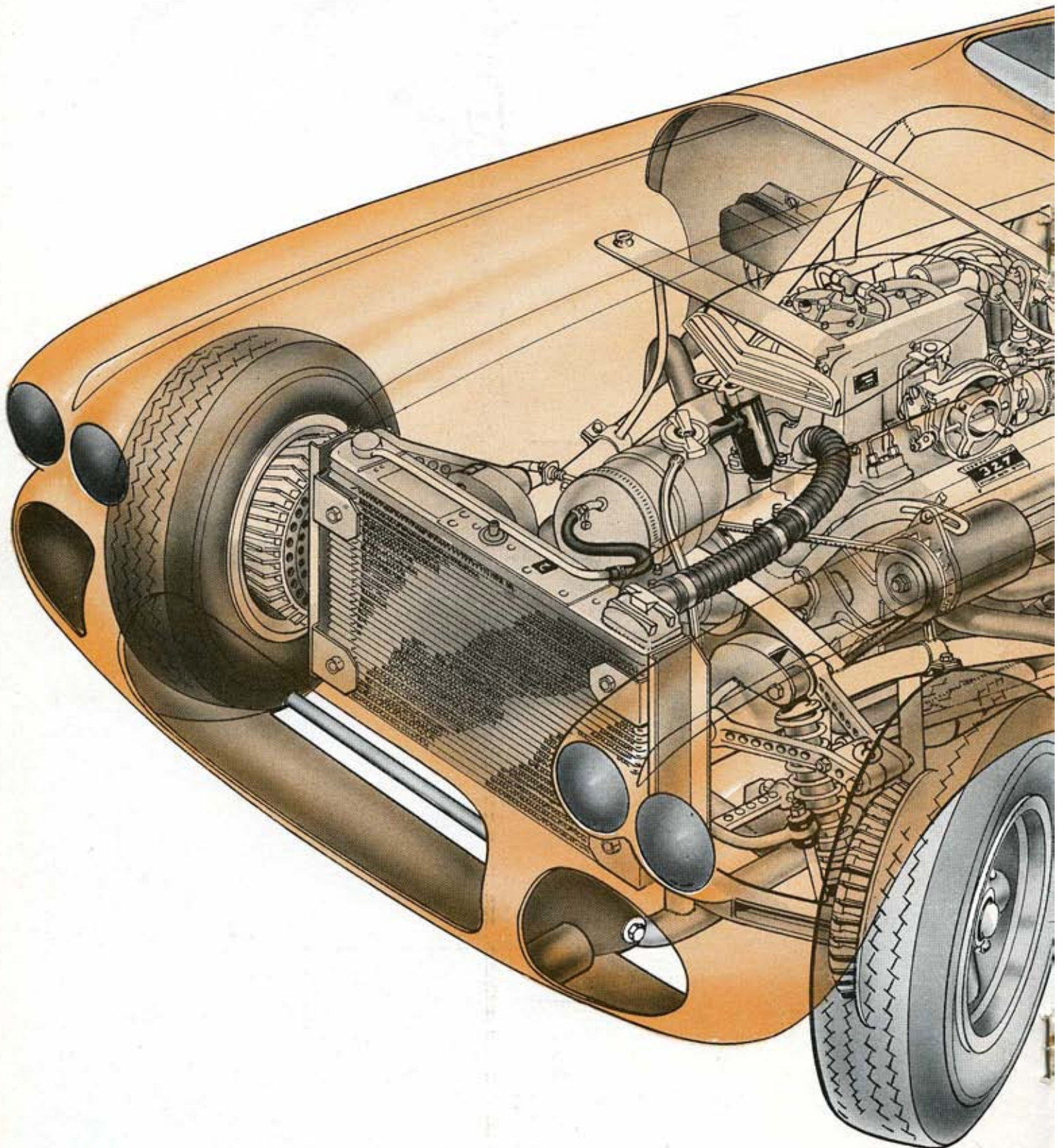
**W**ATCHING DAVE MacDONALD cross the finish line at Cotati in First place, ahead of some of the finest imported and home-built machinery running on the West Coast, was his sponsor and car owner, Jim Simpson. Simpson was having a ball. "There goes my house!" said Simpson, "I was all set to build a house, but instead I decided to go racing and build a car. If I had the decision to make again, it would be the same — the car, instead of a house."

Pretty enthusiastic words, wouldn't you say? Simpson has reason to be enthusiastic. Take the hottest American engine in racing today, the new 327-inch 1962 Corvette, put it into a chassis by Max Balchowsky, drape it with a body out of Detroit styling studios and you'd be feeling pretty good, too. Simpson has been sponsoring MacDonald throughout his meteoric career, first helping him with his ride in  
*(continued on p. 44)*

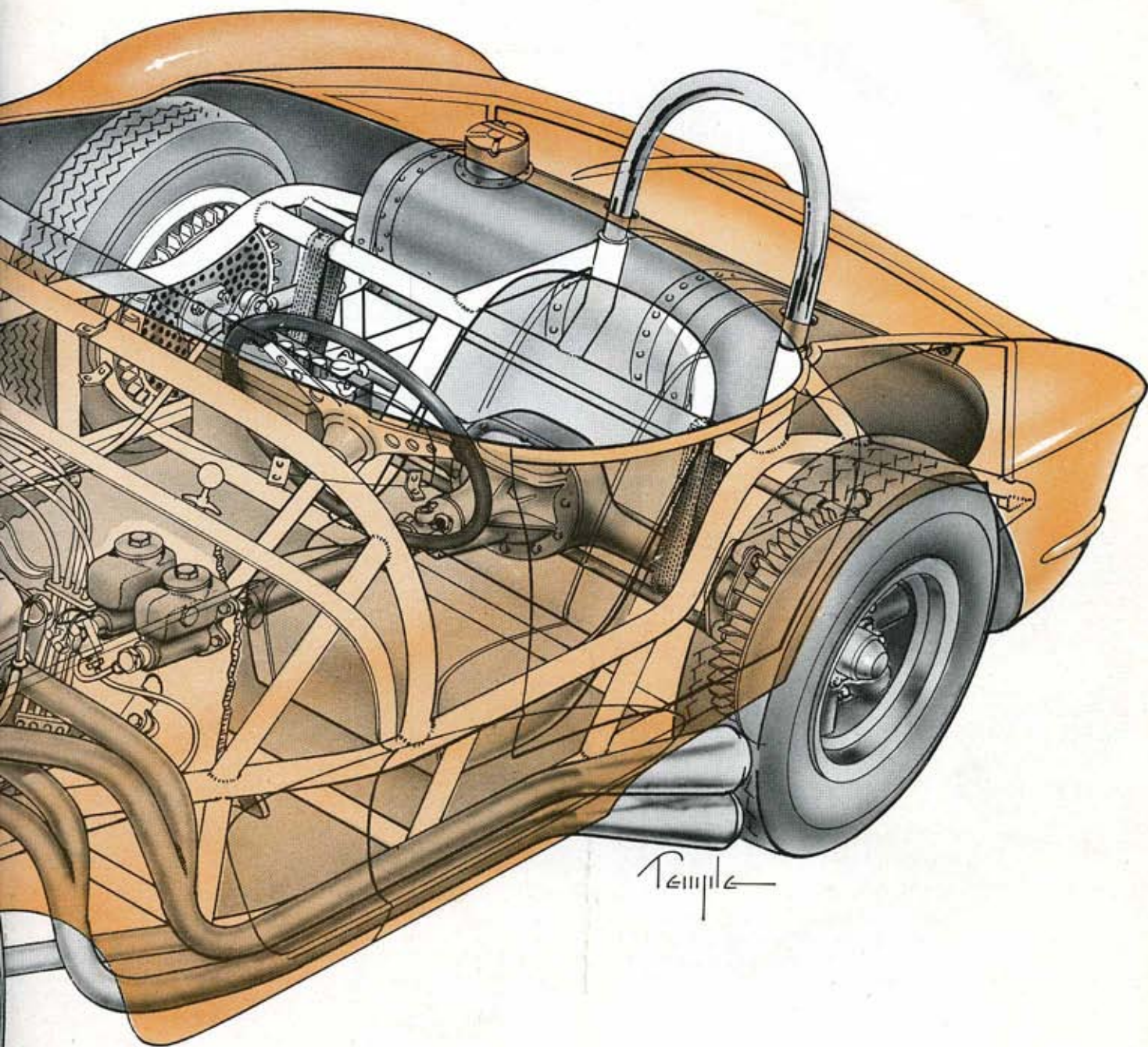


*Hot . . . with both wrench and right foot, Dave MacDonald handles mechanical and driving chores of Jim Simpson's car.*







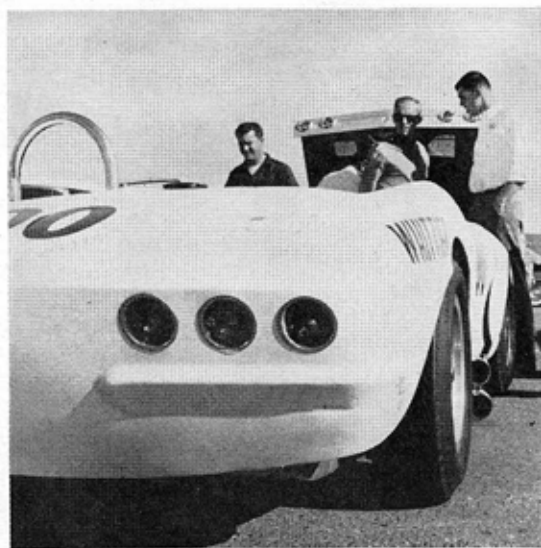


# CORVETTE SPECIAL

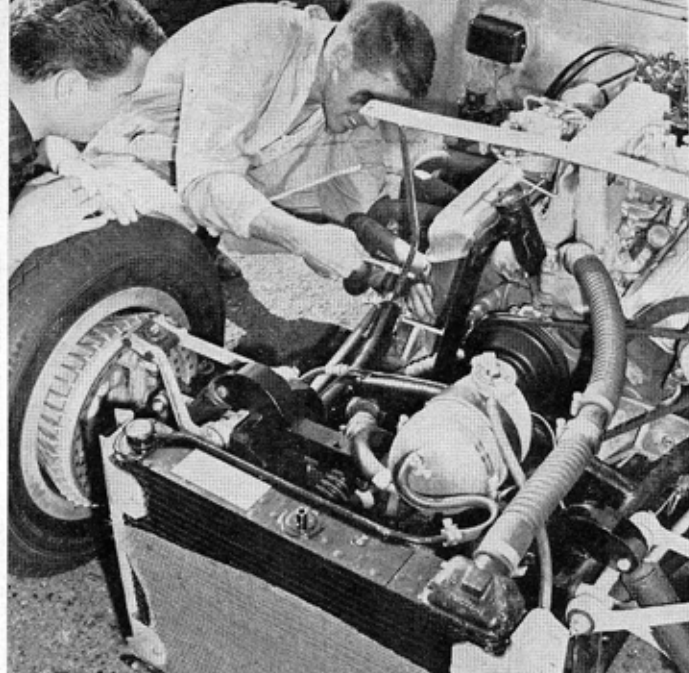




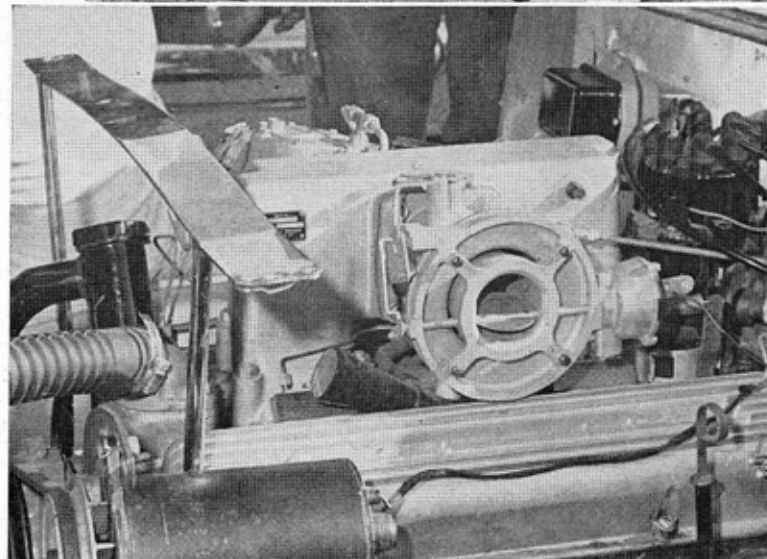
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1.—The special, sponsored by Sorenson Chevy, blasts through turn at Cotati — first finish, first win.

2.—Fiberglass body was made from mold lifted off a '61 Corvette but is many pounds lighter than stock.

3.—Based on an Old Yaller Mk IV frame, the car has torsion-bar suspension with Jaguar and Morris parts.

4.—“Loosened-up” Chevy engine carries original fuel-injection. Crew feels the brute has power to spare.

## CORVETTE SPECIAL (continued)

consecutive wins. After a phenomenal domination of production car racing, they initially decided to race the Corvette in the modified contests to see how they could do against all-out racing machinery. Dave feels a Corvette is just as fast through the turns as the modified cars but the stock Corvette's big drawback, its weight of 3000 pounds, makes it tough to out-brake the lighter modifieds.

Their very next idea was what you see on these pages — a car that looks like a Corvette, a car with Corvette power, a car that outruns, out-stops and outperforms a real Corvette in every department.

From chalk marks on Balchowsky's floor to the win at Cotati took just two and one-half months. The chassis is basically the same as the Old Yaller Mk IV, as pictured in the July 1961 issue of SCG, but from that point on there is little resemblance.

The engine is the very latest 327 cubic inch Corvette powerplant out of Detroit. MacDonald modifications are minor, practically non-existent. Dave, from experience, found the Corvette performs better, and is far more reliable, if you leave it stock — stock valves, pistons, rods, crank, etc. All Dave has done, aside from having everything balanced, is to polish the combustion chambers.

One of the tricks in aiding reliability is in the way Dave sets up the piston clearance — he calls it “no clearance.” What he does is knurl the pistons (stockers) and practically

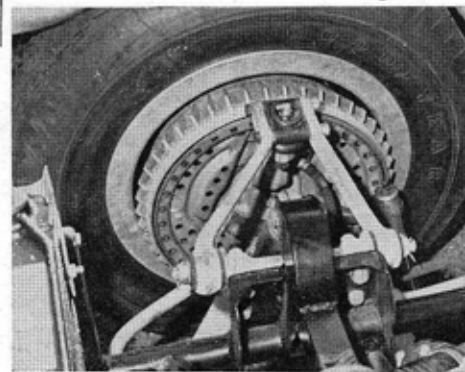
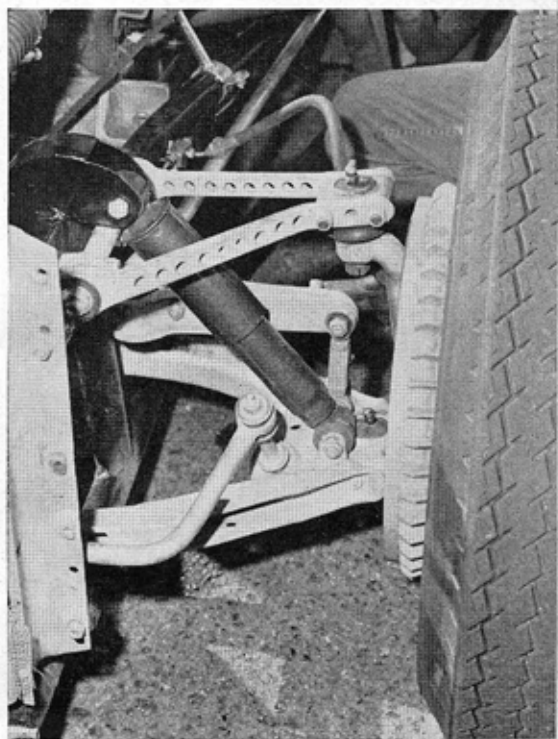
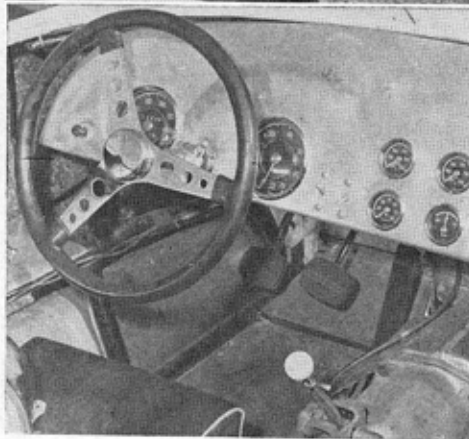
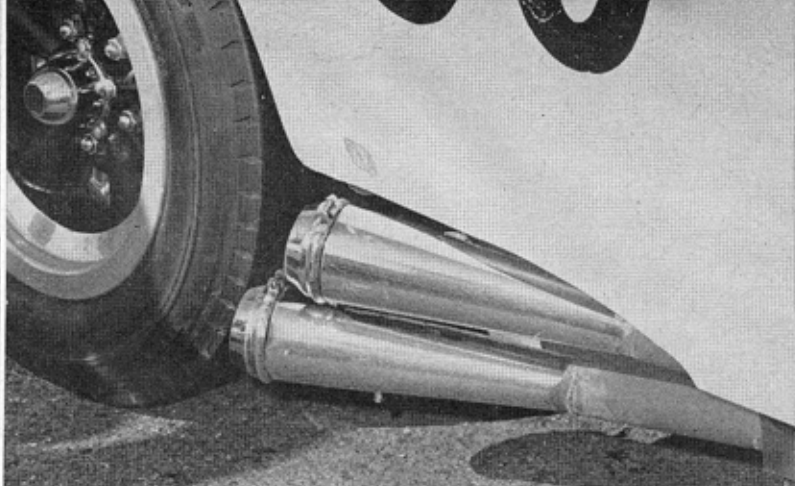
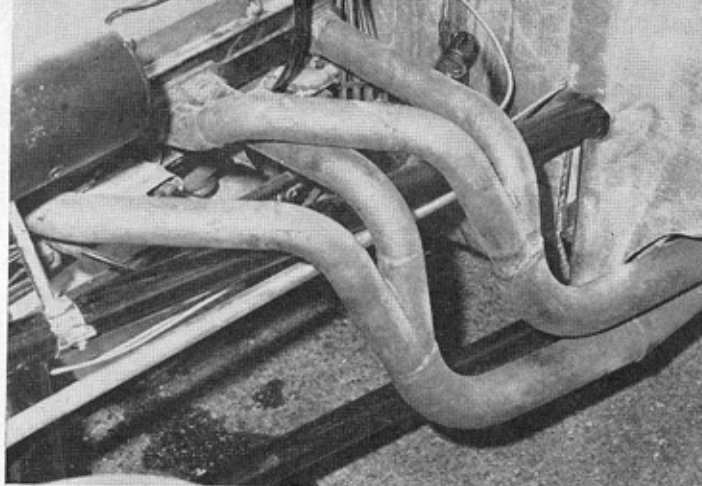
pound them into the bore with a hammer. “After a couple of laps the knurl wears off, they run right in, making their own clearance.”

When asked why he doesn't go farther with the engine, he stated, “We've actually got more power than we need right now. Engine response couldn't be better... and traction is great.”

One modification, though, not directly to the engine but a great aid to performance, is an experimental set of reverse cones at the exhaust ends. It was Dave's idea to use them on a car and he had them made up in a motorcycle shop. Completing the exhaust system are Jardine Headers, which, with their cross-over design (see accompanying photos), offer the least restriction to a good exhaust flow, by alternating exhaust pulses.

For safety reasons an aluminum Weber flywheel, weighing 14 pounds, is used. The gearbox is a standard four-speed Corvette, which originally transferred the 360 (plus) horsepower to a Studebaker rear-end.

Body lines are a direct descendant from the Corvette. Only the size and weight has been changed. With brackets, mounts and hardware the entire body tips the scales at 85 pounds. The glass-fiber material is  $\frac{1}{16}$ th of an inch thick. The overall length has been reduced from 176.7 inches to 160 inches, width is five inches narrower, at 65.4 inches, and height has been reduced four inches, from 52.2 to 48.2. The body itself was taken from a mold of Jim Simpson's



5.—Exhaust headers loop over frame.

6.—Cycle reverse-cones help scavenge.

7.—Flat instrument panel gives away the machine's non-production origin.

8.—Goodyear tires, Amer. Racing's mag wheels help the unsprung-weight factor.

9.—Buick finned-aluminum brake drums.

10.—Pontiac, Jag, & Morris parts shown.

Corvette and the glass-work was done by Jim and Dave, along with much help by Jim Burrel.

Front suspension, like previous Balchowsky work, comprises many stock items. It has unequal length wishbones, the upper members being Jaguar, well-lightened, the lowers are stamped Pontiac units. Springing is by Morris-Minor torsion bar. Shocks are Gabriel adjustables. The torsion bars run parallel to the frame rails and are fully adjustable. Unlike Max's Jaguar disc-braked Mk IV, the front brakes are 11-inch Pontiac drums, with aluminum fins. Twelve-inch Buick Alfans supply the stopping power at the rear. The backing plates, front and rear, are liberally drilled to reduce unsprung weight and to aid cooling.

An inch longer than the Mk IV, the Corvette-powered charger has a 92-inch wheelbase. Formerly the live rear axle was Studebaker, with rear stabilization by leading arms. These were connected to Morris torsion bars, mounted transversely, providing rear springing. Tubular Gabriel shocks were mounted at as near vertical as possible. Lateral location was by Panhard bar.

The Studebaker-rear-end has recently been swapped for a similar unit of Chevy II derivation, that has the advantage of being both lighter and stronger. Load-leveler springs have been adapted up front to stiffen this section. Aside from considerable shake-down problems, such as re-welding brackets, etc., the crew has found it necessary to change Max's "set 'em up loose" method of anchoring his

suspension components. The car's tendency to wallow, especially in the tighter corners, has found MacDonald in some ticklish situations already. Both Simpson and Dave feel that considerably more development can and will be accomplished in the near future, but meanwhile they have a basically potent machine to compete with, and the refinements can be made as they go along. The frame is rugged and its weight of 95 pounds is far from a handicap.

Getting back to performance — at Riverside, first time in the car, Dave got his lap times down to about 2:07. "I only pushed it on the straight. Until I really get the feel of it I don't want to go hard through the turns. We were running 3:30 x 15's, taching 6700 to 6800 on the straight."

At Cotati, Dave reached 116 mph from the starting line to the timing lights, a distance of about 1000 feet.

"Should do about 130 in the quarter, with the right gears," stated Dave.

During the race at Cotati, Dave went through the traps at better than 140 mph.

"I was just getting on the brakes for Turn One, when I went through the timing lights."

The next time you see what you think is a Corvette out-hauling the latest from Modena, you'd better take a closer look. And if you see the number "00" you'll know what you're looking at — Dave MacDonald's "beauty-is-only-skin-deep" Corvette. It weighs 1750 pounds wet, on the grid; it goes like a tiger, and it should be able to run all day. It has. Fast.