283-327 Chevelle Owners:

BOLT IN A 'SEMI-HEMI' AND WAIL

Here's the low-down on a low-budget 396-427 super swap for Chevy's popular middleweight

BY ALEX WALORDY

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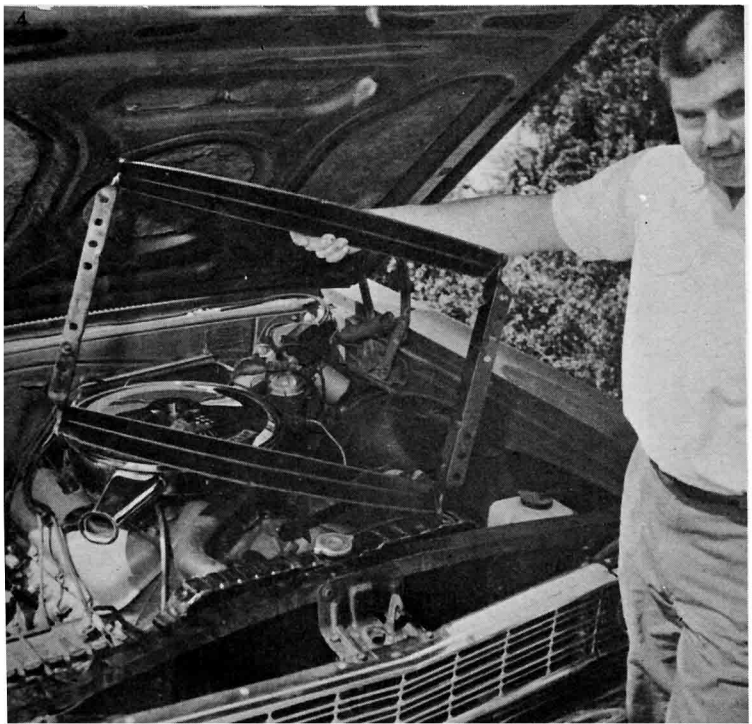

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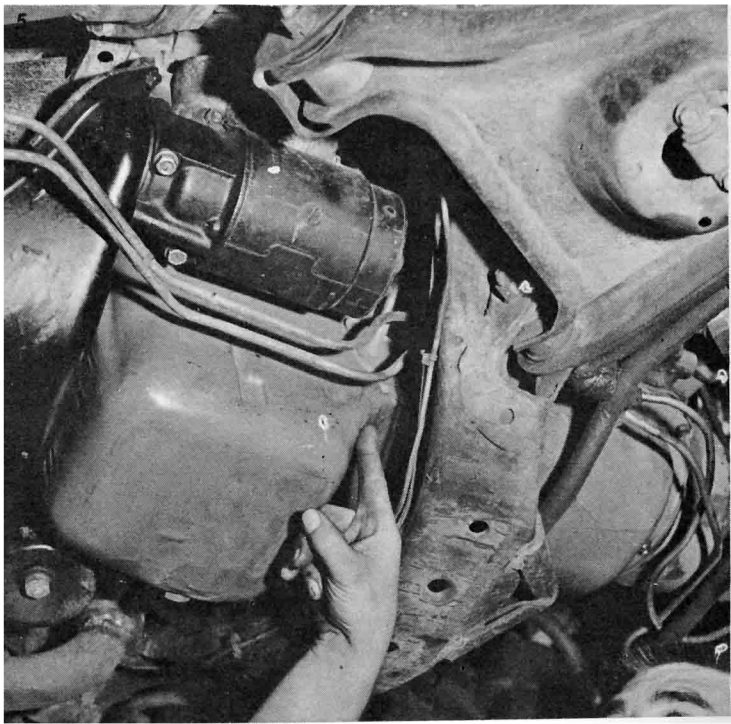

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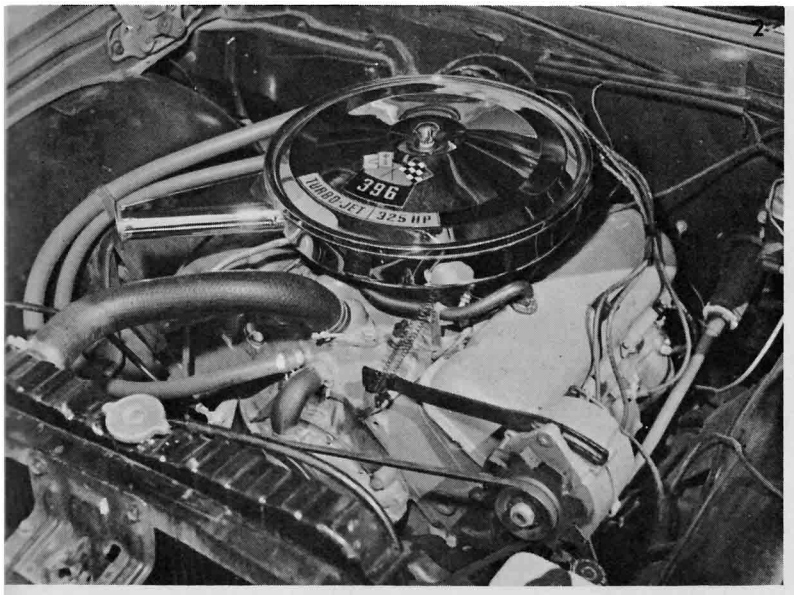
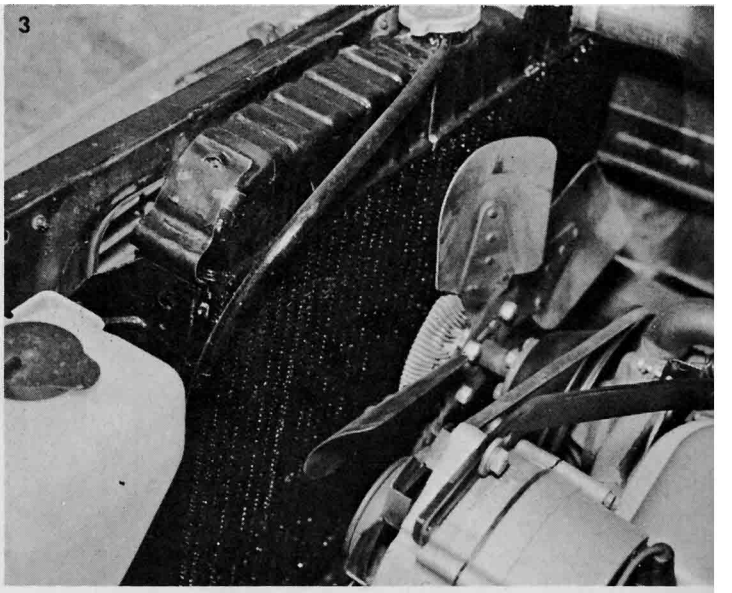
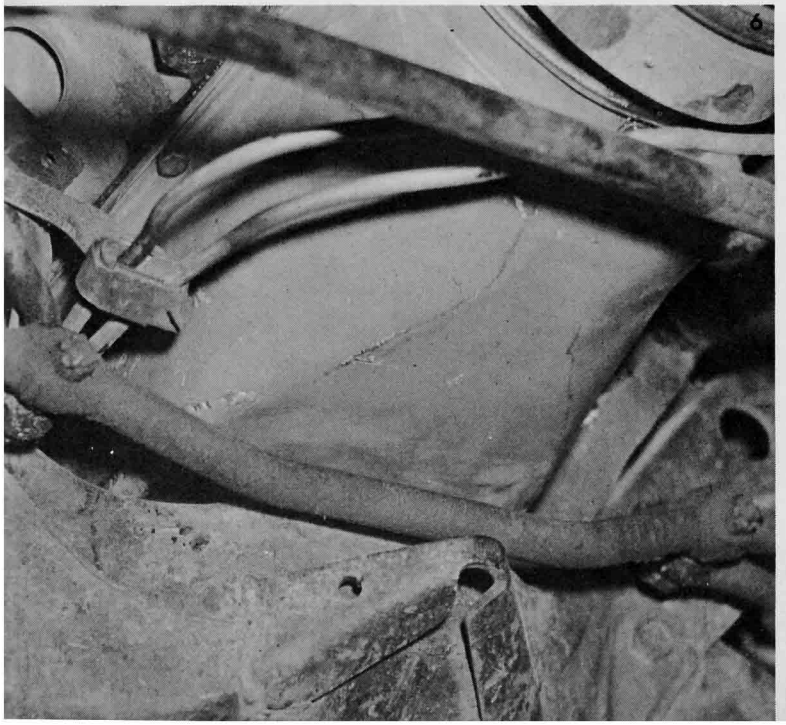
THE INTRODUCTION of the Chevelle symbolized a period of anti-racing lethargy earmarked by the company's good, sturdy 283's. Pontiac's introduction of its 389 GTO changed everything. Power and performance became the new creed. Now Chevelles and Chevy II's are available with 396's that readily enlarge to 427's. These new options are of little solace to the owners of early Chevelles. One of those owners left in the lurch was determined to take advantage of the new power without buying a new car. Jerry Brilinski, a body and fender man from Anaheim, California, solved his problem when he found a colleague rebuilding a 396 Impala. Brilinski's colleague didn't mind the come-down in engines and Jerry traded his old Chevelle power plant for the 396 Impala for $250 plus his labor.

An extra 113 inches of displacement with the engineering benefits of a new engine makes Brilinski's Chevelle a Chevy to envy. He had no problem with adaptors as the 396 came with its Powerglide transmission. He also found

1. Jerry Brilinski stands proudly by his spanking "new" Chevelle with its 396 engine. 2. The old Chevelle engine compartment accepts the new 396 with few problems. No sheet metal changes were made. 3. The radiator was brought forward and down while its core capacity was increased from two rows of tubes to four. 4. To change the radiator location, Brilinski discarded the support shell and drilled new location holes. 5. Although a stock Chevelle oil pan can be used, the Impala pan was reworked to clear the crossmember. 6. Heating and hammering the front crossmember flattened it for added oil pan clearance. 7. Original Powerglide cooler lines are retained, and readily connect to a cooler in the reworked radiator.







283 cube weakling to 396 cube bruiser

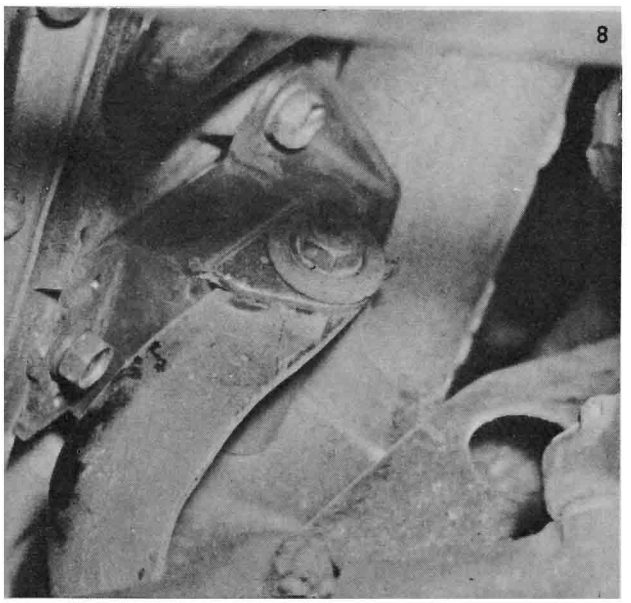
that the front mounts from the old 283 fit perfectly while the rear mounts were the same.

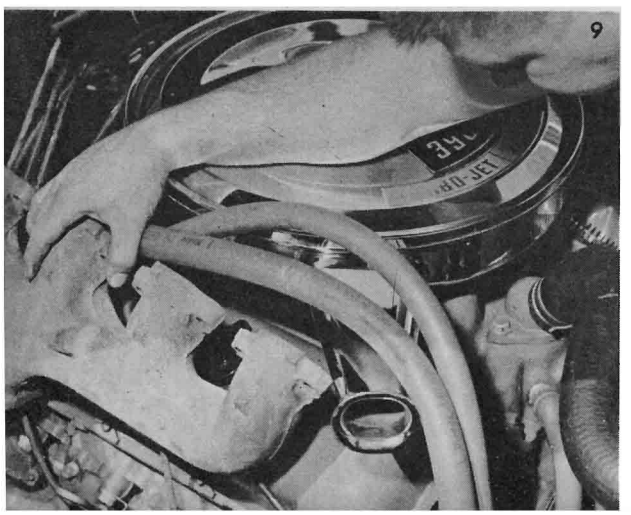
A small interference at the bottom of the oil pan was bypassed by heating the cross-member and banging it down 3/4 of an inch with a hammer. The front of the oil pan was cut down, saving the expense of buying a new one. The Impala manifolds interfered with the frames, so Brilinski replaced them with '66 Chevelle manifolds which cost $32.50. The 283 exhaust system can be used by welding the manifold outlet to the stub ends of the Impala pipes that come with the engine.

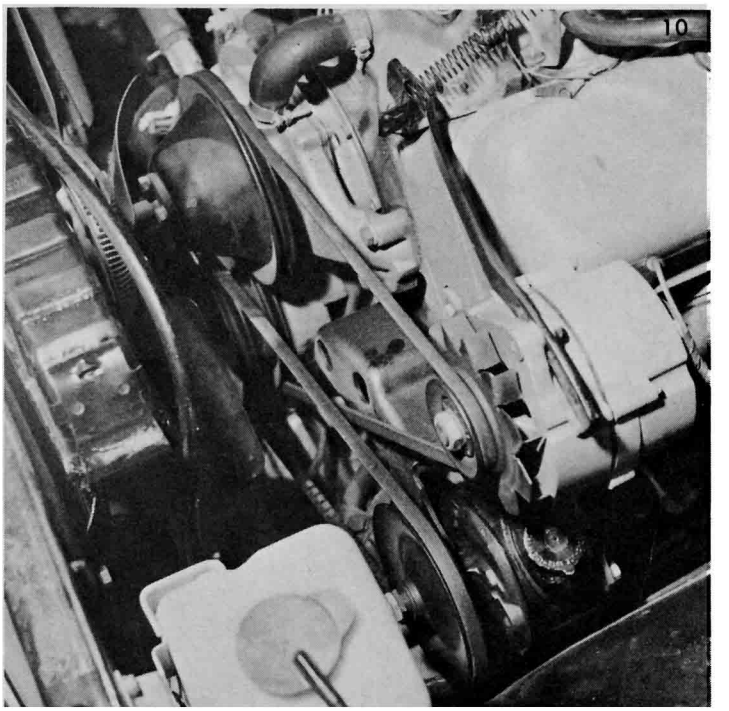
Since the 396 engine is longer than the 283, the radiator had to be moved forward. This was easily done by eliminating the shroud, or adaptor bracket, which normally brings the radiator closer to the 283 fan. Ditching the bracket gained a few inches. While the top holes on the radiator lined up with those of the radiator shell, the bottom ones did not and had to be redrilled. The change eliminated any need for fan modifications. Heat rejection to the cooling system is pretty much proportional to displacement on engines of similar efficiency. To cope with the rise in cubic inches from 283 to 396 Jerry changed from a radiator core with two rows of tubes to one with four rows, doubling the flow capacity. The cooling increases but doesn't double through the addition of the extra pipes. A radiator shop changed the core and cut expenses by using the same tanks and straps as on the 283. The cooler for the Powerglide was retained and so were the lines going from the transmission to the radiator.

Since the Chevelle is a '64, it did not have to meet *(Continued on page 81)*

8. The 396 engine mounts were too small, but the old 283 bumpers drop right in and will carry the load. 9. Impala manifolds interfered with the frame, so New Chevelle manifolds were installed. 10. The Impala steering pump bracket does not fit. A Chevelle bracket must be used.







That left G.C. Spencer to finish second and collect $10,980. Other finishers were Don White, rookie James Hylton, Neil Castles, Paul Connors, Wendell Scott, Jarrett, Blackie Watts and Buck Baker.

The early hopes of the Ford fans—Turner in a '66 Ford and Darel Dieringer in a Mercury Comet—were never in contention. Turner was sidelined after only 19 laps with a blown head gasket, and Dieringer went out in lap 21 with rear end trouble.

The victory was a birthday gift in advance for Panch, who was 40 on June 28. He took home 40 percent of the rich purse.

Panch spoke highly of his new ride. "These Plymouth's sure got something. It's a very fine automobile," he said in the post-race press interview. A smiling Richard Petty said, "That's the way to talk."

Panch explained to reporters that scar tissue from burns suffered in a 1963 wreck left his back very tender. He said there was a spot on the seat of the car which was rubbing the scar tissue raw.

"Apparently Richard is a little taller than I am and the seat was built for him," Panch said. "We didn't notice it in practice or we would have changed it. Once that scar tissue becomes raw, it is really hard to heal. I saw Richard in the pits and I thought that would be a good time to get out."

Panch said he had no formal instructions from the Pettys on how to run the race but decided to pace himself. "I had to get used to the car, and besides, Richard was running awfully strong. He would have won by 10 laps if he had finished. I thought I had set too slow a pace until I saw all those cars go out."

Asked if he would be in the Petty's second car for the rest of the season, Panch said that it was up to Lee and Richard. "If they want me around, I'll sure stay."

Richard said there were no definite plans yet, but he said of Panch's win, "I don't know a better way for him to get another ride."

CHEVELLE continued

the '66 smog device requirements. Jerry was therefore able to eliminate the new air pump that feeds the exhaust manifolds and replace it with a conventional smog device going from the air cleaner to the valve cover. Incidentally, he tells us that when servicing the smog valves, they should be washed in lacquer thinner rather than in gasoline or solvent. The lacquer thinner cuts deposits and makes it easy to re-use the valves.

On the Impala the steering gear is close to the firewall; on a Chevelle it is right up front. This results in an interference between the gear and the power steering pump. Jerry installed a '66 Impala power steering bracket, bringing the pump out of the way. Swapping an engine from another Chevelle, rather than from an Impala, nullifies the necessity of changing the bracket. The alternator bracket is the same, and the alternator remains in a stock position. To accommodate the power steering pump, the reservoir filler neck was cut approximately three inches.

The transmission which came with the 396 is a Powerglide, a less than desirable unit. Much more interesting, though costly, would be a Turbo-Hydromatic from one of the '66's. A Turbo-Hydromatic lends itself to racing, and will probably supplant the old style 4-speed hydro when it becomes more fully available. All the transmission linkage from the '64 Chevelles hook right up to the Powerglide. The speedometer gears in a 396 Powerglide are set up for another gear ratio than the 283, and the gear driving the cable had to be changed, a very simple operation.

Since the 396 engine is a couple of hundred pounds heavier than the original 283, the nose of the car sat close to the ground after conversion. Installing spacers between the spring coils brought the front end back up to correct height. For $9.10 apiece, plus a couple of hours labor, the correct '66 Chevelle 396 springs can be installed. Chevy also has a worthwhile stabilizer bar and spring kit that enhances handling.

The stock Chevelle 283 is not designed to handle the power of a 396, but apparently does, in conventional street driving. Racing, even on a weekend basis, would probably take the car out in a few runs. Jerry is planning to change to a bigger unit, but hasn't decided on the one he wants to use. A '57 Pontiac rear would be a logical choice. All of the stock suspension brackets welded to the Chevelle rear can be transferred to the replacement housing.

The complete conversion, done on a minimum cost basis, ran up to a tab of $320—extremely reasonable, considering the performance gained. Comparatively little additional money would provide a set of headers. The exhaust system can be revamped for improved breathing with a handy torch. The handling is passable, and the additional power allows the Chevelle to corner in style. The brakes are comparable to what GM releases for their '66 cars with the same power.

A fair cost appraisal of installing a 396 into an older Chevelle with much mileage should include the expense of reconditioning the old engine, not to speak of bringing it to an equivalent power level. Installing a 396 is not the end of the line, since it can be brought up to 427 standards or swapped outright for a 427 as they become more availabel.

The engine swap, done along the same low-budget pattern as Jerry's is the most practical method we've come across of obtaining the power and engineering benefits of the new engines for the older cars.