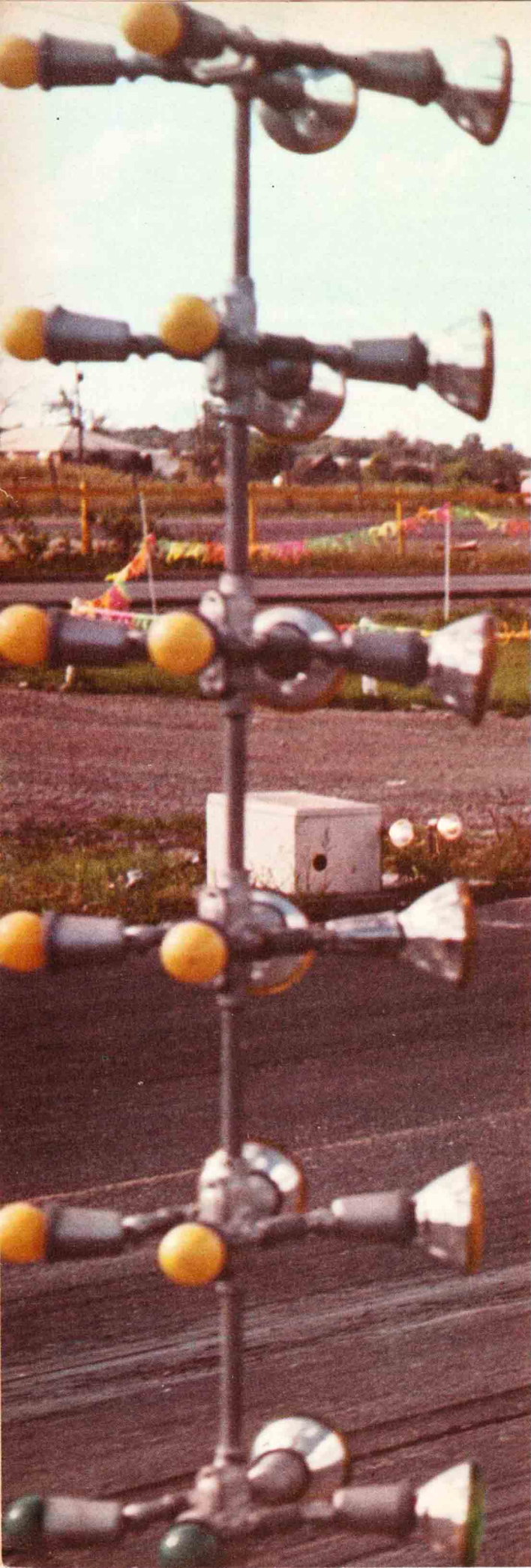


UNREAL FLYING OLD

Olds pros 'Rund' a 442
and come up with
an 'Unreal Flying Oldsmobile'
BY ALEX WALORDY





UNREAL

Olds pros 'Rund' a 442
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John F. Mulvaney



IF YOU WANT to find the fastest Oldsmobile around, try Detroit Dragway. It usually hangs out there, and it's neatly lettered "Run to Rund" so you can't possibly miss it. Find is the Oldsmobile dealer who sponsors this fleet 442 C/Stocker. The car came to be built because Vance Brady is a sharp man with a rulebook. He should be, after years as an NHRA tech advisor. He works for Farmer Dismuke, and is in charge of the tech crew at Detroit Dragway.

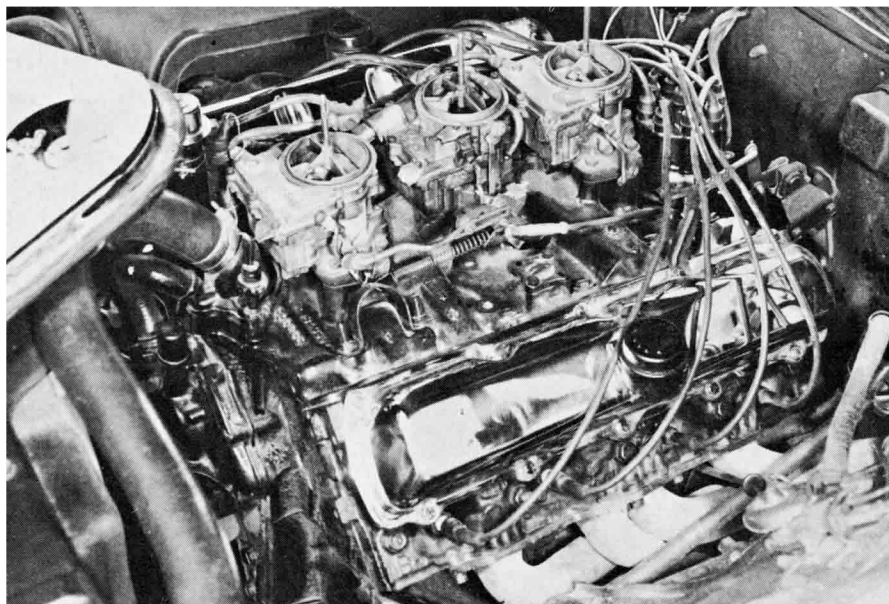
Vance has an encyclopedic memory for the little details that will make a car go. He can rattle off all the key measurements and the little knobs, protrusions and castings that identify the hotter stock models. One day he was studying the rulebook and discovered that the 442 Olds had a great power-to-weight ratio going for it. At that time, not many drag fans had much faith in the 442. Now, the staunchest of the GTO lovers will admit that an Olds will certainly give them a run for the money, and then some.

Vance's car runs a good tenth of a second under the record, which stands at 12.48. Vance has turned 12.38 at TriCity, Michigan, and 12.48 at the Detroit Dragway. Under the worst conditions, he never runs above 12.60. At Martin, in a regional meet, he sailed through with a 12.46, winning the event.

Brady feels that being a tech inspector can be a handicap, as well as an advantage. He feels obligated to bend over backwards in order to comply with the rulebook. Even his hottest competitors willingly admit that Brady goes out of the way to give them a fair shake. This doesn't mean, however, that both Vance Brady and driver, John Molnar, haven't investigated every little detail that can make their 442 run faster than the next guy's car.

John Molnar, who is studying to be a mortician, is the fastest thing out of the gate next to greased lightning. John tells us that every strip has different timing on the lights and that he will spend as much as an hour at a time watching these lights to get their particular feel. One favorite trick of his is to get a friend to watch the Christmas tree with him and snap fingers at the light for an hour or so practicing timing. He may red light one out of 20 times, but it's the other 19 times that count. During this past year he red lighted just four times, while the wins were enough to fill anyone's trophy shelf.

In getting out of the gate, Molnar lets up the clutch until he feels it is just beginning to grab, pushes it in a quarter-inch or so, and revs up, wait-



Tri-carb 400-cube powerplant is fitted with ram-air intake and tubular headers.

ing for the lights to change. John tells us that when he leaves, he never does see the green light, and having taken a ride with him down the strip a couple of times, we certainly believe him. We saw the green light by looking sideways from the passenger seat, but he couldn't possibly have seen it, and that, friends, is split timing. And yet he leaves smoothly, and doesn't pop the clutch straight from the floor, which accounts for the drivetrain living longer.

Since weight is the enemy, Vance ordered the car as close to naked as possible. There is no heater or radio,

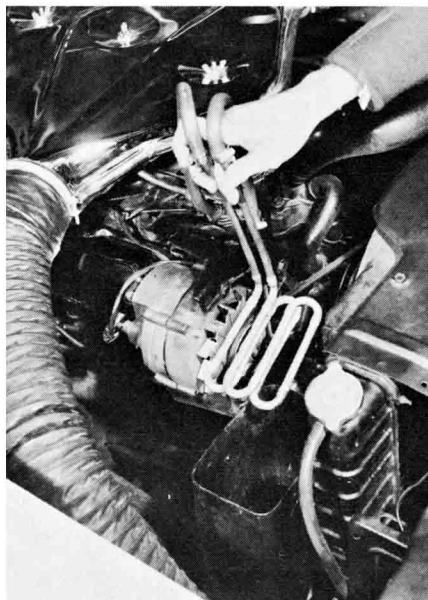
and no dum-dum or sealers. Oldsmobile will not delete the roof insulation, and this was perfectly all right with Vance Brady because he wants the weight at a height so that enough load will quickly transfer to the rear wheels. Following old-time drag practice, Olds relocated the battery into the trunk. As a further incentive to induce the load to transfer to the right rear, the left front spring is fitted with a spacer.

With the front end raised, the geometry changes and the upper control arm comes down too close to the rebound bumper. A spacer pack was installed between the spindle and the upper control arm, bringing it up closer to its normal ride position. This is well within the rules as long as the rebound bumper is left in. The shim pack reduces camber changes and the car is less likely to ride up against the bumper stops. As a manufacturing convenience, the spacers were made up of aluminum plates shaped on a shear, rather than from a solid block.

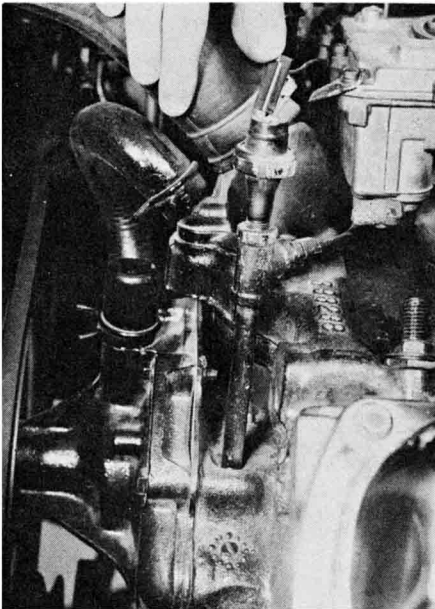
To allow the front end to rise more freely, the rubber bushings at the stabilizer bar were relieved. This allows the stabilizer bar to swing without drag. Once the front end moves up, it stays there, thanks to a set of 90-10 Cure-Rides. When Brady found that the Cure-Rides he used were too short and limited the suspension travel, he did the reasonable thing and welded in extensions. A rise in the front end inevitably brings with it camber changes. To make sure that the wheels run straight with zero camber when the front is up, the static camber has been set at three degrees positive.

This also offered some fringe benefits. For instance, it is illegal to shave

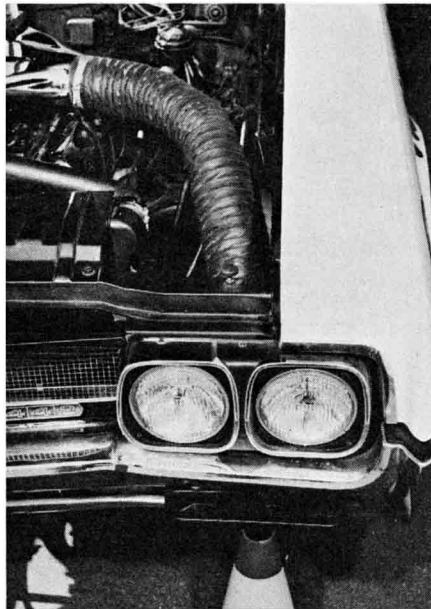
UFO



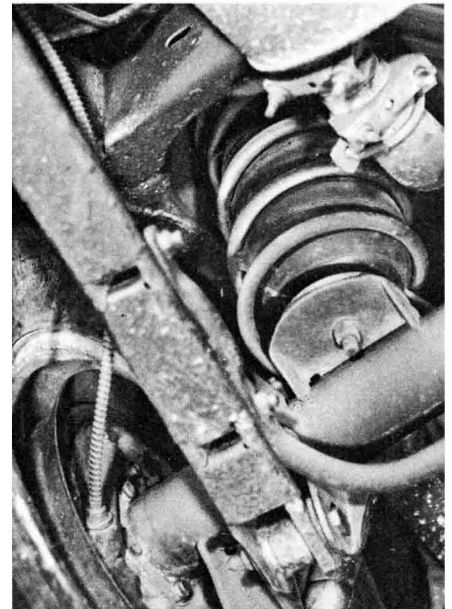
Gas is cooled in this coil which sits in ice-packed rectangular can below it.



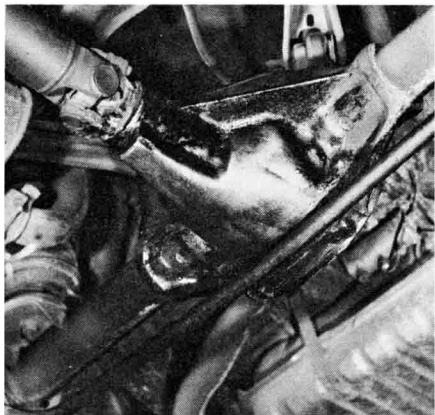
Car features both temp gauge and warning light. T-fitting houses sending units.



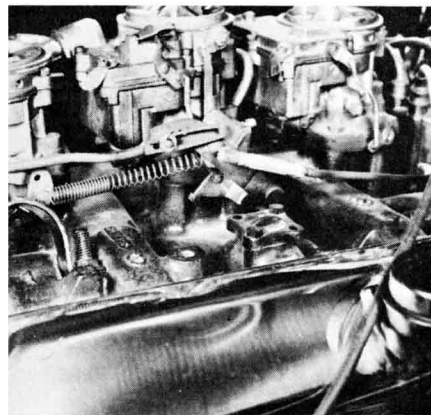
Four-inch hoses lead from air inlet to delta-shaped plenum chamber over carbs.



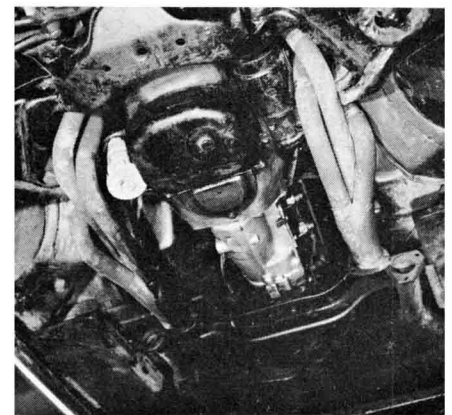
Air bags are used to tailor traction between the left and right slicks.



The 4.88 rear end ratio with 15-inch slicks brings car through traps at 5900 rpm.



To insure smooth, progressive action, front carb opens hair ahead of others.



Oil pan was enlarged considerably to provide maximum lubrication, cooling.

rubber from the front tires, but there is nothing in the rulebook that says they can't wear. The substantial positive camber does insure ample side wear, and by switching the tires around between tow jobs to various strips, this wear is equalized on both sides. The tires themselves have also been helpful in raising the car. Brady explains that the 8.20X15 tires he uses are higher than the 9.00X15's. They are mounted on 5-inch rims. Rolling resistance is minimized by keeping the front tire pressure at 50 pounds.

The rear suspension received just as much attention as the front. Vance doesn't subscribe to the idea of suspension parts hanging below the rim line because this can be dangerous in the event of a blowout. In fact, the chances are pretty good that this type of suspension will be ruled out in next year's rulebook. This automatically eliminated many of the good suspension versions that would increase

traction, and Brady had to stay pretty close to the stock Olds layout.

Softer springs were tried but didn't work. Instead, the original springs were fitted with airlift bags. These bags were originally run with pressures that ranged as high as 18 pounds, but are now set up for 2 and 6 pounds, respectively. The Air-Lift people claim that their bags should not be run with less than 4 pounds so they will not chafe against the springs. Vance, on the other hand, feels that his pressures are adequate for the small amount of actual running that the car does. Surprisingly enough, one lift alone on the right sides does not seem to do the job as well as a pair of lifts.

Tire pressures are kept equal on both sides, and traction is tailored solely by changing pressures in the bags. The straightness of the car in coming out of the hole is practical proof that the system works. Just to add frosting to the cake, Brady's 442

stays straight on even the hardest shifts.

All suspension arms are fitted with a standard set of bushings rather than the steel bushings that some competitors use. The bushings are changed frequently before they get weak or loose. Until now, wheel hop problems have never been encountered and traction is perfect.

Brady and Molnar have made a science out of selecting tire sizes and gear ratios. As of right now, they carry three different size rims, each color-coded so that there will be no mistakes. For a slippery track, they use a 4.88 rear gear and install 5-inch Chevy rims with 9.20X15 MH slicks. The bigger wheels and slicks act like a tractor wheel to give more traction. Also, using the big wheels with a 4.88 ratio keeps the engine from running out of rpm. These wheels are also used for towing. Brady points out that towing doesn't add much to tire wear, and the big slicks

cut down axle rpm, so there is no reason to change to street tires. The towing pressure is 40 pounds, forcing the slick to ride on the mid-section of the tread. For maximum traction, Brady uses a 4.56 rear and a 9.50X14 MH. This tire is mounted on a 6-inch rim. It gives so much bite that Molnar is afraid of breakage, but that doesn't keep him from posting top times.

Pop the hood and you will find the same attention to detail that prevails through the rest of the car. For instance, the engine compartment and the engine itself are painted in a se-date flat black. The reason: better heat dissipation. An engine block can dissipate almost a third as much heat as the radiator itself, and Brady is not one to leave something like that unattended. Even the ice bucket for cooling the fuel line is placed right next to the radiator. It is filled with ice only at the beginning of the run, and the melt from the ice runs down onto the copper tubing in the cooler. One of the little improvements planned for the near future is a canvas ice bag which will also be placed next to the radiator. As this ice melts, the water will trickle down onto the radiator surface and evaporate, helping the cooling action. Between runs, the radiator is hosed down with an ice spray from a one gallon jug. This helps keep the car cool, run after run, during eliminations.

To supply cool air to the carburetors, Oldsmobile released a very handy air cleaner package which replaces the original parking lights with a pair of air pick-ups. 4-inch hoses lead from these pick-ups to a large plenum chamber that tops the three two-barrel carbs.

The three stock Rochester 2GC carburetors have been tickled in the right places. The front and rear ones have .073 jets instead of .068, and on cold days Brady even goes up to .075 jets. The main jets of the center carburetor have been richened from .063 to .068. To insure a smooth progressive opening, the front carburetor opens well before the center and rear carbs, but all three reach their full opening simultaneously.

Hot AC plugs are used for warming up, to eliminate the possibility of fouling. Once the chill is off the engine, Molnar switches to AC42S plugs. Spark gaps are kept at .030 inches, well within the capability of the ignition system. The stock distributor was reworked to cut down its advance to 6 distributor degrees (12 crank degrees), and the initial advance is kept at 24 degrees. This gives a total of 36, good for most running conditions. The stock points were replaced by Mallory points which will not float

until well after the engine reaches maximum rpm. Brady plans to add more separators to the ignition wires to keep them apart and also away from surrounding metal.

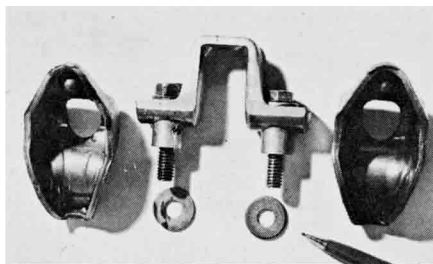
The result of all these modifications is an engine that crosses the eyes at 5900 rpm, which is not bad for a mill that started with a 5100-rpm limit before modification. At the traps, Molnar puts the car in neutral and doesn't allow the engine to slow him down. This offers several advantages, such as saving the engine and getting perfect plug readings. On the other hand, it puts quite a load on the brakes. It's good testimony to the Olds brakes that he retains stock brake linings and even the stock self-adjusters.

The engine was fully blueprinted by George DeLorean, whom Brady considers to be one of the very top engine builders. Knowing DeLorean like we do, we can vouch for the fact that his engine work falls into a "tool-room" precision category. The bore was left as is, instead of going the limit of .020-over. This left a little safety margin for future rebuilds, and saved money. JE forged pistons were fitted with Muskegon Dykes-type top

rings and Perfect Circle second compression and oil rings. Clearances at the pistons, as in the rest of the engine, are fairly high (.010 inches at the skirt and .0035 at the rods and bearings). Morraine 400 bearings are used throughout. To compensate for the added bearing clearances, DeLorean upped the oil pressure and increased the rod side clearance. This last modification allows more oil flow out of the bearings, hence better cooling action. As a finishing touch, the oil galleries in the block were aligned with the bearing holes. The engine is also fitted with an unusually deep oil pan as well as an extended oil pickup that rests at the bottom of the pan.

The valve job was obviously extra-special, and Brady admits with a twinkle of his eye that he hasn't touched it during the whole season, for fear of undoing DeLorean's good work. He adds that the next valve job will obviously also go to DeLorean. The valves have narrow seats and have been matched in weight. In addition to fitting the new "air package" springs with the blue color code, DeLorean also shimmed them to the correct height. The previous springs would bulldoze and lose tension, but not these. Just .020 inches were taken off the heads and the sides to bring the cc's to the limit. Changes in valve seat depth were used to make all combustion chamber volumes equal.

The 442 must be run with hydraulic lifters, but there is nothing in the book that says that you can't lash out those lifters so that they run almost like solids. This is not an easy task on an Oldsmobile because of the design of the rocker arm pivots. On a '66 Olds, (Continued on page 81)



Spacers under rocker arm stands provide an extra 500 rpm at top end.



Unreal performance of the Rund 442 stems from engine work by George DeLorean.

So that's how things stack up between Ford and Chrysler for the upcoming NASCAR-USAC racing season. I don't see how we, the spectators, can lose. If the racing officials let Ford run the OHC engines, we're bound to see some wild racing and a flock of new records. If Ford engineers get busy on manifold and lower end development, this engine should be dominating the tracks by the end of this season. On the other hand, if the OHC Ford engine is *not* permitted to run, we'll still see good racing between the Mopar hemis and wedge Fairlanes and Comets. The Mopars will probably win most of them, especially on the fast speedways, but things will be close enough to be interesting.

RUND OLDS continued

these pivots are die cast in pairs at a fixed height from the cylinder head, precluding any conventional adjustments. Brady uses a pair of .070 flat washers to space up the rocker arm pivot. This brings the lash to .002 inches, which is just what the doctor ordered. The correct washer thickness will vary from car to car depending on how much the head is cut.

Last year, the cam gear was bored out to accept offset bushings for advancing or retarding the cam. This year Brady accurately bored eight holes in the cam gear to provide half-degree increments for advancing the cam to a maximum of 4 degrees. The same eight holes can be used for retarding as well as advancing the cam by simply flopping the gear.

To keep tabs on what the engine is doing, Brady and Molnar installed a set of gauges in a snappy looking walnut panel fitted under the dashboard. However, Brady is not one to call a warning light an idiot light. He feels, and right so, that a warning light can be seen more easily than a gauge and when it flashes on it draws immediate attention, while a gauge is likely not to be spotted. Thus, the oil pressure and coolant temperature warning lights have been retained. A set of T-fittings are used to mount the sending units for the gauges and the warning lights.

Plans for the future? Molnar and Brady polished off the last race of the season before the advent of the cold weather and promptly set to the winter task of rebuilding the car from top to bottom. To win more races, that's the plan. . . .

**MAIL EARLY
IN THE DAY!**

EDITORIAL continued

Chevrolet has its Chevelle SS 396 available in 325-hp trim. For the first time you can get a two-barrel economy GTO and an automatic-equipped top engine option.

Chrysler, on the other hand, has reversed its performance merchandising program. They are actually offering an image muscle-mobile for the first time and the only way it can be had is with hot and hotter powerplants. Prior to the Plymouth GTX and Dodge R/T Mopar middleweights were available with engine choices from Slant Six to Street Hemi. There were no image models for the youth market. Now that Chrysler has some image machines, they have restricted their sale to ultimate performance buffs. The standard 375-hp 440 cube engine is a dynamo and the only optional engine, the 426 Street Hemi, is unreal. It looks like GM and Chrysler are trading positions in 1967.

LOYAL CHEVY FANS are eagerly awaiting delivery of the first 396 Camaros. The factory has the option listed, but as of this writing none have been delivered. Nickey Chevrolet in Chicago is offering custom-built semi-hemi Camaros and is in the process of finishing up a drag racing version for competition in the "funny car" ranks. Nickey's Camaro will most likely feature new rods, forged high, high compression .060-inch-over slugs and aluminum heads. All carry factory parts numbers and can be ordered from hip dealers such as Nickey or Bill Thomas in Anaheim, California. You can rest assured that Chevrolet will be well represented in quarter-mile competition this year.

HUNTINGTON continued

All of this has got the Chevrolet people a little bugged about the Camaro. They would like to offer the 325-hp version of the 396 engine as an option. The word now is that this combination will be a dealer-installed kit at first, possibly available by the time you read this. Of course engine swapping on this basis is no real answer in the mass market because it's so expensive and inconvenient. But the dealer kit will tide Chevrolet over and help to maintain the "image," until arrangements can be made for assembly-line installation. I look for this by next spring, now that Pontiac has gotten permission to use the 400-cube engine in their Firebird.

And who knows where it might go from there? I notice that the well-known Nickey Chevrolet agency in Chicago is already taking orders for

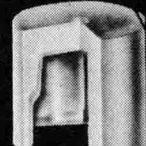
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