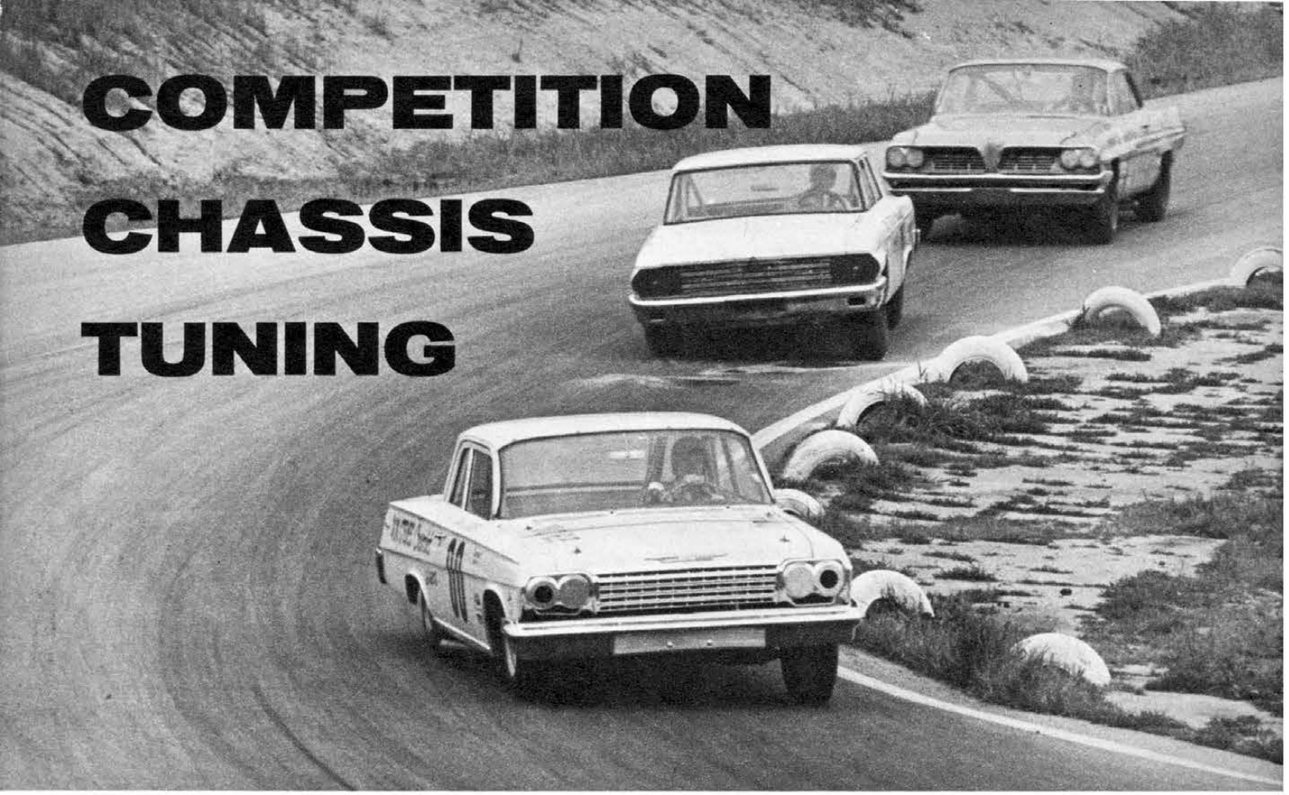


IN the Spring of 1961, when the 409 Impala was still a rare bird (or beast as you prefer), I wrote a short report on a specimen which had been prepared for Dan Gurney, one of the top ranking Grand Prix drivers in the world, for SPORTS CAR GRAPHIC Magazine. It was in the form of an inter-office memo to the editor, John Christy. And, while lightly humorous, the general idea that the car was an all-round high performance machine did come across. In the few months following, the car was shipped to Gurney in England where he drove impressively on the short, twisty circuits used for club and grand prix racing. It startled the British no end and magazine reports of the races praised the Impala's *"flat cornering, in contrast to the wallowing Jaguars!"* Dan sold the car in Great Britain, to some appreciative racing enthusiast, but home once again, he took over another Chevy which had been set up a little more formally, within the USAC rules for stockers and aimed primarily at road racing.

Following a description of the "International Impala," you will find a resume of the alterations carried out to make the car a full-fledged competitor in these events. And, if you are interested in drag racing, a few notes are appended as to the chassis setup of Hayden Proffitt's Stock Eliminator trophy winner at Indianapolis.

Among the three cars, you will derive an idea of the necessary steps and methods used in increasing handling, braking and traction, all of which can be used to a degree to make your highway driving more pleasurable and safer.

Dear John:

Frankly old man, Montebello, California, is a strange place to send a journalist in the first place, but when I got your somewhat garbled message that I was to look for an *Impala* that could outrun a *Jaguar*, I knew that you had obviously been promoted to WILD ANIMAL GRAPHIC and I thought it best to go along. Therefore, I donned my solar toupee, khaki shorts, mosquito net and sun tan lotion, picked up Enzo, my faithful head-boy, and struck out across the *veldt*. You can imagine what a ridiculous picture we presented when we arrived at Frank Arciero's construction yard!

The office receptionist kindly let us cache our .350 Magnums and a pair of silver-chased elephant guns behind the counter and I went to the garage armed only with twin Webleys and a telephoto-lensed Leica. This proved to be sufficient not only to capture the Impala, but to coerce Bill Fowler and Bill Thomas into disclosing the pertinent details which you asked for.

The Impala is, as reported, extremely fleet. (Unless you consider lapping Riverside International Raceway at 2:16.6 an insignificant accomplishment. This is *eight-tenths of a second faster than the Corvette lap record*, held by Dave McDonald!)

For a stock automobile which has not even been brought up to NASCAR specs, it borders on the incredible. But more than one watch caught owner Dan Gurney in a number of practice laps at this kind of pace. Remember, John, this is a fully equipped pleasure car—radio, heater, lavish upholstery —everything but air conditioning, and it is to be Dan's personal transportation in Europe this season. He will use it to go Jaguar hunting on week ends.

It seems that a number of the top ranking drivers have taken up *Saloon Racing*. This is not the pastime you and I have been indulging in for years, John, where we improve our lap times martini-by-martini. This is like going around the jolly race course in sedans. And, the 3.8 Jag, suitably upped to D-type specifications in many instances (ugly rumour has it), is the machine to beat. Gurney seems to have something going for him here, although it remains, as noted above, in unmodified form by the book.

Using the new Chevy 409 powerplant (part no. RPO 580) coupled to the aluminum-housed four-speed gearbox, the 3,690-pound coupe gets off the mark like a dragster and keeps on going. An almost identical car won the HOT ROD WINTERNATIONALS drag races and turned in one run of 109.88 mph (elapsed time: 13.19 seconds) in the standing quarter-mile—126.40 mph in the half-mile—which will give you an idea.

The engine is stock. It was merely disassembled by Bill Thomas and Bill Fowler, inspected, proper clearances established and returned to the chassis. Even the jets in the stock four-barrel carburetor were left untouched!

Some optional chassis details were taken advantage of, though. These included ordering the car with the "Taxicab & Police" suspension (RPO 1108). Stiffer springs, heavier shock absorbers and anti-sway bar, heavy-duty brakes with Moraine sintered lining and rugged 15-inch wheels are included in this kit. Needless to say, this improves the handling and safety aspect of the car a great deal over a similar model not so equipped. To further lower the roll center, a Corvette rear anti-sway bar was adapted and used.

Although power steering is not a feature of the otherwise luxuriously equipped coupe, the power steering gearbox was substituted. Lock-to-lock wheel movement is just 3.5 turns. Surprisingly, even with the 7.60 X 15 Goodyear Blue Streak tires which the car will carry in competition, the steering is not uncomfortably heavy.

Whether they will be necessary or not, Fowler fitted a couple of air-ducts to the front brakes using flexible rubberized fabric heater conduit. A vent to exhaust the fumes from the fuel tank to the outside of the luggage compartment was also installed. (This isn't a half-bad idea for any car, incidentally, when you stop to think about it.)

An electric tachometer mounted before the driver is the only other visible sign that the car is not owned by any other average businessman. A *Q Ship*, you might say.

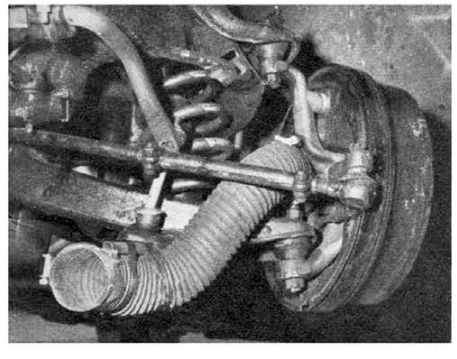
Don't tangle with it in anything short of an all-out Corvette, (and we know what would probably happen even then) unless you want to have the sinking sensation of seeing a family car completely outperform your prized *sportvagen* in all departments. My brief ride, sort of an around-the-block jaunt before they packed it for shipment, was a convincer. It feels just about as lusty as the coupe Don Nicholson used to turn the 109 mph quarter referred to above (I drove *it* a couple of weeks before) and is an impeccable handler for a car its size.

Actually you don't have to worry about this one, John, since it has been caged and shipped across the Atlantic. But, more of the breed are bound to appear. So, it will behoove us to have gun and camera ready when other specimens of *Impalus Internationali* dart out of their Michigan habitat.

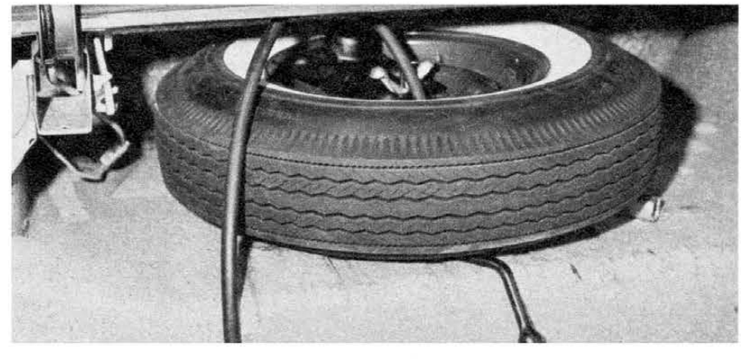
Faithfully,
Your Nature Correspondent
OCee Ritch

Bill Fowler (left) and Bill Thomas inspect hot Impala 409 set up for Dan Gurney.

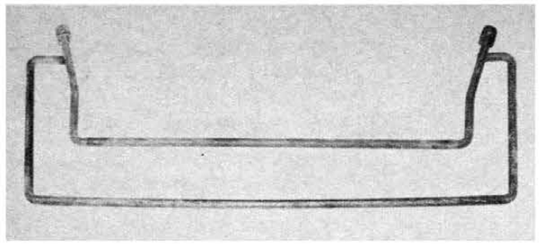
Innocent looking SS could be mistaken for normal street machine but heavy duty suspension makes it road-race worthy. Car, now in England, is winning many trophies.



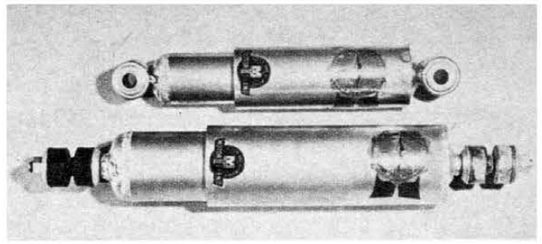
Improved brake cooling, required for twisty circuits results from flexible ducting.



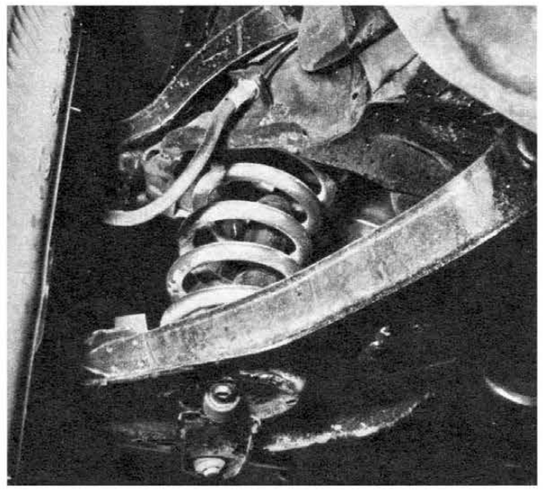
Spare tire must be carried during sedan races on European continent. Tube across tire is from fuel tank, vents fumes increased by agitation of fuel outside of trunk.



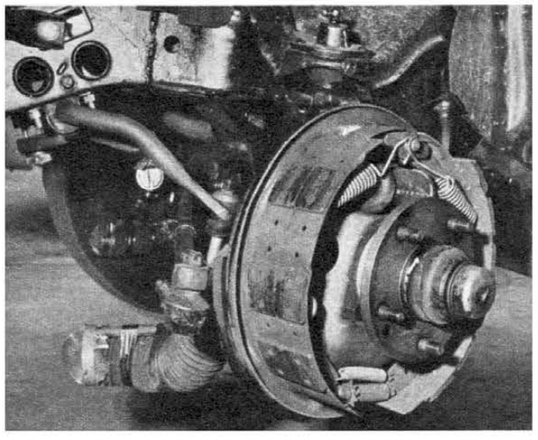
Front (inside) and rear anti-sway bars of greater diameter are part of alterations made to prepare 409 for road course.



Traction Master competition shock absorbers are typical of heavy-duty suspension components required for road racing.



RPO 1108, Chevy optional suspension kit for Police cars and off-the-road service includes stiff front coil springs shown here.



ABOVE: Sintered-metallic lining is cut into segments to raise unit pressure. Metallic compound dissipates heat to shoe.

RIGHT: Brake backing plate is cut away and steel mesh installed for air circulation. Heavy retractor springs are used.

USAC ROAD RACE SETUP

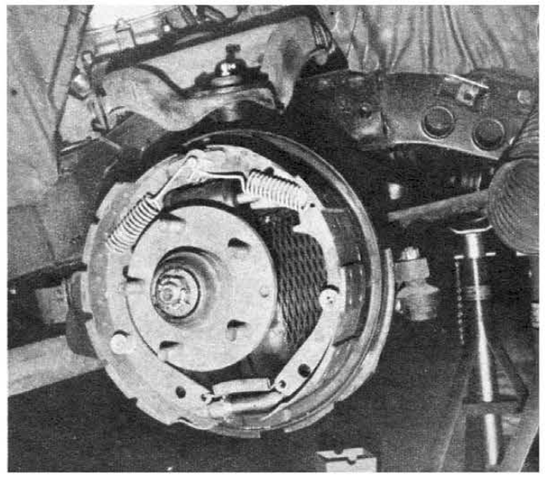
The car which Bill Thomas prepared for Dan to drive in the big Riverside International Raceway event last Summer had many of the same attributes of the original Impala but, since it was intended solely for use on the circuit, included a few extras which would be highly dispensable on the street. First, of course, was a fully braced roll bar of 1¾-inch, .095-inch wall steel tubing.

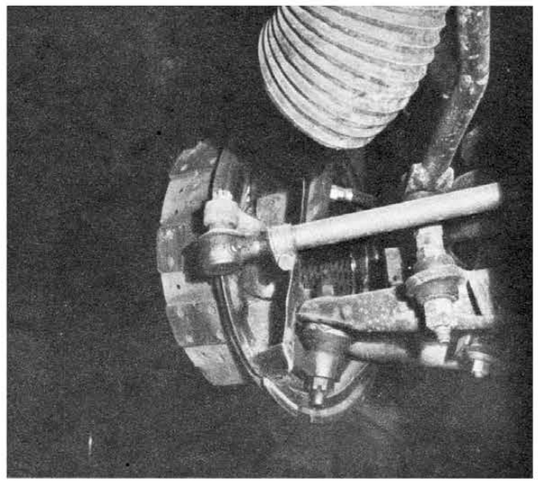
The second would be extra heavy anti-sway bars, needed only for competition. These units are: (1) a replacement for the normal front bar and (2) an additional one to provide more roll stiffness. The front bar is ⅞-inch diameter. The rear, which occupies the same relative position as the fixture on the Corvette, is a hefty 1 5/16-inch diameter piece.

The replacement shock absorbers might be preferred by many, even for everyday driving. They are Traction Master competition model units, and are valved for stiff action. Together with heavy-duty springs and the anti-sway bars, however, they give the Chevy a solidity far removed from the family sedan type of ride.

The springs under this vehicle are optional Chevy parts intended for rugged service meted out by Police, Contractors' and Construction Company cars where off-the-road travel is an everyday affair. That they also serve in competition is fortunate, since having special springs wound would be relatively more expensive. The increased spring rate can be had in part no. 3764408 (front) and 3765137 (rear).

In addition to using the regular sintered-metallic Chevy





Normally used for air supply to car heater, rubberized-fabric duct is employed to direct stream of air onto front brakes.

Source of cooling air for brakes is spot ordinarily occupied by outboard headlight. Lights should be removed for competition.

brake linings, which are segmented and bonded to steel shoes, every effort is made to give the binders all the cooling air possible for road racing. Heat can rise to temperatures above 3,000° under extreme usage, so it is necessary to duct the backing plates in highly imaginative fashion. On the front brakes, which take most of the abuse, much of the backing plate is cut away and expanded metal mesh tack welded in place. Then a scoop is added and fresh air brought from the place normally occupied by the outboard headlight in the dual set. Regular car heater air ducting is used. Five ⅝-inch holes are drilled in the face of the drum to provide cross ventilation.

Heavier retractor springs, also a Chevy part with the HD brakes, are used to make sure that brakes do not drag.

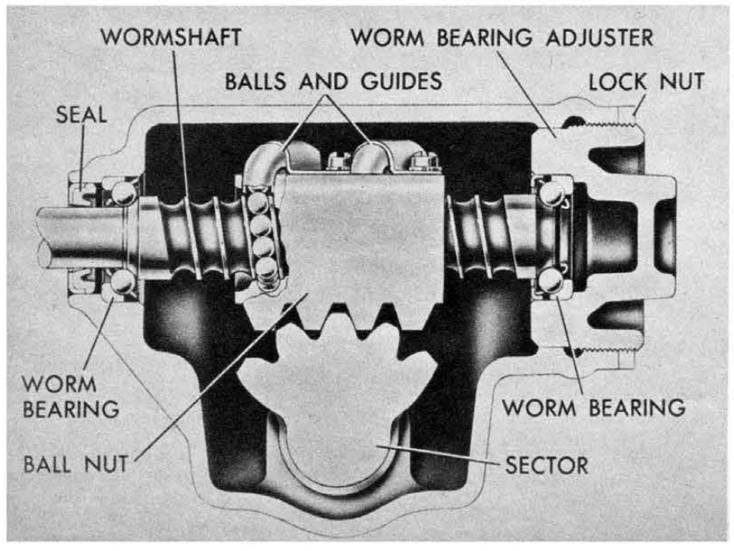
Special ½-inch lug bolts with nuts made up from hex stock are used to secure the 15 inch wide-base wheels (part no. 3748348). Front spindles are stock, but have been magnafluxed and shot-peened to guard against flaws and to improve tensile strength.

To speed up steering ratio, the Saginaw power-steering gearbox is used, but without the assistance mechanism. This part is no. 3817355, and, with tires inflated to competition pressures, the car is not at all uncomfortable to drive. It is a little heavy to park, but there is small amount of parking done during a road race anyway!

This car is fitted with a stock 409 engine and the only unusual item under the hood is an aluminum radiator and expansion tank (parts no. 3150916 and 3151106 respectively). The thermo-coupled "free-wheeling" fan is also used. Coupled to it is the regular close-ratio, four-speed gearbox and a Positraction unit is in the differential.

A special instrument panel, which places the gauges in the driver's line of sight so that he does not have to take his eyes off the track, has been installed. It consists of tachometer, oil temperature, oil pressure, water temperature and fuel pressure gauges, plus switch and starter button. All highly neat and functional. The passengers' seats have been removed and the driver sits in a Corvair bucket, held in place by lap and shoulder harness.

All glass has been replaced by Plexiglass and the windows



Faster steering required by road course is obtained through use of power steering gear box, but without power assist. Steering is now 3.5 turns, lock-to-lock.

operate in normal fashion. The rear window is held in place by metal strips from the top to the deck, as a precaution against its popping out at high speed under the impetus of pressure and vacuum.

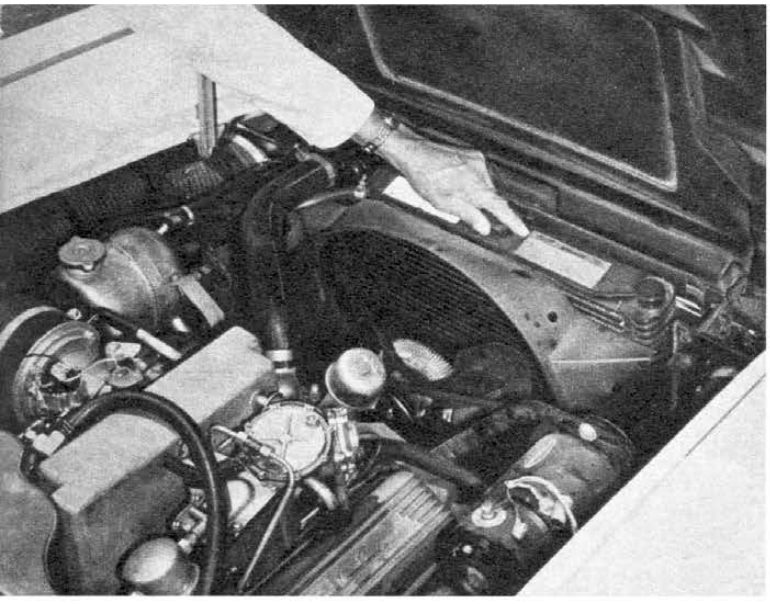
HAYDEN PROFFITT'S STOCK ELIMINATOR

In the Stock category, NHRA rules are quite specific. Stock means "Stock," and except for variations to insure greater safety, there is little difference between this Class winner and a showroom model. These variations are largely in suspension.

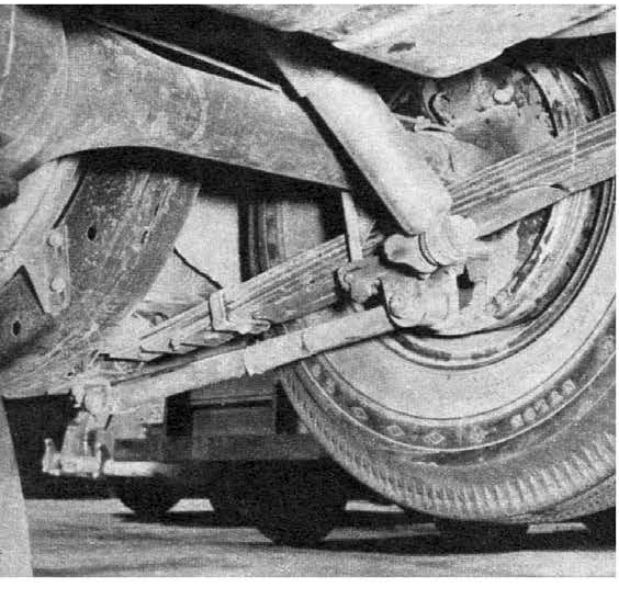
For example, Traction Master or similar anti-spring wind-up bars are recommended, since they help counteract torque by transmitting it to the frame. And suspension as produced by the manufacturer must be retained but the rules permit lowering in the rear and raising the front by 2½ inches maximum, and this is at the option of the contestant. So, the logical method would be to install stronger (optional) front springs and remove a few leaves from the rear or de-arch them (if they are leaf type) and pursue a similar course in the case of coil type. This has been done on Proffitt's car as well as the others in this category. Lowering the rear is helpful in that it shortens the distance from axle to pivot point and reduces wind-up. The 9-passenger station wagon front springs will get the front up nicely. Shock absorbers are stock.

The rules quoted, incidentally, are subject to change by NHRA so, before you indulge in any chassis alterations, check with the latest copy of the rule book.

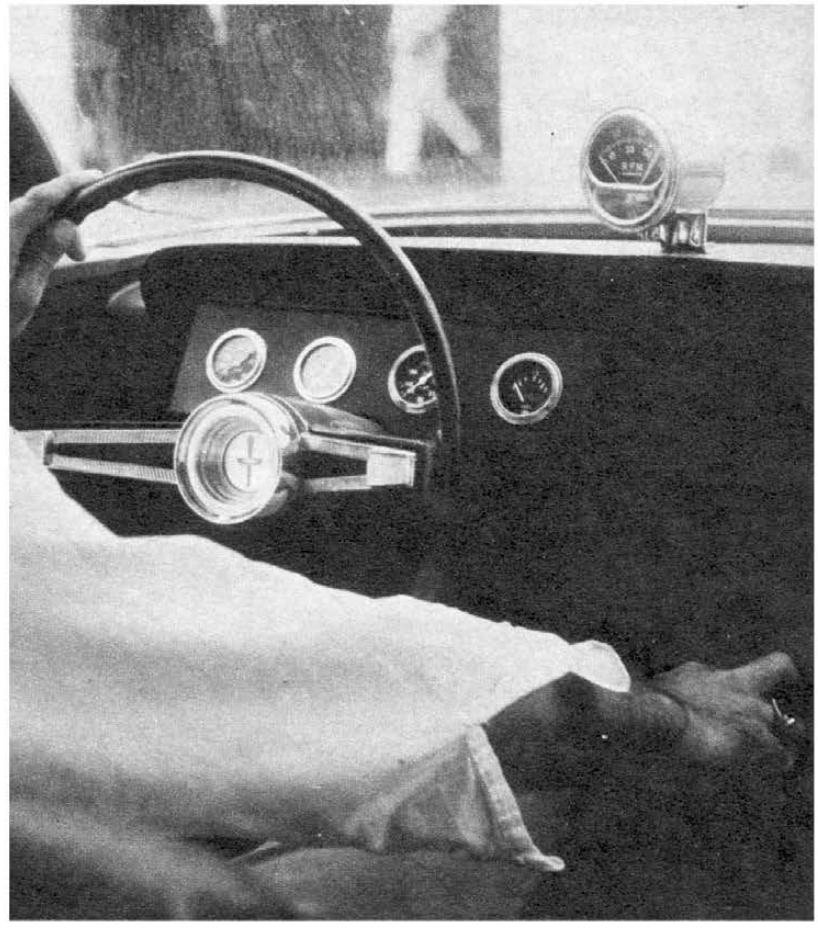
Abiding by the rules is, in fact, the only way to conduct competition. If your choice has been the Chevrolet, hew to the line and you'll have a fine car for any purpose you may see fit to enjoy. ■



Aluminum radiator is more efficient and weighs much less than conventional type, is favored by competition-minded.



Traction Master anti-wind up bars are recommended by NHRA as safety measure, used by most drag enthusiasts to control axle hop.



Custom instrument panel has been installed in Hayden Proffitt's Chevy 409 which won "Street Eliminator" at 1962 NHRA Nationals. Oil temp, oil pressure, water temp and fuel pressure, plus dash-mounted tach, are used.