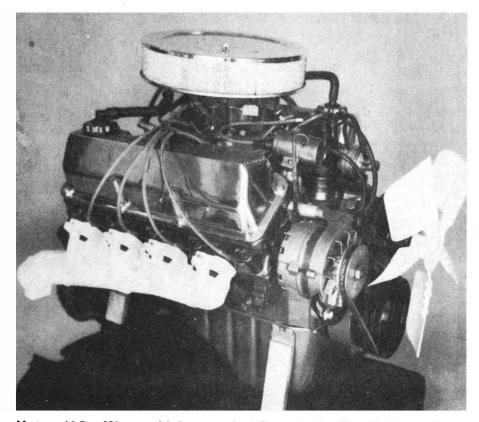
THE TOP COMBOS

Our tech expert performance-rates the unleaded new cars in four brackets and comes up with some real sleepers in the '71 lineup

BY ROGER HUNTINGTON



Hornet SC/360 outrates Chevy Nova SS350 because it's from 200 to 300 pounds lighter.



Mustang with Boss 351 power might become top dog in Ponycar bracket. Time will tell.

PERFORMANCE FANS have tended to be a little discouraged with the 1971 Detroit models because of the drop in compression ratio to burn low-lead fuel. A few premium models have retained high compression in early '71 production. But it is known that all these will be switched over as soon as possible, probably by spring. It looks like we're going to have to learn to live with low compression—at least in the foreseeable future.

And there's no use trying to kid ourselves that it hasn't cost a little performance. Early tests suggest an average loss of about .2 second in drag strip e.t., other factors being equal. The factories have done a good job trying to offset the loss of compression by changing other factors like spark advance, carb calibration, gear ratios, torque converter stall speed, etc. Things aren't as bad as they look. And there are many possibilities for getting back more performance—and even setting new standards—using special hop-up tricks now being worked out in Detroit and in the California hot rod industry. Performance isn't dead by any means.

So let's take another look at Detroit's 1971 model line-up of performance models, and see if there aren't some exciting possibilities that we may have overlooked in the early pessimism over compression ratios. We'll separate them into basic *types* of cars, rather than company-by-company, to try to see which has the best possibilities in any given class.

JUNIOR SUPERCARS

These would be your lighter economy "supercars" with medium-size V-8 engines—usually with bench seats, a lot of special exterior body trim (for identification), but with money saved on the interior and special chassis goodies. You can actually

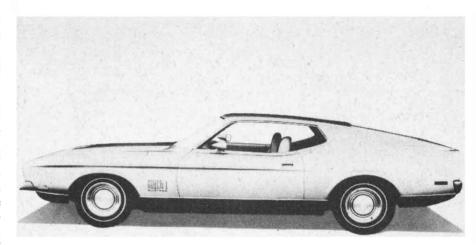
buy most of these cars for less than \$3000, which makes them perhaps the best buy in the performance field right now—especially in view of the lower operating costs and insurance rates.

The leading competitors in this class would include the new Dodge Demon 340, the matching Plymouth Duster 340, the Chevy Nova SS with the 4-barrel 350 engine, and a sleeper in the form of American Motors' new Hornet SC/360 package with the 4barrel 360-cu. in. engine. These are the major "package" cars that would qualify in this junior supercar class. There are many other possibilities that you could design on the order blank with various option combinations, but we'll confine the analysis to these specific models. This will be true in the other classes as well.

In evaluating the above cars we can expect the Dodge Demon and Plymouth Duster to come out even, since they use the same body, chassis and engine, and would be virtually identical in every respect except for body sheet metal and trim. And, frankly, I hesitate to vote against these cars in any performance competition because of that fantastic 340cu. in. MoPar high-performance engine they use. This is a "performance" engine from the ground up, using special cylinder heads with big ports and valves, special big-port intake manifold, special cam, beefed bottom end and special streamlined exhaust header castings. And this year the engine gets another boost via the switch to the Carter Thermo-Quad hot rod carburetor, with a flow rating of 750 cfm. None of the other engines in this field can claim the above



The 429 CJ Torino rates third behind 440 Mopars with Six-Pack and Stage I Buick.

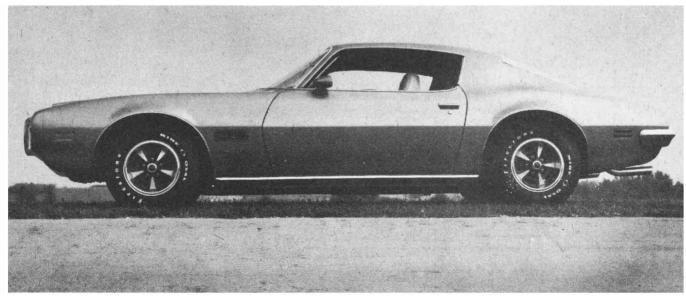


The Mustang Mach I with 429 Cobra Jet power is slotted in Senior Supercar bracket.

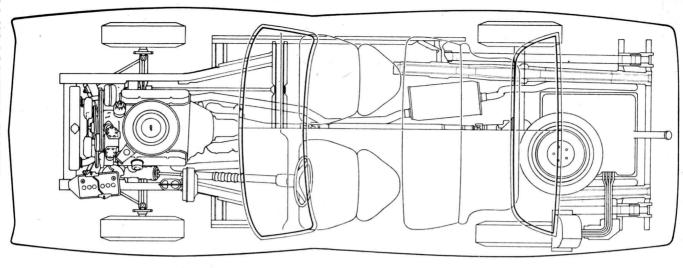
features. They are more or less standard 4-barrel V-8's that have been put in these light bodies to get snappy performance. But they are not real "performance" engines like the 340 MoPar. The MoPar should put out at least 20 or 30 more honest horses.

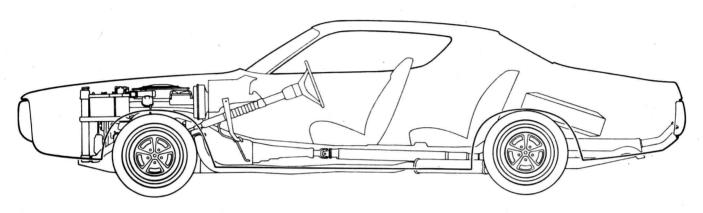
So I'll have to go along with the Demon and Duster 340 models as the best choices of the junior supercars. You can expect quarter-mile e.t.'s well down in the 14's at 95 mph or more trap speed.

It's an interesting race for second



Formula 400 Firebird was de-powered to 300 hp for '71 and has to be classed somewhere between real Trans-Am cars and supercars.





The Dodge Charger with 440 Mopar Six-Pack engine package gets many stars as one of the leaders in the Senior Supercar lineup.

between the Chevy Nova SS and the new Hornet SC/360. The advertised horsepowers are 270 and 290 respectively. I would expect the 350 Chevrolet 4-barrel engine to put out a few more horses than the equivalent 360 A.M. engine. But we also have to remember that the 360 Hornet is 200 or 300 pounds lighter than 350 Nova. This would more than offset any slight deficiency in power. I think I'll have to bet on the 360 Hornet to have a slight performance edge over the Nova SS 350. I would expect both of them to show e.t.'s in the low 15's at 90-92 mph.

And speaking of these two cars, it's too bad that their factories don't offer to make them more competitive in this new "junior supercar" class by hopping up the engines with goodies that they already have on their shelves—like big-valve cylinder heads, big-port manifolds, hot cams, etc. These available parts will all bolt to these blocks. But the factories have not chosen to offer the hot combinations in these bodies. Maybe they're waiting to spring something wild in the future. Anyway, I will go on record as saying that both Chev-



Along with its off-the-line capabilities, the Charger R/T also handles on road course.



The Dodge Demon 340 along with Plymouth Duster 340 is one of top dogs in the Junior classes.

rolet and A.M. have the hardware right now to make their Nova and Hornet junior supercars more than competitive with the corresponding Dodge and Plymouth models. They just haven't done it vet.

TRANS-AM PONYCARS

The original "Trans-Am" car was the Z/28 Camaro back in 1967. The rules then to compete in International Group II sedan racing required production of at least 1000 units of the basic model, using the basic engine (under 305 cubes) that would be used for racing. This is how the $\mathbb{Z}/28$ was born.

It included a lot of other goodies that were not required to meet Group II rules—like heavy-duty chassis parts, big tires, 4-speed trans, special instruments and body trim, etc. It caught on like crazy with the performance crowd. And it wasn't long before other companies were copying. Now we have an entirely new class of performance cars based on these Trans-Am racing models. The big difference now is that the Group II rules no longer require production of basic engines under 305 cu. in. Bigger engines can be de-stroked, so now all the factory T/A packages use engines around 350 cubes.

You know the hot competitors, of course: the Z/28 Camaro with 350 engine, the Boss 351 Mustang, plus the Dodge Challenger T/A and Plymouth Barracuda AAR modelsboth using the 340 4-barrel engine this year (with Six Pack carburetion optional). Pontiac offers the Trans-Am Firebird but this uses the 455-cu. in. engine, and would have to be classed as a regular supercar. Also A.M. has the 360 Javelin. But this wouldn't be in the class because the engine has no special hop-up goodies, and we wouldn't expect it to be competitive in performance. It's a performance car in name only.

Picking the class of this category will be tough. All four of the above models are very close on performance. Drag strip e.t.'s (with low compression) should be in the mid-14's at near 100-mph trap speed. Actually the Boss 351 Mustang is a dark horse here. We don't know much about it yet. Only a few have been produced as this is written, there have been only a few tests, and I haven't seen any on the drag strip yet. On paper it looks like it would be the hottest of the bunch, mostly because of the huge ports and valves. These big ports were actually a hinderance to the Boss 302 Mustang last year as they were just too big for quick response and low-end acceleration with only 302 cubes. But I expect the combination will work a lot better with the long-stroke 351 block. Unfortunately the Boss 351 cam is only fair, and I don't know much o about the new 750-cfm Autolite carb and Carter 4-barrels used on the other entries in this class. We'll have to

Anyway I'll go out on a limb and rate the Boss 351 Mustang as tops in the Trans-Am class.

The Z/28 Camaro is right close behind. It's unfortunate that the allout, through-the-gears acceleration of the $\mathbb{Z}/28$ is handicapped by a larger factor than just the drop in compression this year. They are using a new camshaft in '71 that has shorter intake duration, to get a smoother idle and quicker low-speed response on the street. It gives a much sweeter engine for everyday driving, but the shorter duration will undoubtedly cost 5 to 10 hp at the top end. I would expect the total difference on the drag strip—due to both the lower compression and new cam-to be at least .3 second on e.t. This could be the margin that gives the Boss 351 Mustang the edge.

Frankly, I think both of these can out-pull the MoPar Trans-Am entries with the standard 340 engine. (Continued on page 62)

The Olds 4-4-2 with the W-30 package is competitive in middle-stock classes when prepped, but showroom models don't run that well.



can (at present) go only three ways for competition; Holley 4700 or 4500 series, Autolite inline(s), or Doug Nash (Hilborn type) fuel injection. The Holleys have already proven their worth on a multitude of Chevys, so all that's necessary here is to mate the right carbs with your engine. The new Autolite 4V inline is another matter. Although the carb has finally reached limited production and the price is down to \$200 (!) plus \$175 manifold, it's had very little application because of scarcity. However, the latest versions imcorporate huge 2.25-inch throttle bores to give plenty of breathing for the required "Cross Boss" ram manifold. The 14-inch "pipes" in the manifold base give a good kick in the midrange—about 6400 rpm. With the special dual inline mounting plate there's one throat for each cylinder and a flow rate of 1800 cfm with the small carbs.

A good set of headers, properly tuned, are a must. For street/strip use, Ford recommends 1.75 to 1.875-inch I.D. and 36-inch primary tube length. For race applications, the tubes should be 2.00-inch I.D. Drag racing requires 32 to 34-inch primary tubes with 10-inch collectors. The preferred road-race set-up is 38 to 40-inch primaries and 10-inch collectors.

The techniques illustrated above have been proven in actual competition, and they produce *winners*. So remember, painstaking preparation really pays off.

BAJA BOUNCE

(continued from page 55)

hicles, a Jeep piloted by Sandy Cone and Farris Hytower finished first in 19:02.14, which was the 11th fastest time overall. Category 6, non-production four-wheel drive vehicles, saw the Jeep team of Robert Sievert and Dan Widner win in 21:34.09, good for 28th place overall.

In Category 7, Steve Hurd and Dub Smith rode their DKW motorcycle to victory in the up to 125cc class in a time of 21:35.45, which was 29th place overall. The winning motorcycle team in Category 8, cycles 125cc and up, was the Yahama ridden by Phil Bowers and Mike Patrick in a time of 18:31.45, good for eighth place overall. Bowers and Patrick had the fastest time in the 1970 Mint 400.

For Wilson, the victory was a repeat of his win in the inaugural Mexican 1000 in 1967. (His co-driver was Ted Mangels in that race.) The 1970

triumph wa also a repeat of 1969 wins for Lindquist, Johnny Johnson, Sievert/Widner, and DeVercelly.

Parnelli Jones, former Indy 500 winner and 1970 Baja 500 champ, looked like a sure winner with his codriver/navigator Bill Stroppe, but mechanical problems 130 miles from the finish delayed their modified Ford Bronco. They were plagued by flat tires, air cleaner and vapor lock problems after having a 40-minute lead. They finished in 20:55.18,—22nd place overall.

NORRA officials said there were no serious injuries in this race. The 1969 event saw two drivers killed when their Bronco crashed and rolled.

Prize money, paid out of the \$350-per-vehicle entry fees, totaled \$38,000. Contingency prizes offered by manufacturers added another \$72,050. First place cash prize in each category was \$2200; second, \$1100; third, \$600; fourth, \$500 and fifth, \$350.

NORRA officials said that the crowd of spectators at the start and finish lines was bigger than ever and that Mexican authorities had some problems controlling the mass of enthusiasts.

The tentative dates for the 1971 Baja 500 race are June 8-11.

TOP COMBOS

(continued from page 33)

The new Barracuda-Challenger body is quite heavy—at least 100 pounds more than the Camaro and Mustang bodies. This hurts. And the 340 Mo-Par doesn't have the camming and carburetion of the other two. The best way to take care of this is to order the optional triple-2-barrel carburetion system—using the three Holleys with vacuum actuation of the two end carbs. (The car cruises on just the center carb.) This setup gives excellent breathing, and adds nearly 20 hp to the output at the flywheel-plus good response at low and medium speeds on the street, due to the gradual opening of the end carbs. It's a good option. And with this triple carburetion, I would have to rate these MoPar 340 Trans-Am packages very close to the Camaro and Mustang on total performance.

SENIOR SUPERCARS

These are the big-inch cars that use intermediate-size coupe bodies—a concept started by Pontiac with their famous GTO in 1964. Since then practically every company has come up with one or more strong entries in the class. Sales have boomed, and this

type of car has become a very important part of the American car market. Unfortunately, the true "senior supercar" is in trouble today. The combination of high prices, high insurance costs and high operating expense has put them out of the reach of most young buyers. The junior supercar is the result of this trend. And yet these big-inch jobbies are still certainly some of the most desirable sports/performance cars in the world today.

The major entries in the field are well known: the Buick GS 455, Olds 4-4-2, Chevelle SS 396, Pontiac GTO, Torino Cobra, Mercury Cyclone Spoiler, Dodge R/T, Plymouth GTX—plus a number of secondary entries where the big performance engine is put in a ponycar body, with or without a special package designation. Take the 'Cuda 440, Challenger R/T, Camaro SS 396 and Cobra Jet Mustang, for instance. It's a big field with a huge choice of options and special combinations.

In evaluating these cars I'm going to assume the optional performance package on the basic engine, rather than the standard engine, because it seems like more and more guys are ordering these optional engines. The price may be anywhere from \$150 to \$500. But it seems like most of the men who are buying these cars today are not the young kids on a shoestring, but older enthusiasts who have the dough to pay for the hottest thing that will run smoothly on the street.

In other words, we're talking here about, say, the Stage I package for the 455 Buick engine, the W-30 option for the Olds 4-4-2, the 455 HO engine in the GTO, the Drag Pack for the 429 Cobra Jet engine in the Ford supercars, the triple-carb Six-Pack option on the 440 MoPar engine, etc. All these special equipment packages are very effective in boosting the performance of their basic engines, though they vary widely in the type of equipment used. For instance, the Stage I package for the Buick engine includes special big-valve cylinder heads, special manifold, 326-degree hydraulic cam, with heavy-duty springs and valve gear—where the Six-Pack option for the MoPar engine is only the triple carburetion, plus low-taper cam lobes (same timing) and stiffer valve springs. The Olds W-30 package uses a super-hot cam and ram-air induction to get a big boost in useable power. The Ford Drag Pack is basically a hotter solidlifter cam, ram air and a big Holley carb. There are many different ways Why men in Accounting, Banking, Sales, Credit, Real Estate, Traffic, Purchasing, and every other branch of business

STUDY

SPARE TIME

A knowledge of law is an asset for the person who aspires to a position of leadership and re-sponsibility in business. The greatly increased role of gov-ernment in business, the many new problems of law involving insurance contracts. Jubility insurance, contracts, liability and much more—have caused management to put a special management to put a special value on the law-trained executive. That is why executives with a law background are often found holding well-paid positions in business and industry. You can study law in spare

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Daddy, what did you do in the war against pollution?

Like it or not, we're all in this war. But as the war heats up, millions of us stay coolly uninvolved. (We have lots of alibis):

What can one person do?

It's up to "them" to do something about pollution—not me.

Besides, average people don't pollute. It's the corporations, institutions and municipalities.

The fact is that companies and governments are made up of people. Employees, executives, legislators. It's people who make decisions and do things that foul up our water, land and air.

What can one person do for the cause? Lots of things. Modest actions around the house and on the job. Like cleaning your spark plugs every 1000 miles, using detergents in the recommended amounts, supporting better waste treatment plants in your town. Yes, and throwing litter in a basket instead of in the street.

Above all, let's stop shifting the blame. People start pollution. People can stop it. When enough Americans realize this, we'll have a fighting chance in the war against pollution.



People start pollution. People can stop it. to go on these performance packages.

Which combination do we put at the top of the list? It's going to be real close between the Ford products with 429 CJ and Drag Pack, the MoPar B-body cars with 440 Six-Pack and the Stage I Buick GS. Any of these should turn in the high 13's at 100-103 mph in showroom trim, even with moderate compression. If I had to pick one of the three to lead, it would have to be the 440 MoPars with Six-Pack. Then maybe the Stage I Buick, and finally the 429 CJ Fords.

I left the W-30 Olds and 455 HO Pontiac out of this. They don't seem to be quite as strong right from the showroom. This is funny, because the W-30 Olds, at least, is very competitive in the middle stock classes on the drag strip-when modified to legal stock-class specs. The Stage I Buicks and 440 MoPars and 429 Fords were not competitive with it at the recent NHRA Nationals at Indianapolis. But the way you get it from the factory . . . well, it just doesn't run that good. I always figured it was the very long stroke in the 455 Olds engine, and the additional high-speed friction.

The Pontiac 455 HO engine is still a question mark. I haven't seen one yet, and know of no tests. On paper it doesn't look too good.

YOUR
HEART FUND
FIGHTS

HEART ATTACK
STROKE
HIGH BLOOD
PRESSURE
INBORN HEART
DEFECTS

And Chevrolet really doesn't have a competitive entry directly in this class. The standard 396 engine in the Chevelle SS is not strong, and there is no mild performance option for it. You go directly to the wild 454-cu. in. LS-6 engine option. And this is an entirely different class.

SUPER SUPERCARS

I define a "super supercar" as an intermediate-size or ponycar body with one of the de-tuned racing engines that some of the companies offer as limited-production options. The Chrysler Street Hemi would fall in this class, and also the Chevrolet 454 LS-6 engine mentioned above. It might be hard to draw a fine line between these "semi-racing" engines and the hotter hopped-up "standard" engines –like, say, the Ford 429 Cobra Jet. All of them have special bigport cylinder heads, big-port manifolds, special streamlined exhaust headers, hot cams, etc. And yet the 429 CJ is definely not a de-tuned racing engine like the MoPar Hemi or the Chevy LS-6-which is actually the base for the wild ZL-1 aluminum engine used in the Can-Am racers. As a matter of fact, Ford has dropped their entry in this super-supercar class this year. That was the Boss 429 Mustang, which used a de-tuned version of the 429 NASCAR engine. The combination never ran too well on the street, due to ports being actually too big. Ford decided to drop it after they built enough cars to make the engine "stock" under NAS-

So the race here for 1971 is strictly between the MoPar Street Hemi (in either the Barracuda-Challenger body or the bigger B bodies) and the LS-6 Chev 454 in a Chevelle or Camaro. In any case the weight of these cars is going to fall between 3900 and 4200 pounds due to the increasing weight of the cars themselves and the big, heavy engines. The horsepower has to really work here. Nevertheless, there is more brute acceleration available in this class, off the showroom floor, than any of the other cars discussed above. I'm talking about e.t.'s in the mid 13's at 103-106 mph trap speed. This is with factory exhaust system, legal emission equipment, street tires and reasonable street gears (around 3.90).

And which one gets my nod? Got to give it to the MoPar Hemi—but only by a slight margin. It has slightly better breathing, more carburetion and a better exhaust system than the LS-6 Chevy. (In fact, some LS-6 installations are using standard 427

exhaust manifolds because of space problems.) The LS-6 has a lot more cam timing and lift than the Hemi, but that's the only edge. I vote for the Hemi in a heads-up race.

And you argue it out from here!

SCENE

(continued from page 4)

the brakes on their heavier cars. The recent move to power disc brakes, as standard factory equipment on most large American cars, has changed all this. These big cars with these discs, stop well by any standards. There is certainly room for improvement; but as far as we're concerned, the foreign-car purists can stop looking down their noses at the brakes on American cars.

Drag racing fans will be interested in a new national sanctioning body that is opening up in Bristol, Tenn., called the International Hot Rod Association (IHRA). It's being started by Larry Carrier and Carl Moore, coowners of the beautiful Thunder Valley drag strip in Bristol. They've already got a number of well-known strips in the fold, spotted around the country, and plans are booming for the '71 season.

The major aim of the new group is to get a bigger slice of the gate receipts for the strip owners when hosting big national drag meets. Carrier says the current national sanctioning bodies (actually NHRA and AHRA) are taking too big a slice for themselves. They're not leaving enough in the purse to attract big-time racers, or enough profit for the track owners to maintain top-notch facilities. He implies that the sanctioning people are getting rich at the expense of the racers and strip owners. Carrier goes on to say that the purses are so tight at the big events, in relation to the gate receipts actually available, that the accessory company sponsors are pressured into putting up cash instead of contingency money for a point champion at the end of the year. This often leaves the accessory companies giving money to a winner who uses the product of another company. The new IHRA would like to do something about this.

This development will be watched with interest. You always hear criticism of the big sanctioning bodies in any sport, and it is common knowledge that the Bristol, Tenn. drag strip has been badly burned by both NHRA and AHRA during the last two years. There's bound to be some "sour grapes" here. On the other hand, a little controversy and new blood is healthy for any sport. This new IHRA

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