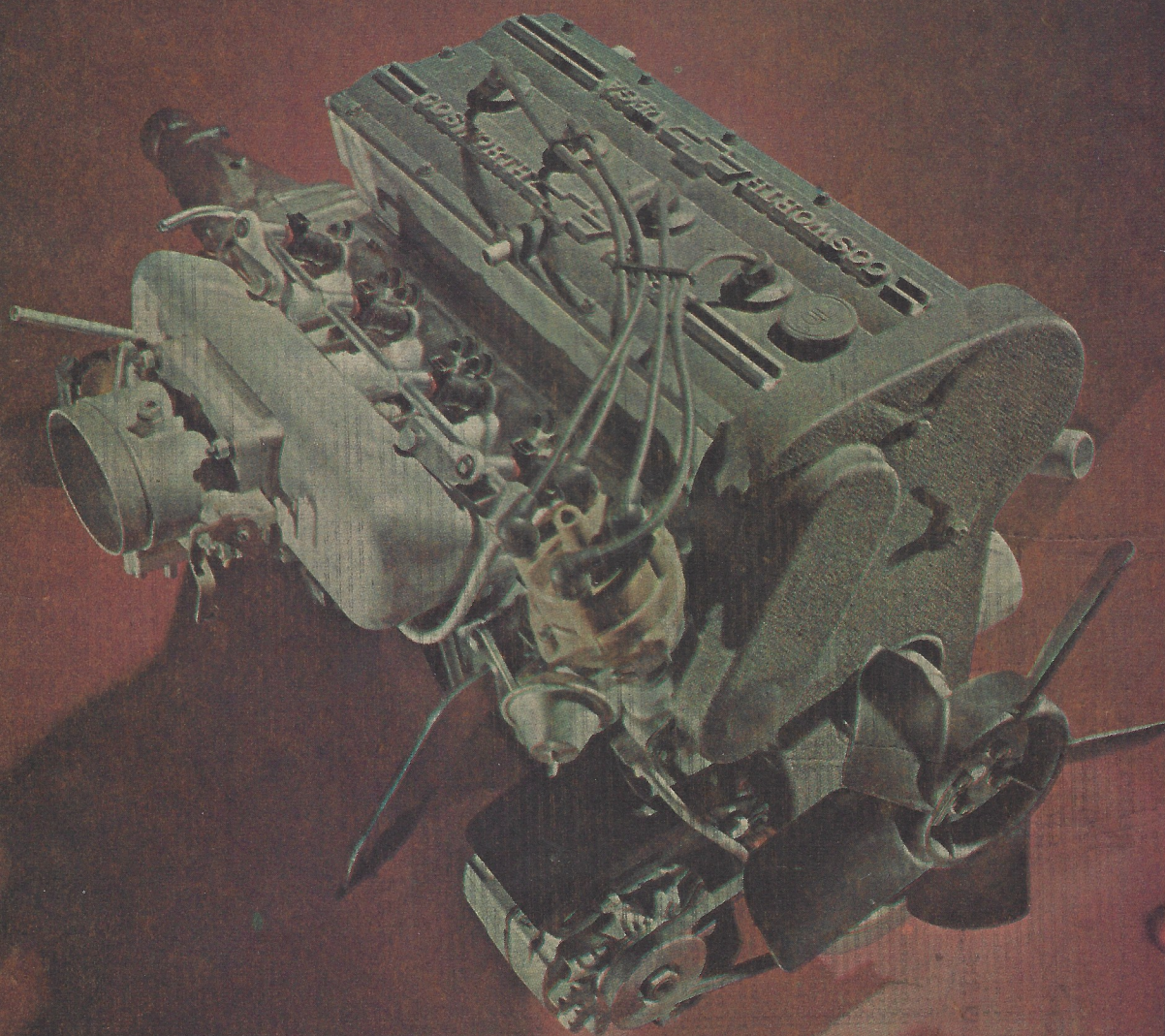


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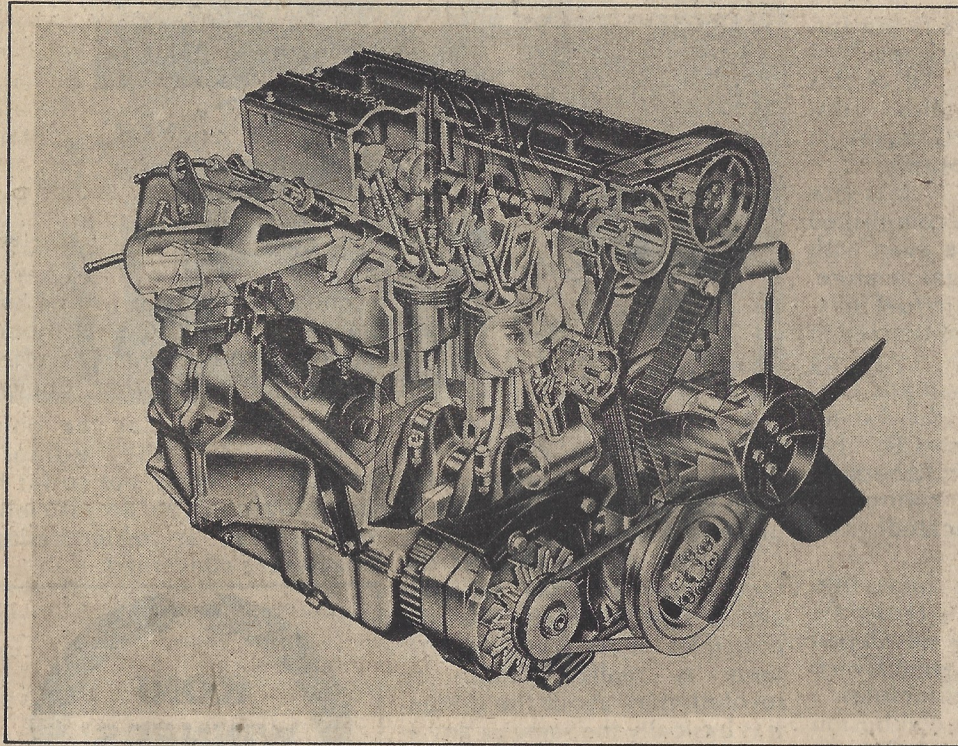
AUGUST 18, 1973

50 CENTS

The CosVeg Cometh



Chevy's Attack on the Mustang II



Report by Gary Witzenburg

To understand the new Chevy Cosworth Vega, you have to have a sense of your own history.

Ah, sweet nostalgia! What was the *first* MuscleCar? OHV V8 Chevy? Flathead Ford? Stutz Bearcat? It depends on your point of view.

But the modern MuscleCar era as we know it all started with the 1964 Pontiac GTO. Remember the first GTO? Lebenty-sebber-hunnert odd horsepower stuffed into a little Tempest 2-door. Two

merely a scooped and striped, gas guzzling and emasculated image of its former self. Bulging at the waistline, weighted down with indestructible bumpers, choked by air pumps and God knows what, it is still occasionally spotted wallowing from gas pump to gas pump, feebly mumbling "wanna drag" to nobody in particular.

Meanwhile, the guys in Europe were doing *their* thing. Over there, gas has always been a scarce and valuable commodity. The idea of a

The Coming of the CosVeg

The economy factor, combined with exceptional performance, is what makes the Cosworth-powered Vega a true SuperCoupe, and separates it by light years from everything else yet produced in this country.

honest horsepower going right to the 10" donuts. A skillful yank on the parking brake zipped you right around the average narrow, 90-degree street corner, and a flick of the wrist steered the little box between the lamp post and the vegetable wagon, usually. The things were capable of 80mph or so (depending on the gearing and off a cliff with a good downwind), but they got 30mpg no matter what you did to them.

Enthusiasts who could afford it got

sports car with the practicality of a sedan, SuperCoupes are light, agile, fast, comfortable yet still safe and economical in the true touring car tradition. Today's most familiar and popular European SuperCoupes are the Alfa 2000 GTV Veloce, and the BMW 2002 Tii. The latest English contender is the 4-door Triumph Dolomite Sprint featured on page 4 of this issue. The *only* American machine of this genre will be the Chevrolet Cosworth Vega,

Vega, you have to have a sense of your own history.

Ah, sweet nostalgia! What was the first MuscleCar? OHV V8 Chevy? Flathead Ford? Stutz Bearcat? It depends on your point of view.

But the modern MuscleCar era as we know it all started with the 1964 Pontiac GTO. Remember the first GTO? Lebent-sebber-hunnert odd horsepower stuffed into a little Tempest 2-door. Two pipes coming out *each* side, 2 little scoops in the hood, some real instruments in the dash, fancy hubcaps and all—right from the factory. You didn't even *need* your J.C. Whitney Catalogue. Impress the white socks right off the gang at the drive-in, box stock, and right off the showroom floor. Handling was passable, didn't stop too great, but it *did* go. Jeez did it go!

That first act was soon followed by the Chevy SS 396, Olds 442, Dodge Hemi Charger, Barracuda 6-pack, Boss 429 Mustang and so on and so on. The TransAm sedan series and the discovery of road racing brought with it some sophistication—handling, brakes, small block V8 engines capable of 7000+ rpm and 400+ horsepower—the 302cid Z-28 Camaro, the 302 Mustang and Javelins. Grand National Stock car racing played its part, unfortunately, and gave us the grossly beaked, and winged Chargers and Superbirds.

Then somewhere along the line, things got sorely out of control. MuscleCars inevitably fell into irresponsible hands. Rubber patches outnumbered lane-markers on Woodward Avenue, and a lot of unfortunate people found themselves stuffed into guardrails and embankments, wound around trees and poles—often taking a number of innocents along with them. Insurance rates skyrocketed to the point of absurdity. That along with the advent of emission controls and safety consciousness, served to pretty well eliminate the MuscleCar of the '60s.

The MuscleCar of the '70s remains

mer self. Bulging at the waistline, weighted down with indestructible bumpers, choked by air pumps and God knows what, it is still occasionally spotted wallowing from gas pump to gas pump, feebly mumbling "wanna drag" to nobody in particular.

Meanwhile, the guys in Europe were doing *their* thing. Over there, gas has always been a scarce and valuable commodity. Their idea of fun was a slightly modified Mini Cooper: 1500lbs with 60

parking brake zipped you right around the average narrow, 90-degree street corner, and a flick of the wrist steered the little box between the lamp post and the vegetable wagon, usually. The things were capable of 80mph or so (depending on the gearing and off a cliff with a good downwind), but they got 30mpg no matter what you did to them.

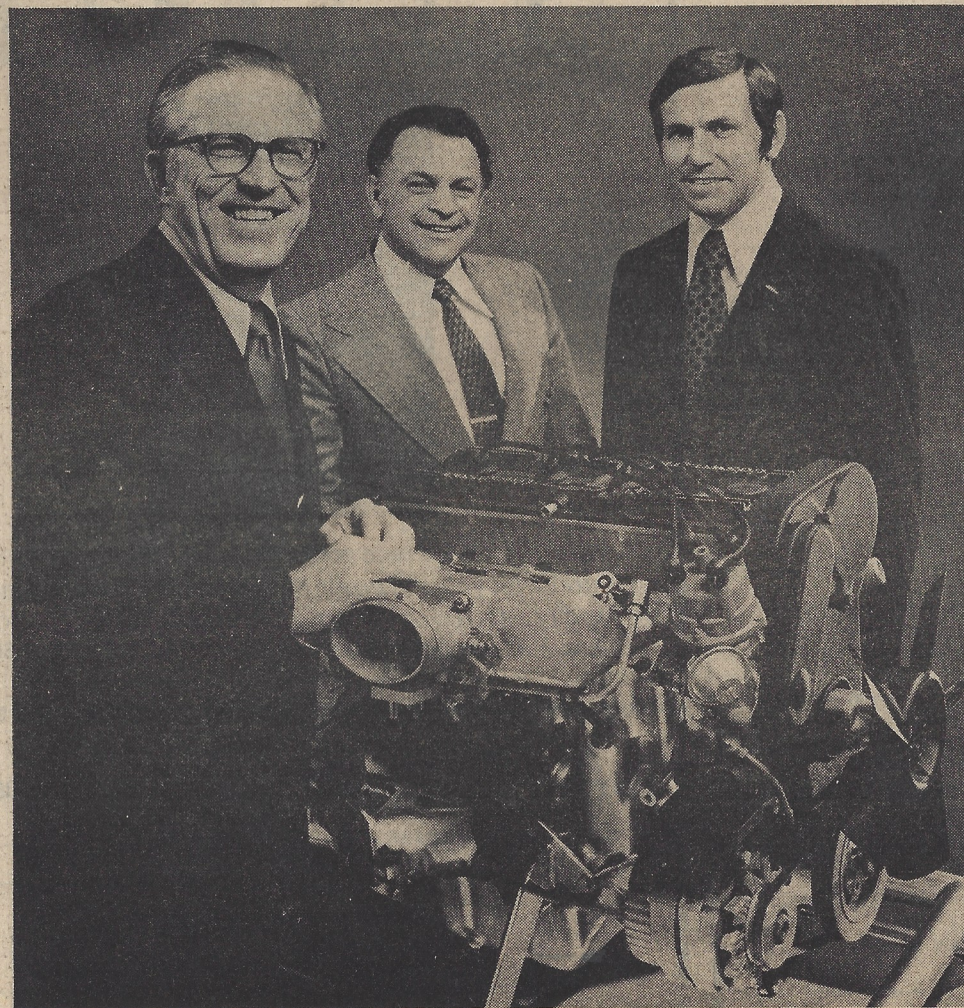
Enthusiasts who could afford it got their kicks in the so-called "SuperCoupes." Combining the virtues of a

fast, comfortable yet still safe and economical in the true touring car tradition. Today's most familiar and popular European SuperCoupes are the Alfa 2000 GTV Veloce, and the BMW 2002 Tii. The latest English contender is the 4-door Triumph Dolomite Sprint featured on page 4 of this issue. The *only* American machine of this genre will be the Chevrolet Cosworth Vega, when it goes into limited production this fall.

Why has Chevrolet chosen to build this country's first SuperCoupe, or Mini-MuscleCar if you prefer? What is the history behind it? Will there be a demand for a \$4000, twin overhead cam, 4-valve per cylinder Vega?

We won't see the car or drive it until next week, so we can only guess at what it looks like and how it handles. We do know that the Chevy engineers have managed a horsepower increase of some 88% over the base engine—135 honest SAE net horses versus the standard 72, with possibly more to come before introduction date. The bore stays the same, but the stroke has been decreased to obtain 122cid (2 liters) as opposed to the standard 140cid (2300cc). The 16 valves (count 'em) are directly driven by a pair of overhead camshafts, one for exhaust the other for the intakes. The electronic fuel injection (EFI) sends a computer-determined mixture through "straight runner" intake ports, while exhaust is quickly and efficiently scavenged from the other side through the extra wide, high volume exhaust ports.

The standard all-aluminum engine block, with its silicone-treated bore surfaces has been retained and mated to the aluminum Cosworth-designed cross-flow head. The camshaft housing and intake manifold are also aluminum, and the weight of the CosVeg engine (officially...Vega TC) is actually 40lbs less than that of the base Vega engine.



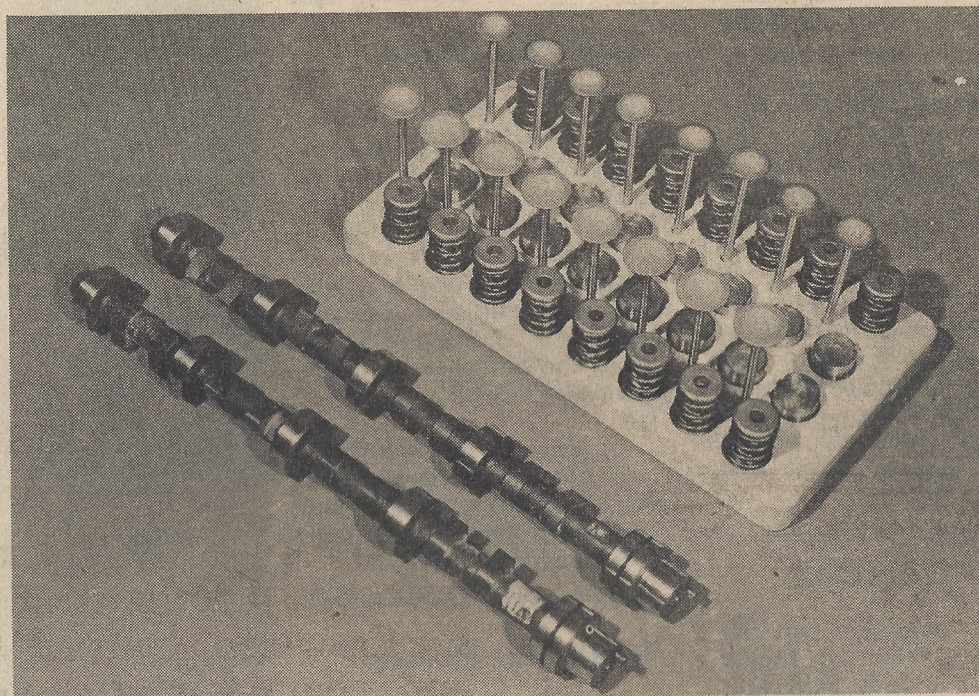
Don McPherson (left), head of Chevy Engineering and the CosVeg's Godfather.

The twin cams, fan and water pump are driven by a cogged, fiberglass-reinforced belt (similar to the standard engine). The breakerless (electronic) distributor gets a small cogged belt combined with a right-angle gear drive.

In the durability department, the forged steel crankshaft is chemically "tuftrided" to increase the hardness of its bearing surfaces. The pistons are of forged aluminum with cutouts for valve clearance and a large "sump" to give the 8.5 to 1 compression ratio necessary for emission control. Because of its low compression, the street Cosworth Vega runs on ordinary regular or low-lead gas. As a result of the shortened stroke (lower piston speeds at high rpm) and the purposeful attention of the engine's designers, the TC should be as "bullet-proof" as any ordinary Vega engine, if not more so.

The engine presently meets 1974 emission standards with ease, requiring no air pump, exhaust gas recirculation (EGR) or carburetor hot air (CHA) system. It does require relatively simple crankcase ventilation (a common PCV valve) and a transmission controlled spark (TCS) arrangement. Drivability is reportedly smooth and trouble-free with immediate response under all conditions—full or part throttle, hot or cold.

Contrary to what you may read elsewhere, all CosVegs made in the near future will be black with gold striping, somewhere between a Hurst Olds and a JPS Lotus design. They will probably get spoilers front and back, along with a gross but functional scoop way out on the nose. Cosworth Vega identification, similar to that on the flat black, wrinkle finish cam cover, will be prominently displayed on the sides. BR70X 13" steel belted radials will be mounted on British made, cast aluminum 6" wide



The twin cams and 16 (count'em) valves.

The concept of a 2-liter, Cosworth-designed, super street engine for the Vega is as old as the GM subcompact itself. Cosworth, famous for its race-prepared British Ford powerplants was fooling around with prototype Vega engines, under contract to Chevrolet, as early as 5 years ago. In the autumn of 1969 there were a couple of Cosworth-built aluminum 4-cylinders collecting dust on the shelves at Chevrolet Engineering. Sometimes they'd dyno test one, occasionally they'd ship one out of the Proving Ground to install in a car, run noise and vibration studies and

do all the other mysterious things they do out there. Mostly the engine guys were too busy worrying about upcoming emission standards and problems with current engines to concern themselves with anything not federally mandated or infinitely mass producible (read profitable).

Next thing we knew, a racing team was running CosVeg engines in 2-liter prototypes in South Africa. They did a lot of development work, occasionally went very well, but rarely finished. That project died over a year ago, and as far as we knew, the street engine project ex-

pired with it. Small sedan racing, one of the underlying motivations behind the whole idea remains very popular in other countries, but never caught on here. When the 2.5 Series (under 2 liter TransAm) turned belly-up this year, all expectations for a superVega should by all rights have been abandoned.

And yet, here it is, the ultimate American small sedan. Why did Chevy do it? For one thing, the car will be an instant image-booster and showroom traffic stopper, as the original Corvette was back in 1953. For another, Chevy undoubtedly would love to steal some of the thunder away from Ford's Mustang II introduction this September. The CosVeg may turn out to be just a short term ace up the corporate sleeve until the rotary Vega hits the market next summer, in which case it will not only be a super-neat machine but an instant collectible as well.

The engines will be literally hand-built at Tonowanda, N.Y. and shipped to the Lordstown, Ohio, assembly plant, where they will be slowly and carefully fitted into the cars off to the side of the regular assembly line. The cars will be assembled at a very slow rate at first, to insure near 100% quality control, with production eventually increasing to one car per hour. By comparison, Vegas are normally built at a rate of 60 or more per hour. Buyers will get an exclusive toll-free number to the factory and will receive special attention whenever anything should happen to go wrong. A malfunctioning fuel injection component, for instance, will be replaced with a new one rather than repaired. Through this aftermarket development program, Chevrolet will in turn be learning and gaining valuable experience with EFI and low-emission, high performance packages for application further down the road.

The
Next
Battleground



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Handling has always been the strong point of the Vega GT, so there is little need for suspension changes on the Cosworth version. The rear axle will get restraining cables to get rid of any power hop, and the sway bar sizes may be juggled slightly front to rear for a little less understeer. Steering will be a very quick 16:1. We'd love to see the Cosworth package include a 5-speed, but it doesn't—the Vega 4-speed gets a 3.7:1 first gear and gets plopped right in, otherwise unchanged.

We hear that CosVegs have done 0.60 in 8+ seconds at the GM Proving Ground, but we'll reserve comment on that until we see it. We do believe the fuel economy figures, though, which are in the neighborhood of 20-22mpg. As Chevy said when introducing the original Vega 4 years ago, "that's a very good neighborhood." The excellent mileage is made possible by extremely efficient breathing through the crossflow head, "double" valve train, and large, open manifolding, low weight of the car, radial tires, electronic ignition, and most importantly, the EFI. The economy factor, combined with exceptional performance, is what makes the CosVeg a true SuperCoupe and separates it by light years from everything else yet produced in this country.

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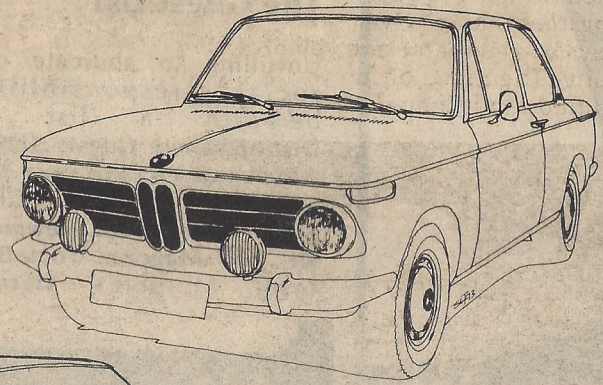
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Unfortunately, only 5000 CosVegs are scheduled to be built this year, which not coincidentally is the minimum number required for homologation into the FIA Group 1 (production touring car) category. Will we see semi-factory CosVegs running against superCapris, Alfas, Escorts, and BMWs in TransAm and IMSA GT races in this country? Maybe even in the hotly contested saloon car championships in Europe? Don't be too surprised. Also, don't be surprised to see 2-liter Vega powered Formula Bs and sports racers in the not too distant future.

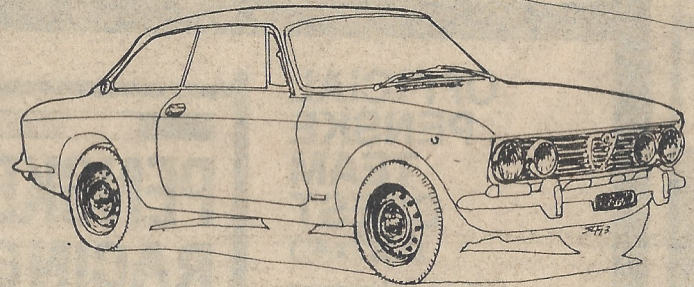
Like most European "homologation specials," the CosVegs will probably be sold out, sight unseen, before the first one ever hits the showroom. If they're as good as they sound, and if they're really going to go for around \$4000, they just could be the bargain of the century as well. We'll let you know as soon as we can get one for a driving impression.

Meanwhile, let's hope that the CosVeg is the start of a new concept in domestic auto production. Small, agile, affordable cars in the European touring and grand touring car tradition. Let's hope that we are seeing the beginning of a trend which will lead to...who knows? BDA Pintos? Traco Gremlins? Maybe even a Cosworth Chevy XP-898 plastic sports car. Fun, clean, good-looking, safe and economical cars to lead the way into the next decade—to help form the character of future personal transportation and its power sources.

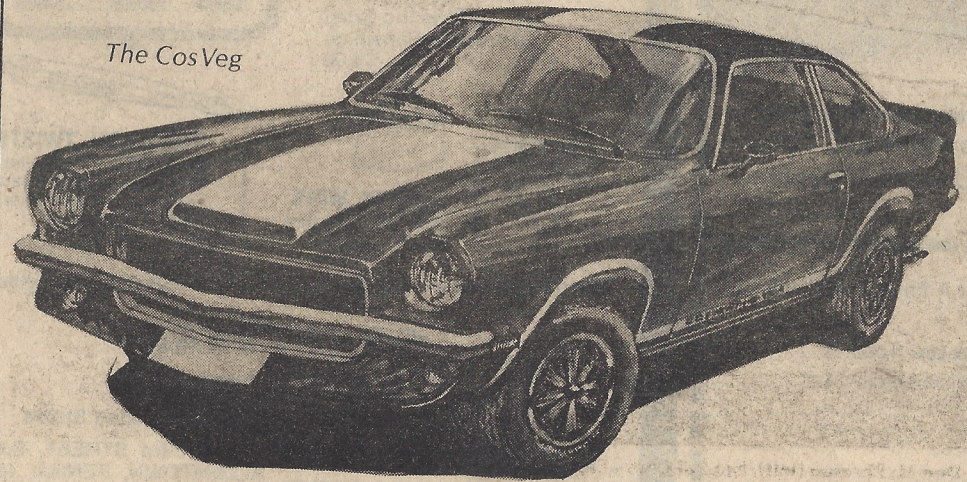
The Next Battleground



BMW 2002tii



Alfa GTV



The CosVeg

ILLUSTRATIONS BY STEVE THOMPSON