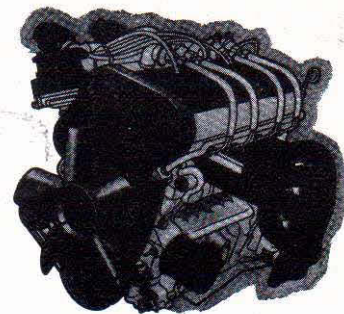


COSWORTH VEGA



OCTOBER, 1982

Official Publication of the Cosworth Vega Owners Association
P.O. Box 910, El Toro, California 92630

MAGAZINE



ONE MAN'S COSWORTH #76-3508

ONE MAN'S IDEA OF THE PERFECT COSWORTH

by
Dave Pritash

No. 3508 was purchased new in 1976. The car has 64,000 miles on it and was totally rebuilt last year. I did all the body work and customizing and the painting was done by M & T Auto Body in Hinckley, Ohio.

The body has been lightened to 2320 lb. (certified scale weight) with approximately a quarter tank of gas. This was accomplished by removing: bumpers, spare tire & well, rear seat and everything else that wasn't structurally required. This was offset somewhat by the Inconel roll bar and rear storage compartment (where rear seat was). The front fenders and both doors were replaced two years ago when body work was required after hitting a deer. I also added the fiber glass wheel flares and spoiler at that time. The interior has been modified by the addition of the lower level panel and a full set of gauges. The car is also equipped with a Super Fox remote radar detector and a Cobra CB.

(Continued on page 4.)

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COSWORTH VEGA Magazine

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LETTER FROM THE EDITOR



Well, it's finally happened! After three years of begging and pleading. After three years of sending out Cosworth Vega Press Kits and after many, many long distance calls and personal visits we can all look forward to our very special cars being featured in the most prestigious automobile publication in the world — *Automobile Quarterly*.

Saturday, September 18th, was the day. Mr. Rick Lenz, the official photographer for AQ and I met for the photo session. The car in question is the 1975 Cosworth, No. 1797. It was of special interest to AQ because of the factory installed sunroof as well as the excellent original condition of the car. The only modification that has been made is the installation of Recaro Spectrum seats front and rear and a Zemco cruise control. The sunroof seems to be the rarest of options. I know of only four Cosworths of either 1975 or '76 vintage that have it.

The point of this, is this. As soon as the AQ story appears, the value of every Cosworth will increase. AQ's mention of the Cosworth will give it the legitimacy that we all have been waiting for. The car will no longer be a "fancy Vega," but will move into the realm of a genuine collector car. Watch and see.

In addition to the club magazine we are trying to do more for you than tell you how to polish your car. We are trying to help get the car the recognition it deserves. It takes a lot of time and effort, most of which is ignored. Here is an example of some real success. The story will be published in six months or less, so watch for it.

Finally, watch for the return of SPORTS CAR GRAPHIC MAGAZINE. I've been asked to do a guest editorial for one of the early issues. Look for it on the newstands soon.

Thanks for your support and encouragement.

Bob Maloy

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ROUND-UP '82 . . . WHEW!

They came from near (Morton, Illinois) and far, as far away as California, Massachusetts and Texas to attend the third Cosworth Vega National Round-up in Morton, Illinois over the weekend of August 6th - 7th and 8th.

Over 75 cars and about 150 people were there to witness the biggest and best yet. Our guest speaker from *Car & Driver Magazine*, Don Sherman appeared on Saturday to take part in the poolside activities, and with his sunglasses in place and tan at the ready, Don answered many of the questions about the Car and Driver Rally Project Cosworth, and the most burning question of the day, what is David E. Davis *really* like.

The Saturday morning sun gave way to overcast skies as the Concours judging took place. Our Chief Judge, Tony Hossain, Editor of *Old Cars Magazine* and his able assistants looked long and hard at the entries and had a very difficult time in choosing an overall winner. As the skies became darker and darker, the Poker Rally began.

In the pouring rain that at times caused cars to pull off the road and wait for a slight letup in the downpour the determined entrants drove up and down country roads, made check-point stops at radio stations, gas stations and even general stores for further directions. Only one winner is possible, and due to the incredible skill and almost unbelievable poker hand they brought in (AAAAK) Pete and Debbie Dirasamer corraled the second of three trophies they were to win this weekend.



"Doc" Dougherty

The festivities continued on into the evening when we were honored to have as our guest speaker Irv Hoerr of Peoria, Illinois. Irv is currently running an AMC Pacer on the IMSA circuit and is looking for a national championship this year. Irv's association with Cosworth's stems from his teams early use of a Cosworth Vega (see the last issue — *Golden Eagle Racing*).

Irv has driven some *very fast* cars in his career, and we found it fascinating to hear about the world at 225 mph in a Lola.

On Sunday, the event that many look forward to all year, the Autocross, took place at the local college parking lot—about three acres of it—the largest number of entries ever recorded; and we were happy to see the number of women drivers this year had quadrupled from the previous year at Detroit. As usual, many of the men were humbled (again) by a certain lady from Des

Moines, Iowa who shall remain nameless so she can again next year sucker more newcomers into pre-race wagers, especially her husband! That number 97-GT-2 car can really go around the corners with the right pilot! Our sincere apologies to Fred Thomas for the preceeding.

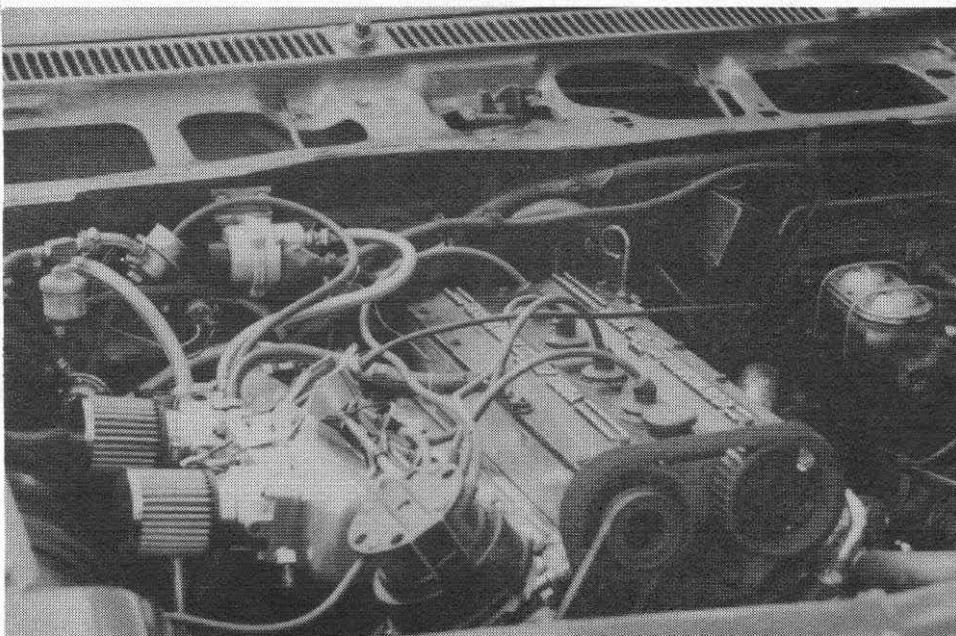
The winners won, and the rest of us didn't. See you again next year!

Sunday evening's banquet was again the highlight of the Round-up with the Regional Director of the year award going to Mark and Becky Grimm. The trophies were awarded with the help of Bill Hutton who seemed really pleased that many of the winning cars were equipped with the beautiful Weber carburetor conversion offered by Hutton Motor Engineering.

Our main speaker this year, Don Sherman, took the stand to tell all about the ill-fated Car and Driver Rally Car. Don brought many great slides of the construction of the car and provided us with many valuable insights into the trials and tribulations of the Pro-Rally circuit.

Don also donated to the club library a complete set of *Car and Driver* magazines that referenced the Cosworth Vega. He said that the Cosworth was the most written about automobile in history, and for a car that came very close to not being produced at all it had more than its share of print. Don also contributed a set of the special Cosworth Vega engine repair tools, and one of the tires, a Pirelli CN-36 Rally still mounted on the Cosworth wheel that had survived the rally circuit.

After being fed and wined until we couldn't move, another Round-up wound down to a close. We want to see you ALL out for Round-up '83 in Dallas, Texas. You'll never know what Cosworth is all about until you do!

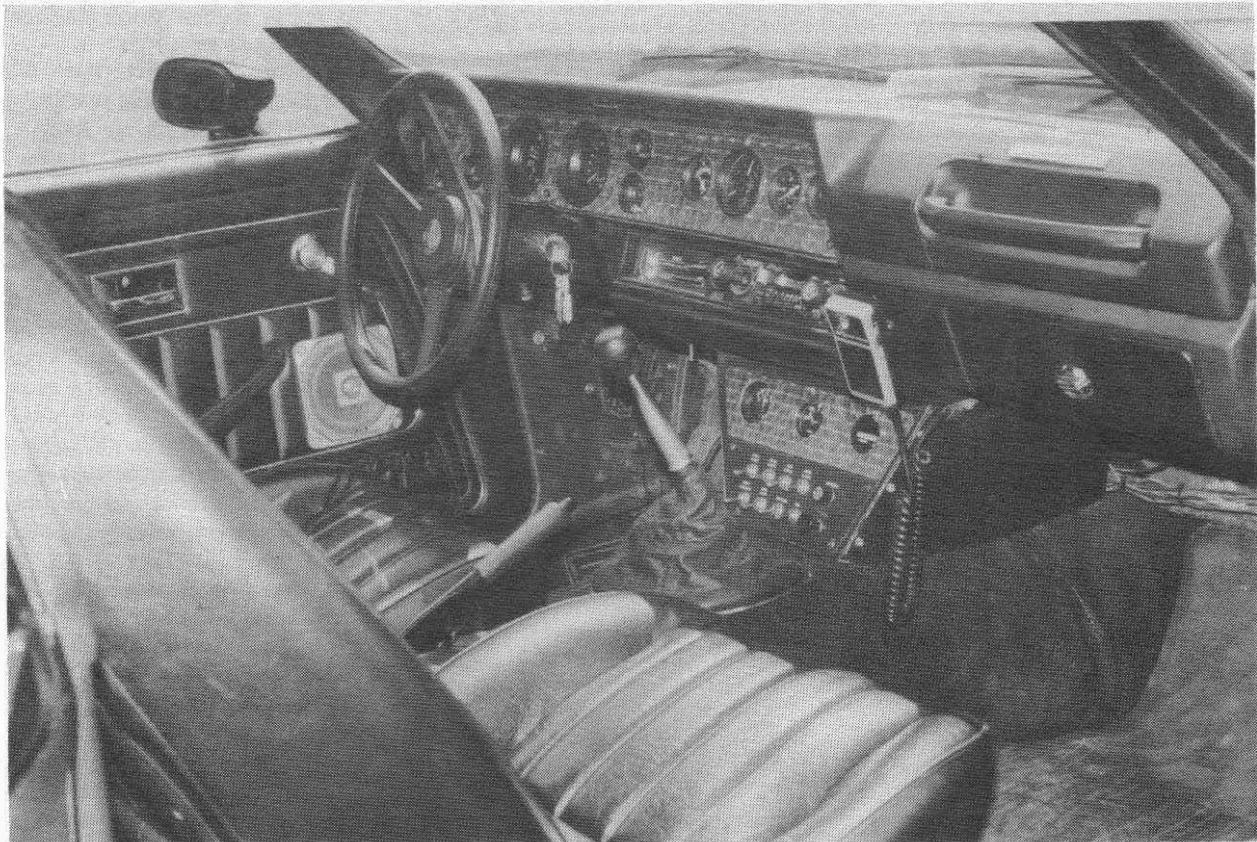


"King Kong" Cosworth

(Continued from front page.)

The engine is set up with 9.5:1 pistons .020 oversize in a sleeved block with Crane cams, (from Hutton Motor Engineering) and the head has been ported to match the intake and exhaust manifolds. Cooling is with a Flex-a-Lite electric fan and the stock radiator set back 2". The exhaust system has been changed to a tri-y design with the second "Y" at 24" and straight back under the drivers feet. From there it runs to a thrust turbo set where the spare tire used to be and then out the rear of the back panel. Induction is through twin Doce-42 Webbers using a stock air filter system with a cold air bypass, controlled manually from the dash. Ignition is MSD6-A firing an Accel Super Coil.

I estimate the car has 140 horsepower with average gas mileage at 22 mpg.

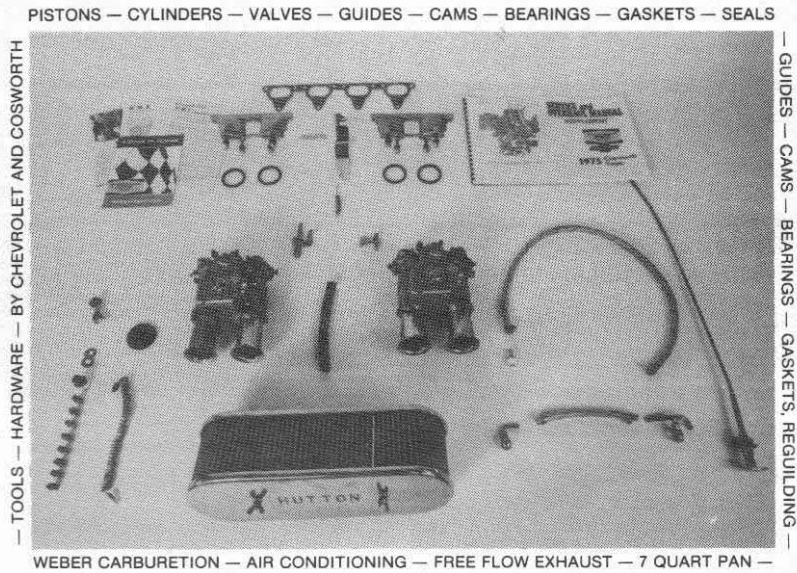


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Stage V	Full NASCAR type adjustable suspension quotation on request - installed by DTR only.	
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Installation extra on request

We recommend the use of gas pressure shocks such as Bilstein, or Koni Coil Over types with the above modifications. Be sure to obtain shocks that are for HIGH PERFORMANCE USE, not street calibration.



ENGINE TUNING PART II

by
Bob Maloy

Many of the calls and letters we receive relate to improving performance of the Cosworth. We are continuing with part II of the Engine Tuning series. Rather than explaining how to build an engine from one person's viewpoint (mine), we have chosen to present how other members have approached the problem as well. Jay Eisenlohr and Dave Pritash are guest contributors to this newsletter and relate their personal experiences.

There are some constants that apply in every case that should be mentioned. First of all, it is imperative that you take the time to do a job right. Here is what we mean.

We start with removal of the engine. When you remove the engine from the chassis, be sure to clean off all of the "crud" that has accumulated over the years before you start to disassemble the motor. A clean engine is a lot easier to work on than a dirty one. Be sure to note the location of tell-tale oil leaks before cleaning and pay close attention to those areas when you start to take the motor apart.

Spray all of the nuts with Liquid Wrench or WD-40 to help in loosening them. You must pay careful attention to this as it is *very easy* to strip a thread in the aluminum by applying too much pressure to your wrenches.

Next, find a clean area where you can lay out everything. It is a lot easier when it

comes time to put it all back together again to have all of the nuts and bolts laid out in the reverse order in which they came out, as it will jog your memory as to how it all looked originally.

It is also a good idea to take Polaroid photos of each assembly before you remove it from the engine. Set the photos alongside the parts you have set out and you will be surprised how much easier and faster the motor will go back together!

Keep the parts clean — squeaky clean! The tiniest speck of dirt can ruin all that work in an instant. Use a derusting agent, like Naval Jelly, to remove rust from the parts. Another nifty trick is polish wadding. This is sold under a number of trade names and is usually available at most auto parts stores. Use this on all of the chrome pieces, like the fuel rail and the return line to the heater, etc., to re-dress the plating like new. You can buff out the brass fittings, such as the temperature sensors and the pipe fitting that goes to the oil return line at the distributor, on a bench grinder with a polishing head installed.

Now for some methods of achieving better performance, without spending megabucks to do it. Remove the stock fan and replace it with a thermostatically controlled electric fan for about 3HP. Remove and replace the catalytic convertor with a "Test Pipe." This provides another 7 HP gain by just freeing up the exhaust system. Low end

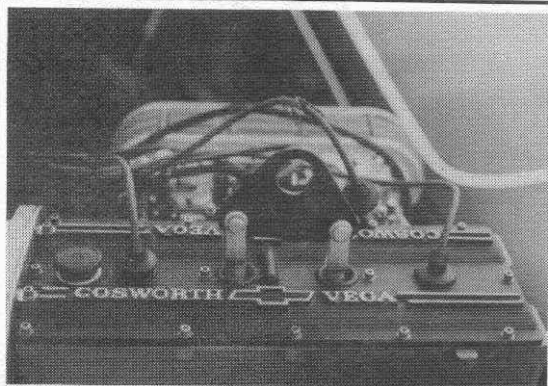
performance will be improved significantly by getting as much backpressure out of the exhaust system as your ears can stand. A good replacement for the rear muffler is a Camaro resonator. It fits in the same place as the old muffler, and has about 80% less restriction — but it's LOUD.

Remove the stock air cleaner box and fabricate a fresh air box that you can run the oil pan breather into. Use a K & N Formula Ford type air filter element. Be sure to oil the element, or the rocks can still get into the intake side of the valve train.

You can obtain a distributor re-curve kit from your local hot-rod shop. MOROSO makes a good one for about \$7.50. This is another set of weights and springs for the distributor to allow the full advance to come in a little quicker. We suggest using the "light weight" spring set-up for most street applications.

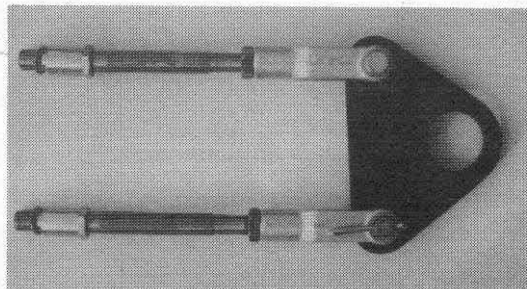
From here on in it starts to cost more money. Nothing will improve the performance of the Cosworth like porting and polishing the cylinder heads and installing the Cosworth of England valves. Another excellent idea is to replace the valve springs with Schmethelm valve springs. These are the same springs used on the DFV V-8 Cosworth motors. It is very important to do certain things when you polish and port the head and re-install the valves and springs. For instance, the valve face height above

(Continued on page 8.)



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ENGINE TUNING PART II

(Continued from page 7.)

the floor of the combustion chamber must be equal in all cylinders. The volume of the combustion chambers must be equal with the valves installed and the spark plug in the head at operational height.

The valve spring height must be exact, not "close." In order for the cam to move the valves the way the designer intended, the springs must be exact. As much as 7 HP can be lost by slipshod installation. Be sure to deburr all of the holes in the top of the head around the thread passages. Campher each hole slightly. Also be sure to put an 85% - 87% radius on all edges in the combustion chamber. A sharp edge will cause preignition and dieseling. Pay extra careful attention to the valve pockets. Be sure they are smooth, and have a similar volume. A large part of the combustion process takes place **BEHIND THE VALVE IN THE POCKETS**, so this is a critical area.

If the car is to be run on the street, don't open up the runners in the head over the recommendations in the Chevy Power Manual. You can **DECREASE** the flow with too much porting and really hurt the low end performance of your motor. Big holes are O.K. for race cars that operate at 6000 to 8000 RPM consistantly, but it's a no-no on the street.

Camshafts . . . now here's a heady subject! (Pardon the pun.) For my money, it's hard to beat the stock cams for all around performance and flexibility. The Short Track grind moves the torque further up in the power band and the low end suffers. For most of us, the street cams are the ones to run. As far as the "Full Race" cams go . . . forget it . . . unless you are in a Midget that weighs 850 pounds and you are planning to rebuild your motor every 20 hours. You will go broke trying to get the car moving, but will keep the clutch companies happy.

Speaking of clutches, the best combination, so far, seems to be a Chevy truck six

cylinder cover and the heavy duty plate from McLeod. These are available from Down The Road Enterprises or through your local Chevy dealer or speed shop.

You'll be reading about the efforts of others (in this and future newsletters) to produce a good running strong street car. We don't have all of the answers but over a period of some six years we have found out a lot of things that **DON'T** work.

In the next issue we will have some of the most interesting ideas yet put forth on getting more power out of your twin cam motor. We are involved with one of the nation's most respected supercharger experts, Jerry Magnuson. Jerry has a long and very creditable history that runs from Indy to the Gran Prix circuits of Europe. He has been a part of the Dennis Hulme team, as well as doing prototype work for the Carroll Shelby group with Chrysler's new sports car with the 2.2 engine. On a buck for buck basis, and even more importantly an engine longevity basis, supercharging seems to be the way to go. All of the old wives tales about the large amounts of horsepower required to drive the blower were true with the big GMC (Jimmy) truck blowers, but with today's compact technology, horsepower gains on the order of *two*

and a half horsepower per cubic inch have been realized . . . on Volkswagen engines!

Admittedly those are drag racer numbers where the motor only has a life expectancy of eight seconds, and on a street motor those are magic numbers; but in real life the Cosworth Vega is an ideal motor for the application of supercharger technology with lots of valve area and electronic fuel injection able to sense both vacuum and pressure in the intake plenum. Fuel enrichment is handled automatically by the computer so lean burning is not a problem. Best of all, unlike turbocharging, there is no requirement for a heat sink or custom fabrication to the exhaust side of the motor. Supercharging is a linear boost related to engine rpm's. No lag. Turbocharging requires the accumulation of exhaust gas pressure to start the turbo spinning, and the phenomenon of turbo lag sets in. Additionally, a turbocharger requires a "cool down" period prior to shutting the motor off to allow for lubrication to stabilize in the rotor assembly. The 8.5:1 compression ration of the Cosworth is ideal for the supercharger, and even if you have installed Webers, it's possible to use a supercharger with the correct jetting and a pull-through type manifold.

(Continued on page 14.)

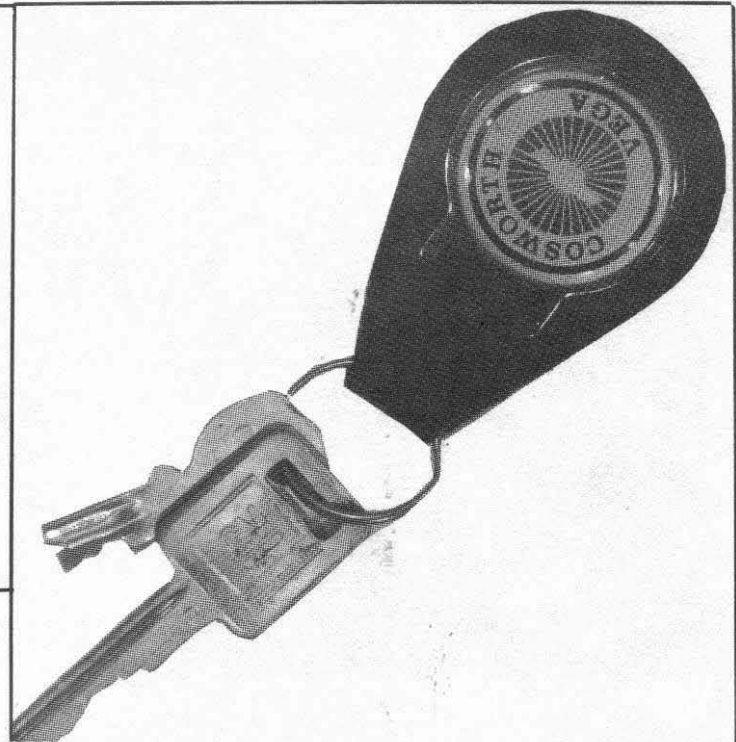
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I DID IT MY WAY

by
Jan Eisenlohr
Part One: The Engine
(Part one of a two part story.)

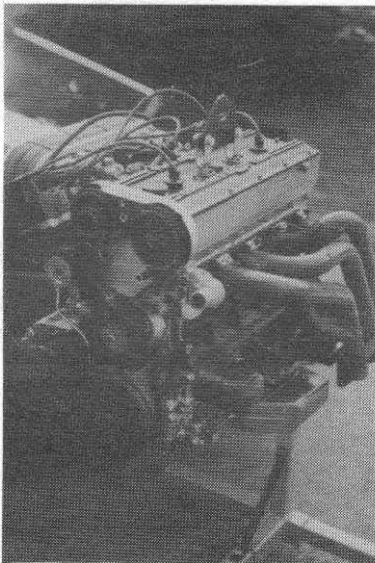
Here's a little background on the author. Jay graduated from Oregon State University with a Bachelor of Science in Mechanical Engineering Technology in 1977. The emphasis in his studies was automotive design, thermodynamics and metallurgy. Jay's senior engineering project covered electronic fuel injection using an RCA 1802 microprocessing chip.

Jay's job experience consists of the following: 1 year Process Foundry Engineer for a super alloy foundry. 2 years Process Control Systems Engineer automating plant processes and documentation. 2 years Systems Engineer with Hewlett-Packard as consultant, automated systems instructor and HP-IB systems sales consultant.

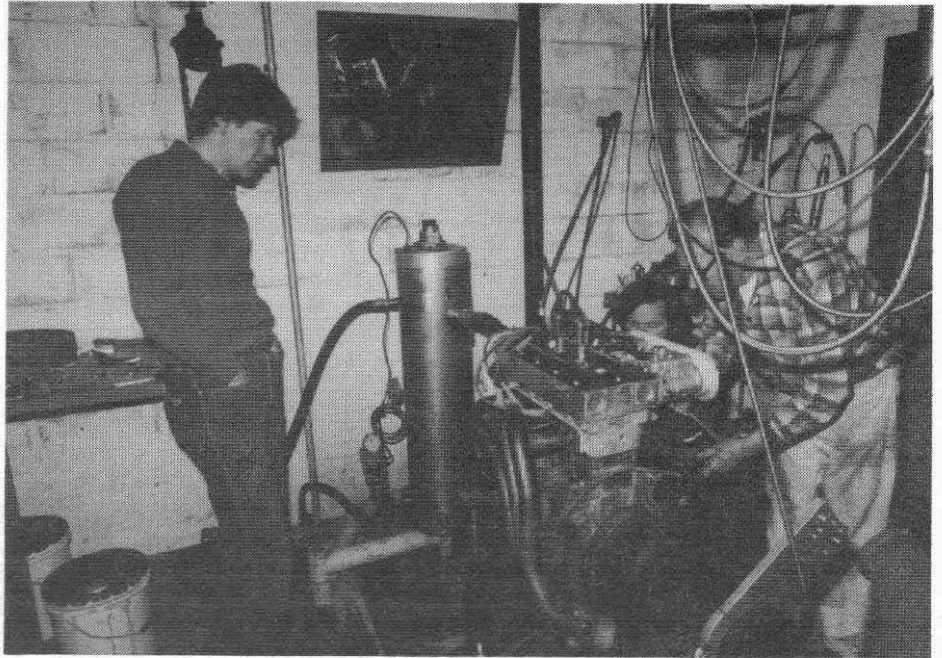
"All I've ever asked for in a car is something with a power-to-weight ratio of 10:1, maneuverability of a Lola T-600, braking of a 935 Porsche, and an engine as exotic as a DFV V-8 Cosworth."

My dream is unrealistic. However, I have spent over half of my life training, searching, reading and asking questions about road racing automobiles. The quest for automobile knowledge becomes almost a spiritual search. A door, once found, that will answer all questions to the physical universe.

What does this mystical explanation of my love affair with the automobile have to do with a Cosworth Vega? You'll see as we explore the final emergence of my shiny black Cosworth Vega #1984.



Cosworth Engine Lift.



Author, Keith and Randy

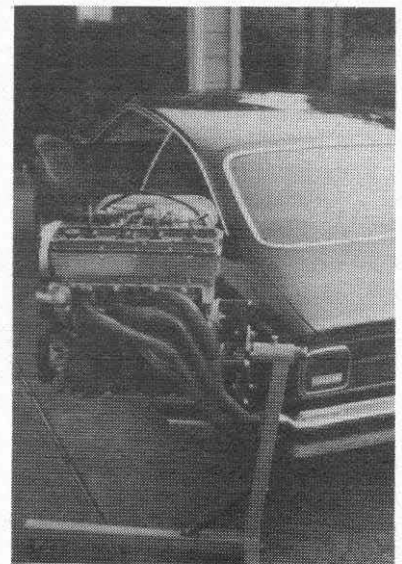
I'm just an average, well not average, middle class suburban car fanatic — a man with a cause, a desire to express his engineering talents in any area that borders on the bizarre. Thus in 1980 I bought a used Cosworth Vega. It had 35,000 miles, Weber 42 DCOE carbs, a weak clutch and a blown 4-speed transmission. I paid \$3,200 for the right to drive this car. Like myself, the Cosworth was a rebel waiting for someone to release it from the bonds of the federal government and the Detroit chassis design engineers. When my engineering peers and fellow car freaks say "What? A Vega!," in total disdain. The hair on the back of my neck stands on end, my eyes turn red with fire and I calmly say "Yeah, I just like a good challenge."

Let's face it, fellow freaks, the Cosworth Vega is a good concept car that barely made it to reality. Why? Well, partially due to Chevrolet, partially due to Cosworth Engineering and a lot to do with the times. Today, the car has the reputation of a loser, with a little mistique of 4-valves per cylinder thrown in. However, I said "I like a challenge" and for a "Loser" it's damn close to a winner. The Cosworth Vega has the most technologically advanced 4-cylinder engine ever built in America. The body wheels and appointments have the road racing look of a John Player Special. The brakes and chassis, well, they need some work. With some help from some new

brakes, some space age materials and good basic chassis updates, the Cosworth can be made to handle respectably. All in all, the CV is not a bad starting point for a project car. The one thing we must remember, with a "Loser" we always will be working in a negative environment, continuously against the odds. The challenge is clear, to be very, very *Fast!*

The Cosworth Vega engine has one extremely good thing going for it, Formula

(Continued on page 10.)



#1984 and Engine #1927.

I DID IT MY WAY

(Continued from page 9.)

II heritage. No other motor in America can make that claim. The all aluminum experimental motor, however, was a loser. It literally fell apart under stressed member racing conditions. Why did it? How could our close companion do this? An aluminum block is only partially the answer. From what I can piece together, even Cosworth Engineering can make misjudgements. Aluminum has a unique quality, a phenomenon known as cyclic fatigue. When aluminum is placed in an environment of compression and tension, the fatigue-to-failure point is just a function of time. What this means is cyclic fatigue can never be designed completely out of aluminum, only delayed. The die cast cross sectional stress areas on stock Cosworth blocks are fine for stock, but not suited to a stressed member environment.

I decided to keep the aluminum cylinders when, after 45,000 miles I pulled the head and found virtually no wear on the cylinders. I know my car was brutally flogged by the previous owner, so I was really astonished. I had studied the 390 silicon aluminum metalurgy and knew theoretically it should be very wear resistant, however, seeing was believing.

The criteria for building the Cosworth engine was impractical for most, street driven 2 liter motors. I wanted strong mid-range torque, reliability at high RPM's (7500) and hopefully, 200 horsepower. I felt a good starting point, to achieve my goal, was the article in *Car and Driver* by Don Sherman (Dec. 1976). (If you haven't read this article you are missing a part of Cosworth Vega history.) The article stated the reasons for choosing various high performance parts. Here is what I used and a list of the major parts, labor, and prices that have gone into my engine:

1 Stock Cosworth Vega block. Honed to Chevy Power Manual specs.	\$ 35
1 All rotating engine parts balanced including cam gears.	\$ 92
4 Rods sized, refitted with SPS type 3/8" rod bolts and polished.	\$150
4 High performance TRW 12.5:1 pistons (discontinued Chevy type).	\$300
1 Milidon (Hutton) 7 quart oil pan with baffles.	\$175
2 45 DCOE Weber carbs.	\$180
1 Complete gasket set.	\$ 48
1st Head job (California). Mild port & polish. Cosworth DFX stain- less steel intake valves and teflon seals. Two short track camshafts (Crane).	\$680
1 Cam cover.	\$ 40
1 Machined distributor cam drive belt guide.	\$ 20

1 Engine build and dynamometer time.	\$1200
2nd Head job (Portland). Valves lapped, DFX teflon valve seals, motor examined.	\$200
1 Extended dynamometer time.	\$400
Total	\$3520

I live in the Portland, Oregon area, a mecca in the Northwest for road racing enthusiasts, I set out to do the best and most practical job I could do on my Cosworth engine. I felt it was important to document the results of my efforts with an engine dynamometer. It also was an excellent method of engine break in and oil leak checking.

Choice of facilities was easy. I asked Keith Randol, a local DFX Cosworth Indy engine builder, to assemble and dyno my Twin-cam. Keith had a Heenan-Froude water brake dynamometer capable of handling 1000 HP DFX Cosworth motors at 11,500 RPM's. It was obvious he had the experience and equipment to handle the job.

Cosworth's Law

If it can go wrong, it will, 50 miles from home.

COROLLARY A - Don't worry because Chevy just increased the price another 50%.

COROLLARY B - Not only is the price sky-high, but just last week the part was discontinued, so it really doesn't matter.

Work began on this project in November of 1980. I had read mounds of information on the Cosworth Vega motor and believed I had a fairly good idea of what was needed for a strong motor. The first subject Keith and I covered was the CV head. We talked about porting the head in accordance with the Chevy Power Manual. He felt the CV head was too valuable for experimentation. His exotic flow bench wasn't finished and suggested another experienced engine builder should do the head work.

I called a number of Cosworth Vega engine builders. Distance became a small problem. However, there was a gentleman in southern California that looked promising. I am lucky enough to travel extensively in my job, so while on business in California I decided to visit, let's call him Mr. Cos, at his facility. Mr. Cos was a very knowledgeable and personable person. I explained my project and asked if he would work on my CV head. He was agreeable and asked me to send \$500, my CV head and thorough instructions of work to be done. Mr. Cos stated my head would be done in two weeks. I told him within a month would be just fine. I removed the head from the block and sent it to Mr. Cos. Six months, two letters and approximately 20 phone calls later, I received my Cosworth head. However, fate struck again; I didn't receive my camshaft cover, old stock cams or male inverted elbow on the thermostat housing. The cam driven cog for the distributor had the belt guide also missing. The cost was another two months of time, promises and excuses from Mr. Cos with no results. In total desperation, I bought a cam cover from Hutton Motors. I had Keith Randol fabricate a new belt guide. I researched and with the help of Greg Horst,

(Continued on page 12.)



#1984 and Engine.

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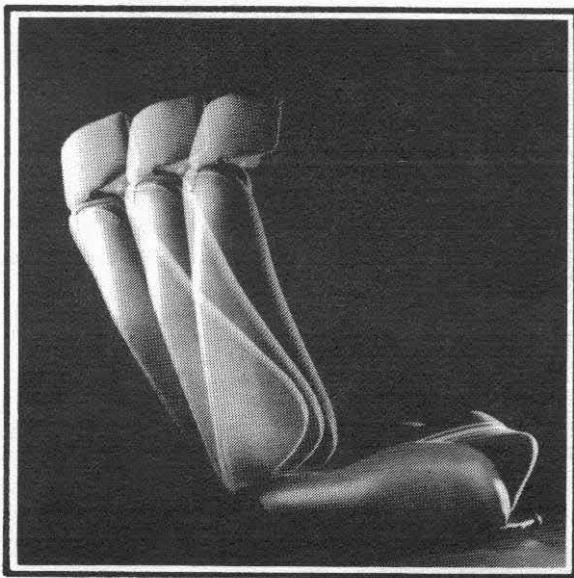
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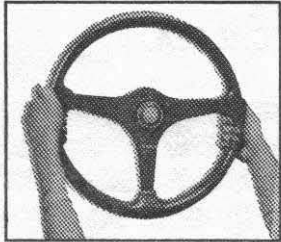
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I DID IT MY WAY

(Continued from page 10.)

your new Northwest Director, bought a Weatherhead 402 x 10 male inverted elbow. The stock cams were never replaced.

Keith was now in the middle of the USAC and CART racing seasons. My motor would have to wait for the fall. While waiting I decided to do some work on the block and have all the rotating parts, including the cam gears, balanced. The biggest hint I can make at this point is follow the honing procedures of the Chevy Power Manual. I could only find one machine shop in Portland (Stark & Norris) who knew the correct procedure for honing a Vega-type block. Honing is a multi-step process exposing hard silicon nodules that are embedded in the 390 aluminum alloy. The silicon has direct contact with the piston rings and is much harder than steel. If standard honing procedures are used, the aluminum instead of the silicon will come in contact with the piston rings; resulting in cylinder wall galling. I know competent owners who didn't understand the silicon aluminum metalurgy and now have steel sleeves.

All the parts for the motor were gathered together late fall of 1981 and Keith Randol's son Randy assembled the motor. We were ready for the dyno testing in January 1982, but the weather was too cold for the water brake dynamometer. Then in February we had a streak of good weather, we were finally ready.

The engine was turned over to make oil pressure, ignition was applied and the engine lit right up. We broke it in under a small load for about 1-1/2 hours. Compression was then taken to see if the rings had seated. The engine had sealed right up and we were ready for some full power runs. We ran the motor with type K thermocouples, so we could correlate maximum horsepower with temperature. The easily removable jets and emulsion tubes on the Webers made optimization of fuel ratios quite simple. Maximum horsepower runs were started at 3000 RPMs, all pertinent data was recorded and then the RPMs were

changed by 500 until the horsepower limit was found. But, in the middle of the run we noticed a problem: the motor was beginning to detonate. We were using one half 130 octane aviation gas and one half Union 76 premium ump gasoline. The actual compression ratio of the motor, using a stock head gasket, was 10.2:1, so this phenomenon was unexpected. Therefore, we changed the spark plugs from a Champion N-4R racing plug with a copper spacer. Later, with help from Bob Maloy, we ran Champion BN-505's. When the run was restarted we decided to go slow, so we could do plug evaluations. Things were a little better, we started to make one last full power run at 7,200 RPMs. The Cosworth was producing 174 horsepower, then suddenly the motor started throwing oil out the crankcase vent tube. My heart sank and we shut down the motor. Keith evaluated the situation and said the head must come off — the day was over.

The head had shown a problem with a leak down test in numbers two and three cylinders. It turns out the new stainless steel DFV Cosworth valves had never been lapped in the cylinder head. The intake seals were supposed to be teflon, they were not. The valve seals had come loose causing oil to leak in the combustion chambers. In a street car, oil in the combustion chamber is not a real problem. On the dyno, a sudden introduction of oil to the combustion chamber, under full load, can be devastating. Keith gave the head a good valve job and new teflon DFX valve seals. The motor was ready for its final run.

The first run including labor and Dyno time cost me \$600. The loss of my Cosworth Vega head including all parts and labor was close to \$1000. This engine turned out to be a challenge indeed.

Next issue will see the results of the final dyno run and begin to discuss chassis modifications to get this new-found power to the pavement. I have spent a lot of time researching better ways to do things for the Cosworth Vega. Through this research I have been developing new engine components and chassis components. I would like

to introduce an old Indy engine trick, the specially designed Cosworth Vega engine lift fixture (please see advertisement). Good luck fellow Cosworth owners. Remember, BE FAST! We have an obligation to all Cosworth Vega's, a car that still can be.

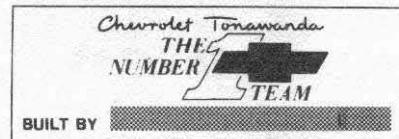
spectre motorsports team



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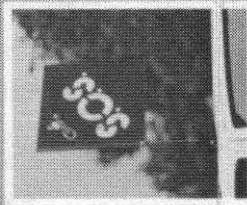
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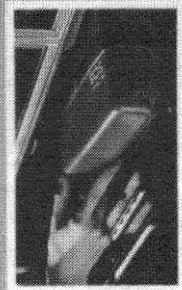
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ENGINE TUNING PART II

(Continued from page 8.)

It isn't all moonlight and roses, but the plusses far outweigh the minuses. We'll have a full report in the next issue with actual before and after dyno figures.

A final thought. In Europe, automotive engineers use a term called SYSTEMS EFFICIENCY when discussing modifications to production high-performance engines. What this means is simply that all of the effects of a modification are taken into account.

In this country we rarely hear the term used. Components are isolated. It's the cylinder head, or the trick piston, or the new super-doublewhammy exhaust header, or whatever the latest magician has pulled out of his hat. Any modification has an effect on every other system of the car. A change in camshaft timing will have an effect on the suspension system. In future segments, we will try to keep that concept in mind and discuss the SYSTEMS APPROACH rather than isolating various components.

A "killer motor" should only be put in a chassis capable of handling it. That means better than average brakes, a good strong transmission and rear end and most importantly a better than average nut holding the wheel.

In the final analysis, the most important and most overlooked system in any vehicle is the human guidance system — *that can never be replaced by an over-the-counter part.*



This beautiful reproduction of an original oil painting by Emanuel Schechter are now available as postcards with a short information panel about the car's history. All proceeds go to Region II. Available either as a postcard, 20 for \$5.00, or as a beautifully framed and matted picture for your den or office at only \$7.95 each.

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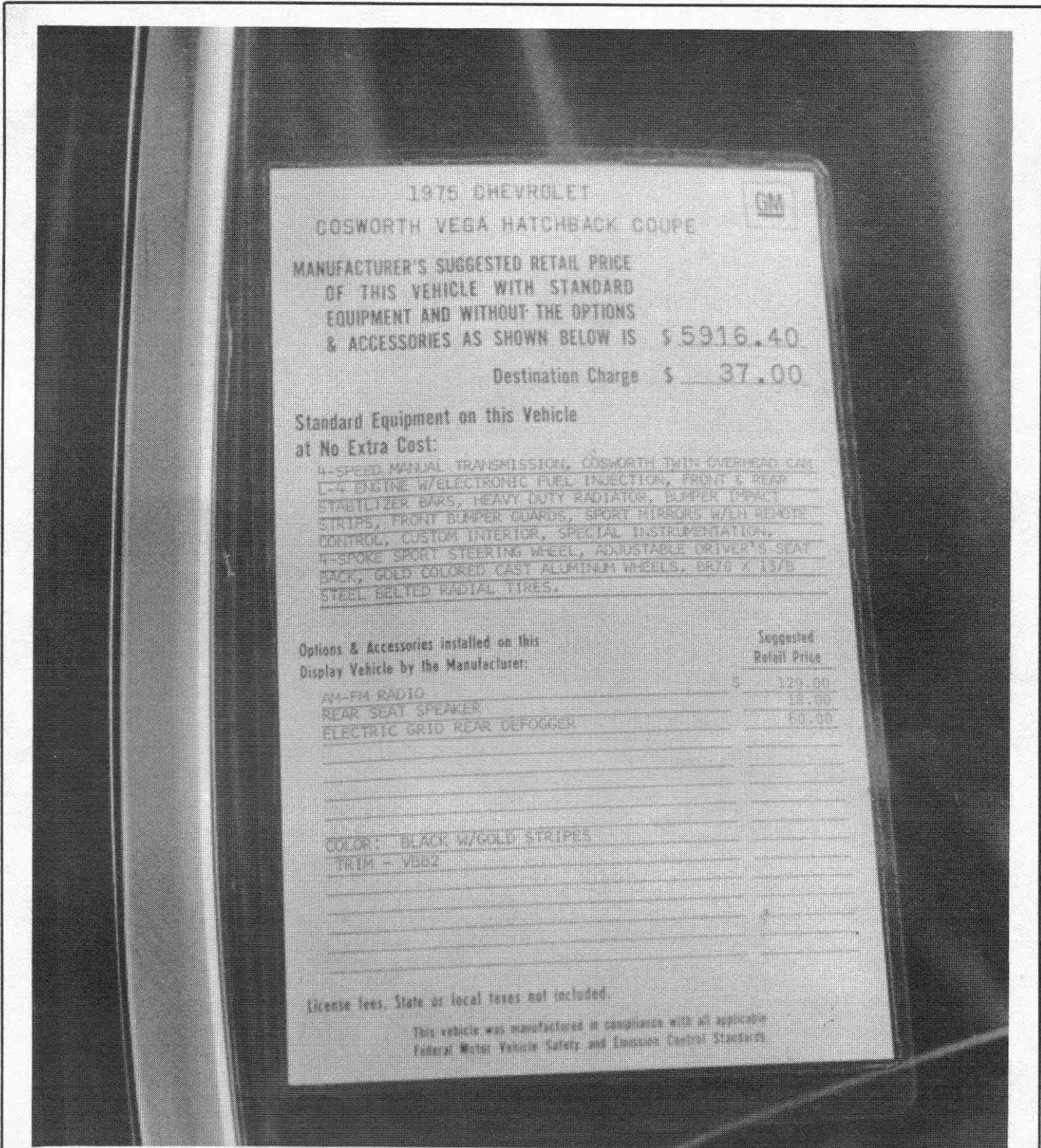
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What's A Cos Worth?

That's a question I've probably been asked 1000 times or more.
 So my response has been — "An Investment Opportunity to Explore."
 And if you don't recall the Suggested Retail Price,
 Just take a look at the Photo and see how Nice
 It is to Own a Performance Package called the RPO-Z09
 And realize, it is now all Mine.

Jim Martin, Nashville, TN

Window Sticker Photograph belongs to Cosworth Vega #0001, located at the Sloan Museum in Flint, Michigan.



ROUND-UP -82 — M



VORTON, ILLINOIS

COSWORTH QUIZ

You say you're into trivia about the Cosworth Vega, eh? Well, here's a quiz to test your mettle, or is that metal?

- Q 1. What is the total spring load, in pounds on the production clutch?
- Q 2. One more "clutching" question . . . what is the total effective area, in square inches?
- Q 3. What is the MILSPEC (Military Specification) for the recommended lubricant used in the standard four speed transmission?
- Q 4. What is the normal oil pressure range at 2000 RPM?
- Q 5. Here's an "exhausting" question . . . what is the exact branch outside diameter and wall thickness of the exhaust pipes?
- Q 6. How about the main pipes, same question as above?
- Q 7. And finally, the tail pipe?
- Q 8. What is the difference in the stock Vega timing belt and the one used on the Cosworth?
- Q 9. What is the width of the assembled oil ring?
- Q10. What is the direction and amount of offset of the piston pins?
- Q11. What is the weight in ounces of a Cosworth connecting rod?
- Q12. What is the cylinder head volume in cc's of one chamber?
- Q13. What is the exact weight of a production piston, in ounces?
- Q14. What is the minimum combustion chamber volume allowed, in cc's?
- Q15. What is the maximum width of the Vega with both front doors opened fully?
- Q16. What does a Cosworth Vega owner and Amelia Earhart have in common?

ANSWERS ON PAGE 26.

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Avec le corps

La musique, ce n'est pas un simple plaisir de l'esprit, tout le corps doit participer à la fête. Avec le Bodysonic développé par Pioneer, cette phrase est à prendre au pied de la lettre. Le principe consiste à prolonger l'écoute au travers du corps, grâce à huit vibrateurs ultra-minces placés sur l'envers d'un coussin fixé au dossier du siège de votre voiture. Ceux ci reproduisent et amplifient les sons graves, tout en recréant les vibrations dynamiques que l'auditeur perçoit dans les reins.

OK, but where do you put in the quarters, Shirley?

LET THE SUN SHINE IN

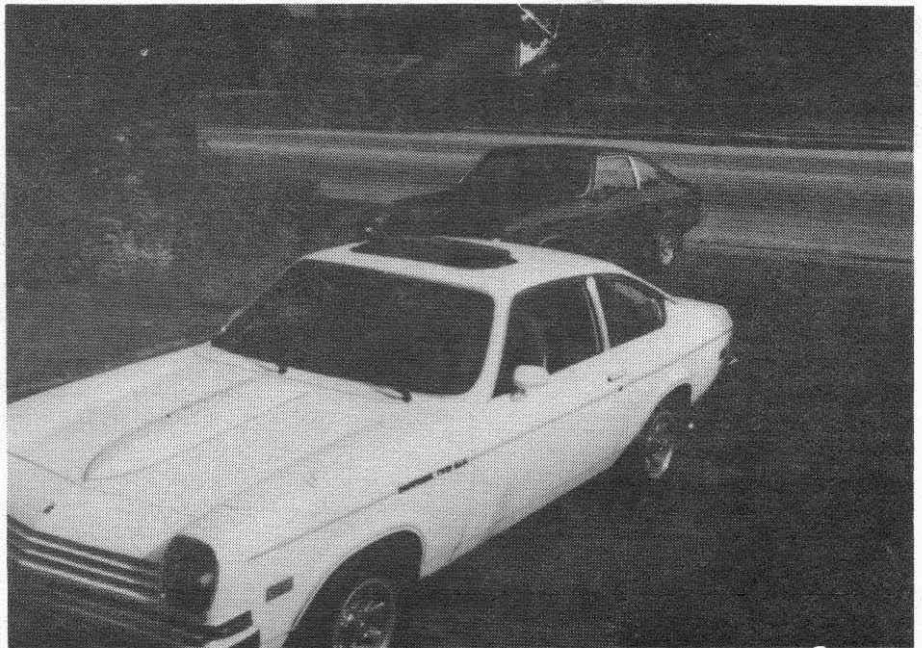
by
Mark Neveu

A sunroof installation for my '76 Cosworth Vega was something I thought about for a long time. I wanted all the benefits, but I wasn't sure about modifying the car. Also, would an after-market sunroof be of sufficient quality? What about the appearance, inside and out? Would I dare cut into the roof myself?

Eventually, several factors convinced me to make the move. The recent purchase of a second Cosworth, the prevalence of cars with sunroofs on the road (everybody's doing it), the closeness of summertime and finally, an inner voice that kept saying, "If you don't do it now, you never will!"

Once my mind was made up, I researched the matter very thoroughly. That is, checking out the styles, prices, installation details and most important, quality. I wanted the best sunroof I could find; junk material need not apply.

After a few weeks, I finally settled on an established auto glass company in Providence, R.I. I toured the shop, looked at the hardware and checked out some of their prior sunroof installations. The company president then looked at my car. "No problem" he said. I stood there for a moment, took a deep breath and replied, "Fine, call me when you are finished." The worst part was now over.



#0097 and #2523 With Sunroof.

Did I make the right decision? Apparently so. I've had the sunroof in for about 4 months now and I'm sorry I didn't do it before! No regrets.

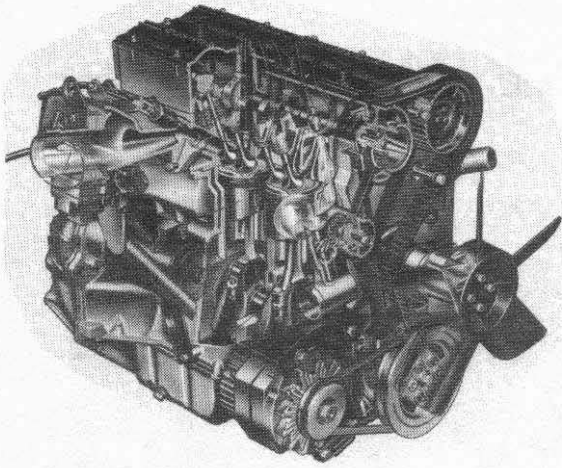
The photos illustrate the final product; most people think the sunroof came with the car originally. On the inside, a black frame blends with the headliner while an inner garnish molding hides all screws and hardware. On the outside, I went for the polished frame (extra cost, black is standard) because it best suited the white car and chrome trim. The PPG "Solar-Cool" glass is fully removable (nice) and effectively reflects the sunlight. Note that some roofs may have "guardian" or "mirror" glass, which is O.K. but scratches easily. The choice is yours. One interesting point is the Vega roof itself; it's double-walled, quite strong and requires careful cutting. The glass shop mentioned that installation was slightly more difficult and time consuming because of this. Cost was approximately \$220.00 — 1 yr. guarantee on roof and installation.

The final product is great; no leakage whatsoever, great ventilation, good looks, and a wonderful airy feeling. If you decide to take the plunge, spend your dollars wisely and check around. A good sunroof, combined with a careful installation, can be very rewarding.

Enjoy and let the sun shine in!



#2523 Sunroof.



TECHNICAL BULLETIN

URGENT TECHNICAL BULLETIN

DATE: 9-25-82

SUBJECT: *Loose Pulse-Air Pipes at Exhaust Header*

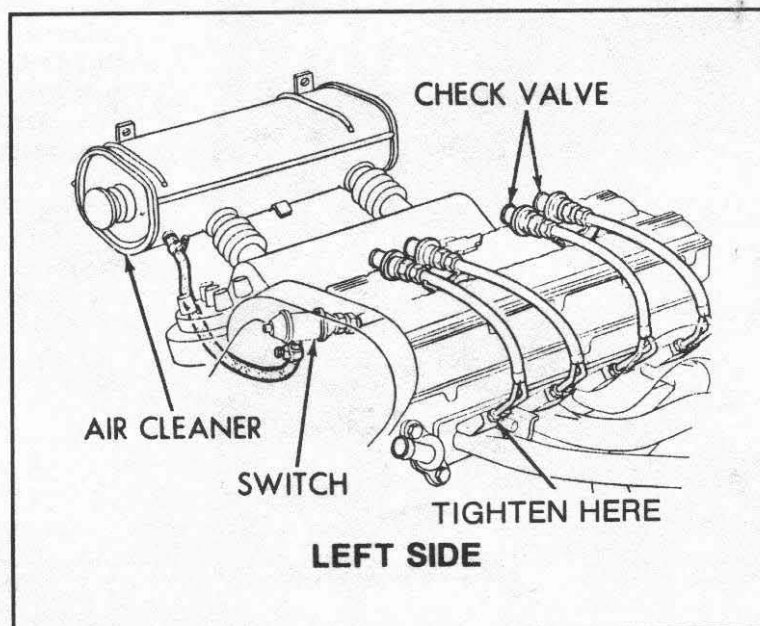
COST OF PARTS: None

Check to ensure that the pipe fitting that secures the Pulse air tubes in the exhaust header are snug. Be sure to use a **SIX-SIDED CROW FOOT WRENCH ONLY** on the fittings as they are made of fairly soft material and will deform if extreme care is not taken in either the tightening process or the removal of the Pulse Air tubes.

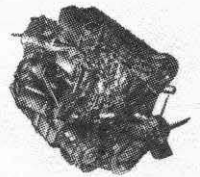
The reason for checking is that if the tubes come loose the reversion tubes in the header pipes can get loose and vibrate causing gouging and unrepairable damage to the cylinder head.

A second cause of damage when the pipes get loose is the potential for cold air to get on the exhaust valve seats and to cause premature failure of the exhaust valves due to uneven temperatures.

The correct torque for the fittings is 150-175 INCH-POUNDS.



TECHNICAL BULLETIN



DATE: 9-30-82

SUBJECT: *Part numbers for various Fuel Injection Parts*

PRICES: Check your supplier

Description	Part #	# Req'd.	Description	Part #	# Req'd.
Gasket, Dist. Drive Housing Cover	334049	1	Speed Sensor	334039	1
Grommet, EFI Control	336500	2	Inlet Manifold Air Air Temp Sensor	345133	1
Grommet, Fuel Rail Bracket	345143	4	Coolant Temp Sensor	361089	1
O-Ring Seal Injector	1606772	4	Fuel Rail	361087	1
Seal, Fuel Injector	345141	1	Pulse Air Pipe	360187	2
Washer, Fuel Injection	2454766	2	Pipe, Dist. Drive Oil Drain	360186	1
Computer	354819	1	Throttle Position Switch	345132	1
Air Cleaner Element AC505C	6488289	1	Throttle Body	377369	1
MAP Sensor	361090	1			

DATE: 10-14-82

SUBJECT: *Cosworth Vega Pinstriping*

The addition of black pinstriping to a white Cosworth Vega is a nice touch. The original gold stripes stand out much better on the white body when outlined with a narrow (1/16") black pinstripe. Also, the black itself matches the 3" Cosworth Twin Cam decals and most likely, the interior color and other trim.

To do this, pick up a high quality pinstripe tape at the auto paint shop, wipe and clean the car thoroughly and give it a try. The existing gold tape already provides the guide you'll need. Do one long length at a time — check for straightness. If you are satisfied with the appearance, there's a number of places you can do. The 4 wheel flares, hood stripe, hatch area, for example. Other light colored Cosworth Vegas may benefit also.

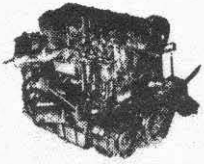
See photo — observe contrast between white/black/gold.

Thanks to:

Mark Neveu
#0097 & #2523



TECHNICAL BULLETIN



DATE: 10-2-82
SUBJECT: *P.C.V. Valve Replacement*
PART NUMBER: AC Type, PCV - CV-784-C
PARTS COST: Approx. \$3.50 - \$4.50

We are printing the letter that prompted this Bulletin in total to stress the importance of **IMMEDIATE REPLACEMENT**.

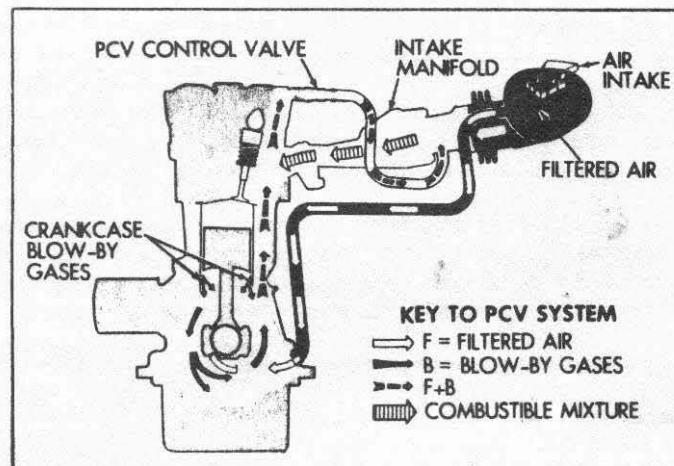
Recently, my car started burning oil. There was also a large external oil leak after the oil pressure went up. I've spent hours looking for the leak with no success. A plug and compression test revealed #1-130psi, dry, #2-110psi, wet, #3-150psi, wet and #4-450psi and soaked. I was really baffled. I checked the PCV valve and it rattled. Possibly three bad oil rings or three cracked pistons? The next day I drove the car 40 miles to work. On the way back home I filled the motor with oil and after 25 miles the oil light came on. I pulled over, locked the car up and walked 10 miles home. Later, I had the car towed to a repair shop as I have no garage to work in.

The final bill came to \$530.00. All of the bearings were replaced, both main and rod bearings. Air filter, gaskets, plugs, and all of the drive belts which were soaked with oil. And they replaced the part that caused all of the problems, the PCV Valve, a \$3.50 part.

The moral to the story is: **JUST BECAUSE IT RATTLES, DOESN'T MEAN IT'S GOOD!**

REPLACE YOUR PCV VALVE EVERY 12,000 MILES.

The PCV Valve is located in the short hose that goes from the cam carrier to the intake manifold. You can replace it in two minutes.



DATE: 10-20-82
SUBJECT: *Window retaining "Bow-Ties" and related pieces*
PART NUMBERS: See below

"Bow Tie" retaining clips for rear window trim pieces P.N. 9880449
Number required: 4 on top, 2 on sides

Trim strips:
RH Side, Top P.M. 9833916
LH Side, Top P.N. 98-3917
Vertical - same both sides P.N. 9680699

Thanks to:
George Harrington
#1884

LETTERS TO THE EDITOR

Dear C.V.O.A.:

My Cosworth Vega is one of the most exciting cars I've driven. I purchased it new in '75 and have driven it summers only. It has 65,000 miles on it and is in perfect condition. It doesn't seem to be tired, but I can't help but think it is. I have been considering the purchase of a new sports car to fulfill my driving pleasure and have had a great deal of difficulty finding something that will fill the Cosworth's shoes. Good used Vettes, if you can find a good one that hasn't been abused, go for \$13,000 or more and Porsches are out of my price range.

I am considering the possibility of rebuilding the Cosworth and utilizing its tremendous potential. Where do I begin? I have a mechanic who is capable if I had the technical information and parts or should I consider packing up the motor and shipping it to someone. One very important consideration is to not create a monster that would be undependable. In my mind I would like the Cosworth to have the strength and performance of a Porsche or other expensive and powerful sports car.

What are my options? Can our club put together some ideas for me?

I look forward to hearing from you. Thank you.

Guy Garofalo

Answer: Dear Guy, will you've come to the right place! We have already sent you a personal reply to your letter, but for the rest of you who are faced with the same dilemma, consider this. You can buy a good used Cosworth Vega with 40,000 miles on the chassis for about \$2,500 to \$3,500 and then spend another \$2,000 making it perfect. You then have an investment of let's say \$5,500 maximum and a car with more technological tricks than a MIT graduate and what's more, a lot of fun to drive plus 30 mpg if you can keep your foot out of it. That is what we consider to be a real economy car and an excellent investment, too.

Dear Sirs:

Working on a Great Lakes iron ore freighter precluded my attendance at this

years "Round-Up" and I am anxiously awaiting the newsletter reporting on it. Sure hope it was a great success!

I really enjoy the Club Magazine, and its Technical Bulletins. I am awaiting the update on the replacement EFI computer being developed. Will it have a wider range of settings (for racing, etc.)? I now own my second "Cos" and have had numerous failures in the computers of both. (I traded my first car in on the second.)

I also would like to know if anyone has any information on the Cosworth powered prototype Monza that was on display at the Kings Island amusement park near Cincinnati, Ohio a few years ago. It was gold and looked like a cross between a normal Monza and a Mazda RX7.

Wishing the C.V.O.A. continued success.

Lance T. Nelson, #2206

Answer: Dear Lance, thanks for your letter. The replacement computer project is at a standstill because what's required now is a

(Continued on page 24.)

THE ACCOUNTING FIRM OF

PHILIP C. RUST III, CPA

IS PLEASED TO ANNOUNCE
THE OPENING OF ITS OFFICE
AT

5005 NORTH ILLINOIS
INDIANAPOLIS, INDIANA 46208

PRACTICE LIMITED TO CONSULTATION ON:

INVESTMENT TAX CREDIT
ENERGY CREDIT
CONSTRUCTION ACCOUNTING
DEPRECIATION ACCOUNTING
RESEARCH AND DEVELOPMENT CREDIT

MARCH 1, 1982

TELEPHONE
317/253-4303

THE LAW FIRM OF

Schwarzwald, Robiner, Wolf & Rock

A LEGAL PROFESSIONAL ASSOCIATION

IS PLEASED TO ANNOUNCE
THE OPENING OF ITS NEW OFFICES
AT

616 BOND COURT
1300 EAST NINTH STREET
CLEVELAND, OHIO 44114

AND THAT

PAULA HOPKINS

HAS BECOME ASSOCIATED WITH THE FIRM

DONALD M. ROBINER
MELVIN S. SCHWARZWALD
MARSHALL J. WOLF
MARK A. ROCK
PAUL F. LEVIN
PAULA HOPKINS

JULY, 1981

NEW TELEPHONE
(216) 566-1600

LETTERS TO THE EDITOR

(Continued from page 23.)

lot of time on a dyno to profile the memory to ensure correct operation under all conditions. Dyno time costs **BIG BUCKS**, something this club is always short on. The Monza you mentioned, at last check, was still in the G.M. display at the Cleveland amusement park.

Dear C.V.O.A.:

Congratulations for the success of our association. I wish I could join our activities. I'm still here in Venezuela accomplishing my job assignment. Every time I receive our magazine, I wish I were back in Chicago driving my Cosworth. I enjoy that car and when I go back I'll write or call you to ask how I can return my Cosworth to running condition again after a few years of storage.

Regards, Ruben Bautista, #0147

Dear C.V.O.A.:

I've just purchased a complete set of stripes for my Cos. In your Tech Bulletin dated April 7, 1980 the price for the complete stripe kit is shown as \$166.25.

I had a heart attack when the parts man at Baher Chevrolet said, "That will be \$226.10 please." Of course that included sales tax! It seems that in just two years, the prices of stripe kits have gone up 78%!

Noboru Kosora, #2442

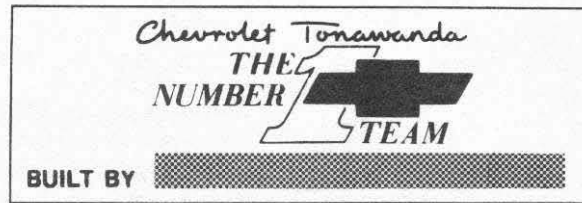
Answer: It seems that a good business to be in is the parts business. We can't get too upset at the dealers though. They don't raise the prices, GMPD does. In all fairness to GM, it does cost money to warehouse parts be they stripe kits or connecting rods. In a way, I would rather have to pay a "price" for parts than have no part available at all!

Dear C.V.O.A.:

When I first bought my Cosworth, I didn't know exactly what I was getting into. The C.V.O.A. has been the only "light" at the end of the tunnel. I really appreciate the work you have put into this club and would also like to give thanks to Mr. Paul Cornell, my Regional Director. He is doing a super job and needs to be recognized for doing so. I wish I could be at the Round-up in Morton, but school comes before pleasure!

Sincerely, Ernest Burkholder, #3112

Original Replacement Engine Signature Label for your **COSWORTH VEGA**



FULL COLOR

Made of high temperature mylar with better than original signature block.

\$3.00 Each - 3 for \$8.00

SEND CHECK OR MONEY ORDER TO:

CLIFFORD H. FRAVEL
27 OPENWOOD LANE
LEVITTOWN, PA 19055

For information call 215/946-6188

English Wolfrace Driving Seats as low as \$275.00*

The more you drive, the more you need a quality seat that holds you securely and comfortably. That's what Wolfrace is all about. Made to last, they're as stylish as they are functional. And best of all, they cost only a little more than reupholstering your present seats: as little as \$275* plus headrest and bracket. We are mail order experts. Your seats will arrive in prime condition and our phone service will help you with any installation hassles.

Color catalog sent at no charge.



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for car, van or pick-up

Ed Swart Motoring Accessories, Inc.
17101 So. Central Ave., Unit 1
2 blocks north of 91 Freeway
Carson, Calif. 90746

(213) **639-4570**

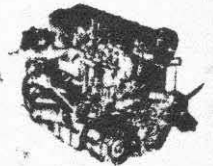
ESinc.
ED SWART MOTOR ACCESSORIES Inc.
15% discount to CVOA members.

WELCOME, NEW MEMBERS



Elaine Albright	Santa Clara, CA	Robert Collom	Clarkston, GA	Wayne, E. Meeker	Grand Junction, CO
Jim Artz	Quartz Hill, CA	James Criner	Anchorage, AK	Jim & Diane Miley	Kendallville, IN
Jeff Baldwin	Houston, TX	Terence Danner	So. St. Paul, MN	Russell Molloy	N. Providence, RI
Scott Becker	Texarkana, TX	Glenn Davis	Clinton, NJ	Scott Moore	Berry, AL
N. Craig Bickel	Cincinnati, OH	Rene De Fouw	Garden Grove, CA	Carolyn Mott	Cupertino, CA
Reynolds Boggio	Riverside, CA	Richard Farlese	Yonkers, NY	Rory Murphy	Hermosa Beach, CA
Garry Bowring	Upper Marlboro, MD	Alan Friskney	Ft. Wayne, IN	Bob Nicks	Cary, NC
Michael Breeding	St. Louis, MO	Dan Garner	Ft. Wayne, IN	Jim Oldiges	Toledo, OH
James Bungard	San Francisco, CA	Ted Gloppe	Natchez, MS	Salvador Paz	Los Angeles, CA
Ted Cassels	Cairo, GA	Robbin Graham	Fremont, CA	Raul Santibanez	Greenfield, CA
Robert Caruso	Somerville, MA	Bryan Graves	Cerritos, CA	Fred Schroeder	Valley Stream, NY
Jeff Chillemi	Aurora, CO	Jess Gregory	London, England	Roger Schutz	Milwaukee, WI
Michael Coffee	Chamblee, GA	Robert Griffin	Napa, CA	John Servin	Santa Clara, CA
		George Harrington	San Gabriel, CA	Ken Sikora	Ft. Wayne, IN
		Alvin Hedges	Murphysboro, IL	Donald Sojka	Perth Amboy, NJ
		Ray Hill	Los Angeles, CA	Steve Spomer	Lincoln, NE
		Joe Hopson	Redwood City, CA	Todd Taylor	Fairfield, OH
		Bruce Jahnke	Milwaukee, WI	Steven Thorpe	E. Peoria, IL
		Mike Kaskinen	Beulah, MI	Keith Treace	Sylacauga, AL
		Thomas Kilian	Centerville, OH	Bennet Trousdale	San Francisco, CA
		Wayne Kingrey	Florence, AL	Mark Uehling	Bowie, MD
		Michael Kosick	Pottsville, PA	Robert Vielhaber	Beachwood, OH
		Larry Lambert	S. Amityville, NY	Pat Watt	St. Charles, MO
		Mark Limdbloom	Garden Grove, CA	Danny Willett	Lubbock, TX
		Wayne MacDonald	McConnellsburg, PA	Craig Wright	Santa Cruz, CA
		John McGowan	Kenmore, NY	Bob Yates	Louisville, KY
		Jerry McKnight	Portland, OR	Greg Yori	Holmdel, NJ

TECHNICAL BULLETIN



DATE: 10-28-82
 SUBJECT: *Headlamp "ON" Warning Buzzer*
 PART NUMBER: 344835
 PART COST: \$7.10

This will remind you that the headlights have been left on, and the installation takes three minutes.

Simply plug one wire into the ACC outlet in the fuse box, and the other into the LPS position in the fuse box. That's all there is to it, and it can save you from a dead battery and a lot of aggravation, too.

Thanks to:
 George Harrington
 #1884



Mike Koeppel
 101 Cedar Ct.
 E. Peoria, IL 61611
 309-694-4053

*We Understand
 Cosworths*



**FABRICATION
 and
 DESIGN**

Great Idea for Christmas Gifts for the Cosworth that has everything!

Debie Roman
Route 1, Box 231-C, Goleta, California 93117
(805) 968-0256



These beautiful handmade rear carpets are made from 100% tufted wool and is available in black, tan or red to match the original carpeting material colors. The logo can be in any color of your choice, but most Cosworth owners prefer the black carpet with the logo in gold 4" high letters. The cost is just \$125.00 including shipping and any applicable sales taxes. Workmanship is guaranteed for five years and replacement will be made in the event of a faulty carpet. Delivery time is four weeks from receipt of order.

Cosworth Quiz Answers

- Q 1. 1250-1450 pounds
- Q 2. 71.82
- Q 3. MILSPEC MIL-L-2105B
- Q 4. 27-41 lbs/sq/in
- Q 5. Branch pipe: 2.25 x 0.84
- Q 6. Main Pipe: 2.25 x 0.83
- Q 7. Tail pipe: 2.00 x 0.57
- Q 8. Width: Stock Vega, .954-1.031
Cosworth, 1.27
Pitch: Stock Vega, .500
Cosworth, 0.357
Number of teeth: Stock Vega, 91
Cosworth, 128
- Q 9. .1870-.1890
- Q10. Major thrust side, .060
- Q11. 19.2 ounces
- Q12. 39.67 cc.
- Q13. 20 ounces
- Q14. 39.2 cc
- Q15. 146.8 inches
- Q16. The plane that Amelia Earhart flew across the Atlantic ocean to Ireland in 1932 was called the VEGA.

BRAND NEW COSWORTH

6 (SIX) ACTUAL MILES
1976 #2618 BLACK, BLACK
5 SPEED, ELECTRIC REAR WINDOW
DEFOGGER. AM-FM DELCO. STORED
INSIDE. PERFECT. ALL STICKERS
AND MANUALS.

Best offer at (or over) \$7,500
S.T. Garrett (317) 849-3543
Noblesville, Indiana

HOWDY! C'MON TO ROUND-UP '83

COWBOY COUNTRY
DALLAS, TEXAS

1ST WEEK IN AUGUST 1983

NOW YOU CAN CHARGE
YOUR MEMBERSHIP
ON YOUR



-CUT OUT AND MAIL-

MEMBERSHIP APPLICATION

NEW RENEWAL

COSWORTH  VEGA

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE (____) _____

MEMBERSHIP: ONE YEAR \$25 THREE YEARS \$60

ABOUT YOUR COSWORTH

YEAR _____ BODY COLOR _____

ENGINE # _____ UPHOLSTERY _____

V.I.N. # _____ COLOR & TYPE _____

DASH # _____

MODS. _____

AMEX M/C VISA CARD NO. _____

EXP. DATE _____ SIGNATURE _____

OFFICE USE _____ DATE RECEIVED _____ EXPIRATION DATE: _____

CUT OUT AND MAIL

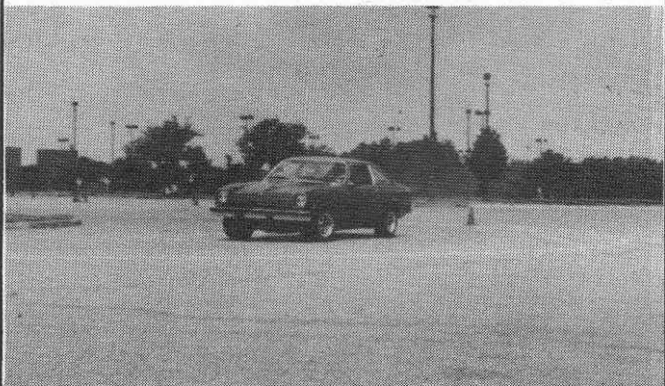
ROUND-UP EVENT RESULTS



Ric Quinonez
1st Place - Unlimited and
Fastest Time of Day Trophy



Mark Grimm
1st Place, Stock Class



Tom Dymant
1st Place Modified



Peter & Debbie Dirisamer
1st Place, Rally

Greg Burton
1st Place, Concours

AUTOCROSS

Stock Class: 15 Entries. Fastest time of the day —
R.K. Quinonez, Fresno, CA - 38:008

1st	Mark Grimm	44:300 (T)
2nd	Peter Dirisamer	44:695 (T)
3rd	Bob Maloy	45:210 (T)
4th	George Coon	45:272
5th	Jim Miley	45:742

Modified Class: 41 Entries

1st	Tom Dymant	41:946 (T)
2nd	Tom Prather	42:950 (T)
3rd	Mark Rock	43:656 (T)
4th	Jeff Romeo	43:681
5th	John Cowall	43:699

Unlimited class: 8 Entries

1st	Ric Quinonez	38:008 (T)
2nd	Doc Dougherty	38:577 (T)
3rd	Fred Thomas	40:767 (T)

Ladies Class: 6 Entries

1st	Diane Prather	45:857 (T)
2nd	Loretta Lawler	47:592 (T)
3rd	Kathy Cowall	48:734

CONCOURS

Class A (under 25,000 miles)

1st	Greg & Paula Burton	(T)
2nd	Dave Gade	(T)
3rd	Mark & Becky Grimm	(T)

Class B (over 25,000 miles)

1st	Maurice Schechter	(T)
2nd	Jack & Carmen Van Dyke	(T)
3rd	Bob Chin	(T)

Class C (Modified or Specials)

1st	Pete & Debbie Dirisamer	(T)
2nd	Clark & Jean Kirby	(T)
3rd	Phil & Shirley Rust	(T)

RALLY

64 Entries

1st	Pete & Debbie Dirisamer	(T)
2nd	Clark & Jean Kirby	(T)
3rd	Phil & Shirley Rust	(T)

(T) Denotes trophy awarded.

REGIONAL NEWS

As you can tell from the editorial page, we have some new Regional Directors for the 1983 club year. Be sure to check and see who YOUR Regional Director is.

Region I, New England

Sunday, October 10th, was the date for a "meet" of the New England Region as guests of the Sports Car Club of America's New England Region. Cosworth owners were invited to participate in the SCCA Solo II event.

Dave Haskell has thrown down the gauntlet to any and all Cosworth owners in the Northeast area. Dave wants to compete for a case of Heinekens Beer donated by Freak Enterprises. The competition centers around the Solo II event, and who has the best time in class. SCCA rules apply. Solo II is also known around the country as Autocross, Slalom, and Gynkanaha. Any takers?

Region II, New York - New Jersey

Welcome to our new Regional Director, Maurice Schechter. Maurice is an ace mechanic and Cosworth whiz. We look forward to some exciting events in the upcoming months.

Region III, Mid-Atlantic

Gene Von Gunten will be assisting D.J. Martin as co-director for this region. D.J. has been at the helm for the past three years and is happy to get some assistance. Gene is the "Father of Old Cosworth Parts" and we are indebted to Gene for going to the time and trouble to search out wrecked cars for parts. He is an avid Cosworth owner and we are assured that the Mid-Atlantic Region will have excellent leadership with this team.

Region V, Southern States

Our thanks go to the Melvin Ayers family for helping with this region's business over the past year. Mel and his son are among the charter members of the Cosworth Owner's Association and we thank them for the support they have shown over the years. Our new Regional Director, Tom Guyton of Raleigh, N.C., has also been a long time member and he assures us that we can look forward to some exciting events in the near future.

Region VII, Great Lakes Region

Another Charter Member, Mark Rock, is stepping down due to his growing law practice in Cleveland. Our new Regional Director, Doc Dougherty, brings a wealth of

knowledge to the members of the Great Lakes Region about the Cosworth. Doc is an experienced Solo II driver and for two years was the undefeated champion at our National Round-Up in the Autocross. Along with Graydon Obenour, Doc prepared a complete breakdown of all of the components of the computer printed circuit board and distributed to the club's members at the 1981 Round-Up in Detroit. We want to award an Associate Membership to Graydon for his efforts and our thanks. Doc's sportsmanship and spirit can be an example for us all.

Region XIII-A, Rocky Mountains

A brand new region has been formed for the C.V.O.A. Jeff Romeo has volunteered to head up the Denver-based group and we are sure you'll be hearing from Jeff soon about regional events.

Region VIII, Detroit - Michigan

John and Kathy Cowall continue to produce one of the best Regional newsletters in the country. The Detroit Region was well represented at the National Round-Up in Morton, Illinois this year, and the Region took home its share of the trophies.

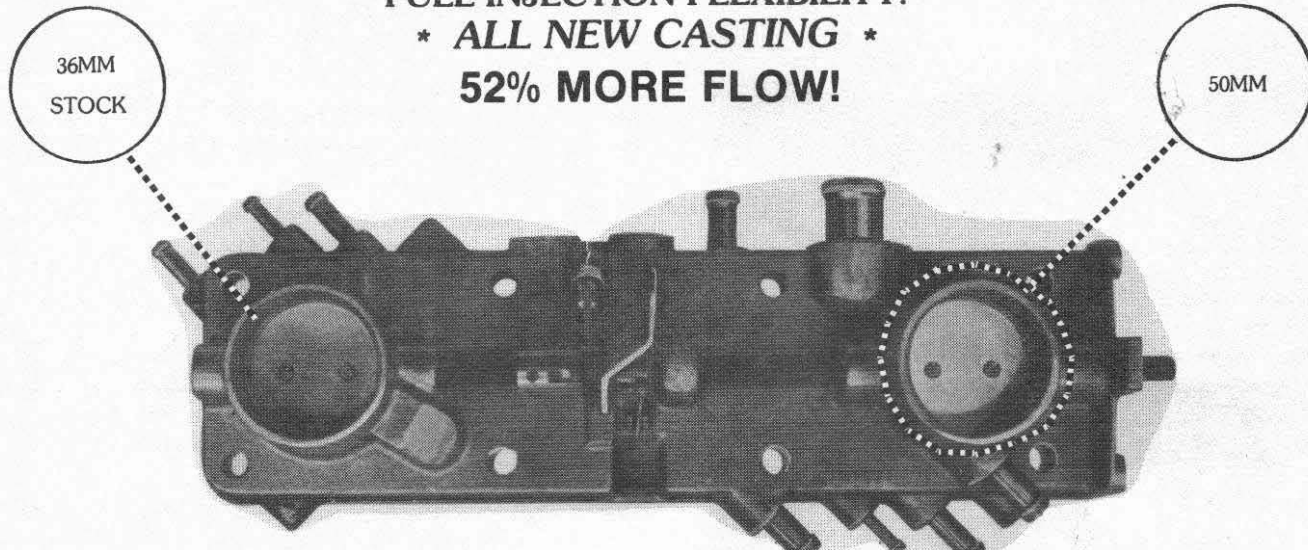
(Continued on page 29.)

NEW THROTTLE BODY CASTING 50MM BUTTERFLYS — SUPER PERFORMANCE!

FUEL INJECTION FLEXIBILITY!

* ALL NEW CASTING *

52% MORE FLOW!



2 HOUR
INSTALLATION

COMPLETE
INSTRUCTIONS INCLUDED

\$225.00 CASH, CHECK, VISA-M/C, AMEX
SEND STAMPED SELF-ADDRESSED ENVELOPE FOR MORE INFORMATION.

RAM ENGINEERING, 28172 VIA CERNUDA

MISSION VIEJO, CALIFORNIA 92692

REGIONAL NEWS

Continued from page 28.)

as the results will attest. John and Kathy continue to provide the members with a variety of events to keep the interest going. John tells us that during the winter months meeting will revolve around the care and feeding of a cold Cosworth, but that's when you can be grateful for all that heat off the exhaust headers!

Region XIII, Southwestern

Paul and Kornell, our Regional Directors for the newly named Southwestern Region, and eight other Cosworth Vega owners were the guests of the Arizona Austin-Healey Club for a desert breakfast get-together in September. In the desert area, early morning events are common, especially when the attendees are all in "hot" cars without air-conditioning. Thirty Austin Healeys and the Cosworths enjoyed a day touring and visiting a local old car exhibition. For those of you who are full of Cosworth trivia, you'll remember that Donald Healey started negotiations with Chevrolet to use the twin-cam motor in his sports car then in the design stages, the Jensen-Healey.

Region XII Cowboy Country ROUND-UP '83

Clark and Jean Kirby are preparing for the 1983 Round-Up to be held in the Dallas-Ft.

Worth area. The first week of August will be the date, so start now to make plans to attend. Knowing how things are done in Texas, we can be sure of the biggest and best Round-Up yet. This Region's outstanding newsletter continues to be one of the leaders in information and help to the members in the Region. The newsletter is sponsored by Olaf Elias' repair facility.

This Region continues to get attention from the press with coverage of a Braille Rally by a local T.V. station.

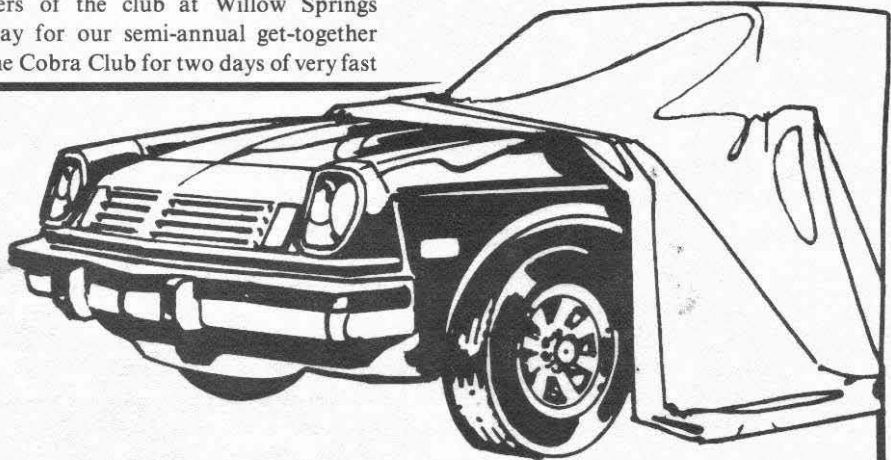
Region XIV, Northwest Territory

Our thanks to Jay Eisenlohr for his support with this region over the past two years. Jay passed the region on to Greg and Nancy Horst and we know, after meeting Greg while on a business trip to Portland recently, that the region is in good hands. Both Jay and Greg are well versed in the working of the Cosworth and can be a lot of help to the members in the region with service or maintenance problems.

Region XVI, Southern California

October 9th and 10th found the "racier" members of the club at Willow Springs Raceway for our semi-annual get-together with the Cobra Club for two days of very fast

driving. Many of the first-timers took advantage of the driving instruction offered at no charge to those in attendance. Mike Pratt and Bob Maloy were two of the instructors available and, as Sy Schoenberg expressed it, "this stuff is addictive, when can we do it again?" Again is May 15-16, 1983, so keep the calendar open. The region also had a great Fun Rally in September, compliments of our Regional Director, Kris Gerbracht and his assistant, Peggy. Herb and Sue Reed, our former Regional Director from Atlanta, took home the trophy. Our next rally event was held October 23rd with Rich Beyer serving as event leader. Our trip took us through the wine country of Southern California into the beautiful area around Santa Barbara. We visited three outstanding wineries for tasting and enjoyed a wonderful picnic.



Announces

"Blanket Protection"

A full stated amount insurance program designed to meet the needs of Cosworth Vega owners, and all collectors, including those specializing in late model and high performance automobiles.

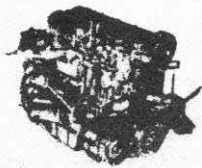
Classic's new "BLANKET PROTECTION" program is affordably priced insurance that includes liability (in most states) and full stated amount coverage for fire, theft and collision.

If you drive your special car 2500 miles or less a year and you would like more information about this coverage call us toll free at:

(800) 631-1363
In Georgia: (404) 955-8787

Classic Insurance Agency • 1 Perimeter Way, N.W. • Atlanta, GA 30339

TECHNICAL BULLETIN



DATE: 10-26-82

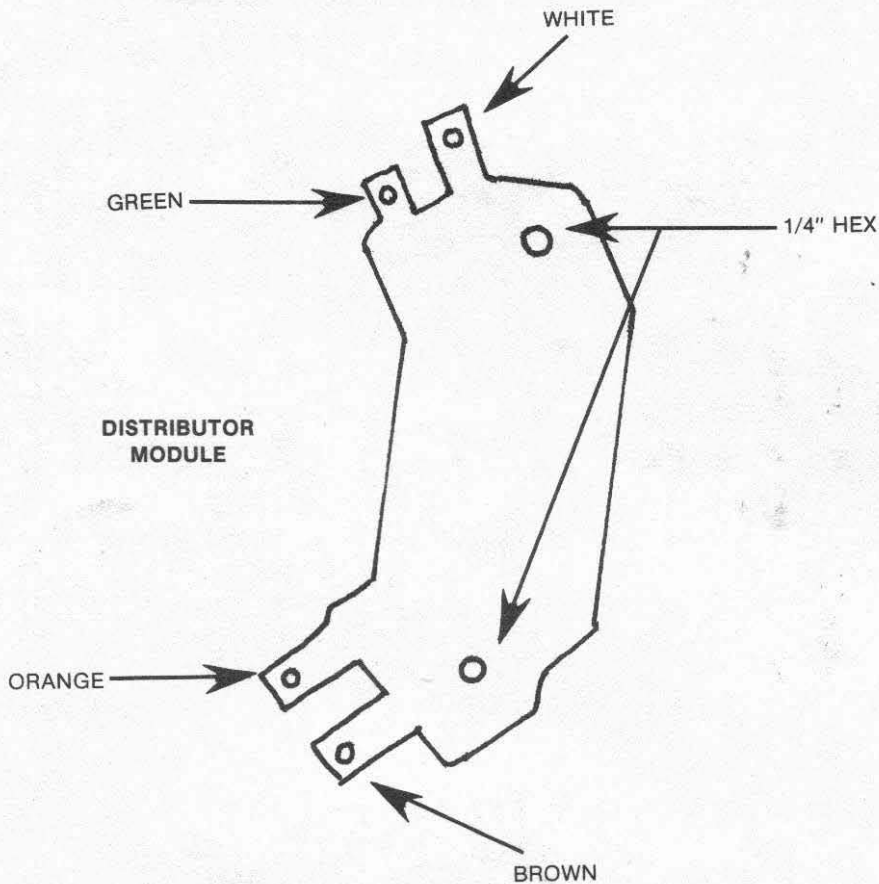
SUBJECT: *Hard Starting & Erratic Performance*

PART NUMBER: Module: Echlin TP45, Cap - Echlin RR191, Rotor - Echlin RR193

PARTS COST: See Your Local Parts Man

1. Remove cap and rotor
2. Locate module in distributor by two mounting screws and four wires. See diagram
3. Remove two screws and lift module out while unplugging wires. It may be necessary to turn advance mechanism in distributor to remove module.
4. With Lectra-Motive cleaner or equivalent on a paper towel, clean mounting base in distributor for the new module.
5. Smear heatsink compound supplied with new module on underside of module and reverse removal procedure. Screws should be snug, not tight.
6. Inspect cap for cracks and condition of terminals and also rotor for burn through. If in doubt replace them at this time.
7. If old module was working, albeit poorly, put it in the glove box for a spare.

Thanks to:
Greg Horst
#0913



CLASSIFIED ADVERTISEMENTS

THE GOOD, THE BAD AND THE UGLY

FOR SALE: 75CV #0956. 40,000 miles. Black vinyl interior, AM-FM stereo, like new. Firestone 721's, rear window defroster, many extra parts. \$3,400.00. Contact Phil Good (313) 373-9418.

FOR SALE: 75CV #0500. Black, black. All factory original. 27,500 miles. Rebuilt engine. New steel belted radials. Needs a little bodywork. Will consider any reasonable offer — must sell! Call Chris Padich, Jensen Beach, FL (305) 334-9045.

FOR SALE: 75CV. #1862. Black, black vinyl. 38,000 miles. 200 miles on rebuilt motor. AM-FM 8-track, rear opening windows. Excellent overall condition. Recent marriage forces sale. \$2,800.00 OBO. Dennis Smith, Galt, CA (209) 745-1346.

FOR SALE: 1982. Trans-AM seats, new car take-outs. Replaced with Recaros. Black cloth, reclining back, all brackets to install. Very close to Cosworth Vega in size. 100% improvement in comfort! Also 3 spoke 14 1/2" leather wrapped steering wheel from Trans-AM. See your instruments, for a change! Make me an offer on these. I need the space and the cash. Call Paul Cornell, Phoenix, AZ (602) 948-3996.

FOR SALE: 75CV #1589. 61,000 miles, stock, mechanically excellent. Needs just repair driver's door. Black, black. \$3,000. See pix cover of Feb. 82 CV News; car at start line. Bill Edge, Arlington, VA (703) 536-8151.

FOR SALE: Used, (but not abused) Cosworth parts including ten wheels at \$75.00 each, two headers at \$200.00 each, one head, one 122 hard chrome crank, eight rods, also some other items. Please call Greg Berger: (405) 377-8242. Keep trying. Stillwater, OK.

FOR SALE: 75CV #2003. Black, black vinyl. 25,000 miles, always in California. Excellent original condition. AM-FM radio, window sticker, all manuals, fully documented service history. Asking \$3,500 or best offer. Phil Koenig, San Francisco, CA. Work phone (415) 894-0142, home (415) 752-3922.

FOR SALE: 75CV #1695. Rebuilt engine. New Roadhandler radials, casset deck. Needs clutch. Excellent condition. \$3,500.00. Michael L. Coffee, Atlanta, GA (404) 458-8774 or 448-1711.

FOR SALE: 75CV #1385. Black, black vinyl. 55,000 miles on chassis, 27,000 on rebuilt steel sleeved engine. Mostly highway miles. Head polished and ported. Engine and valve work done by Katech. Stored winters. Good condition. \$3,500.00 OBO. Getting married. Mt. Pleasant, Michigan (517) 773-0456.

FOR SALE: Pair of Recaro seats. Black with headrest and hardware to bolt into your Cosworth. A real steal at only \$800.00. Call Craig Day (617) 328-6100, ext. 275, Boston, MA area.

FOR SALE: ANOTHER KING-KONG COSWORTH MOTOR. 2499 cc. 50 MM throttle body. Cosworth of England intake and exhaust valves. Trick cylinder head. This engine has it all! This is the factory EFI motor you saw at the Roundup. Motor being replaced by C.O.E. F2 motor. A real deal at only \$4,500 negotiable. This motor ran lap after lap at Willow Springs with Shelby Mustangs. Be the first in your block to blow Porsche 944's into the weeds. Call Bob Maloy at (714) 770-1305.

FOR SALE: 76CV #2501. White with black interior. Complete and original example. 30,000 miles. Call Susan Harrison at (617) 659-4934. Boston area. Asking \$3,500.00 OBO.

FOR SALE: 76CV #2961. Complete and original. Excellent care. 50,000 miles from new. \$3,995.00 OBO. Craig Day (617) 328-6100, ext. 275 (days) Boston, MA area.

COMPUTER EXCHANGE SERVICE: Trade in your dead computer for a rebuilt and tested unit. GUARANTEED. Only \$375.00 exchange for your dead player. We also modify your computer to read short track cam profiles and other engine mods. Phone or write with your requirements. Bob Maloy (714) 770-1305.

COSWORTH VEGA PARTS:

A. Parts from CV #1091: Entire car to be parted out — 19,000 miles. Call for details.

B. Parts from CV #2692: Complete motor, 60,000 miles \$950.00; throttle body assy. incl. injectors \$150.00; head and cam carrier and cam cover assy. \$350.00; exhaust manifold \$150.00; distributor and dist. drive \$100.00; short block \$350.00; E.C.U. (brain-box) tested OK on #2214 \$200.00; dash plaque #2692 \$15.00; interior parts red and silver cloth - inquire.

C. Parts from CV #2961: injection wiring harness complete \$150.00; rubber bellows for air-intake \$2.00 each; intake support bracket \$10.00.

D. Parts from CV #1088: alternator \$30.00; alternator bracket \$15.00; exhaust manifold \$150.00; cylinder head complete \$200.00; pulse-air tube assy. \$25.00; throttle body assy. incl. injectors \$150.00; glove box liner \$10.00; oil pan and baffle and pick-up tube \$40.00; wheel lugs \$1.00 each; fan assy. \$10.00; valve tappets \$2.00 each; valve tappet shims; high pressure fuel pumps \$40.00; sheet metal panels for engine front \$5.00 each; water pump \$15.00; bearing caps and bolts \$2.00 set; harmonic balancer \$35.00; oil pump \$25.00.

E. Other parts: wheel as new \$100.00; spark plug wire sets, good boots \$5.00 set; complete black interior seats, panels, etc. \$200.00 set; inquire about individual pieces.

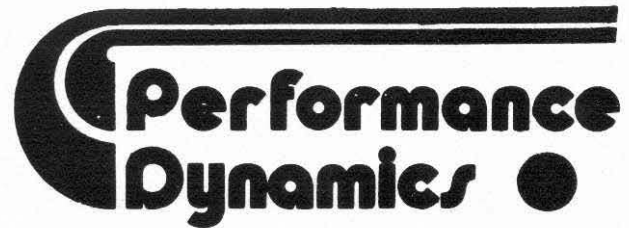
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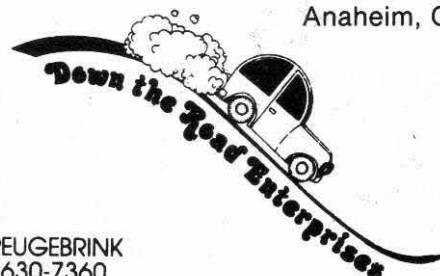
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