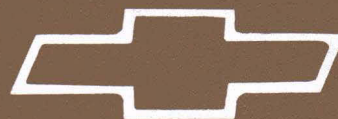


= COSWORTH



VEGA =

OFFICIAL PUBLICATION
OF THE
COSWORTH VEGA OWNERS
ASSOCIATION

Magazine

Published Quarterly

3rd Quarter 1995

DETROIT '95 REVIEW

... Steve Mayefske's Twin Cam Talk, on page 2, has the whole story...

... Minutes from the CVOA'S shortest meeting in history on page 3...

... Concours and Autocross results on pages 6 and 7, respectively...

... What is SPAX? Is it someone's dog? Maybe some kind of kitchen cleaner? See page 9...

... Please see insert for T-shirt orders, note that there are no "correct" white anniversary left ...

... Believe it or not Round - Up 1996 dates are set. Plan to be in Houston, Texas on JULY 12, 13, 14 1996. The hotel is :

HOUSTON WEST HILTON INN
12401 KATY FREEWAY
HOUSTON, TEXAS 77079
1-713-496-9090

You may make reservations now, be sure to mention you are with the " Cosworth Vega Owners Association "

Tim and Sue Morgan are the Round-Up Hosts

... Hope to see you and your " running " cars there. Tim has mentioned that every or almost every "color" Cosworth should be present ...

... Don't forget to order a Kan Kooler with your T-shirt order, they are yellow with black print and have the " 20th Anniversary " logo...

... One more thing, did you figure out what that SPAX was? ...

THE COMING CHANGE IN OBTAINING PARTS FOR YOUR COSWORTH VEGA

Please note that none of the following comments or suggestions are meant to offend in any way.

Let's start with the basics. We all have these cars (peculiar ones at that), they all have parts which wear out, fail, or become damaged in some way. In order to keep it going or looking good you need new parts. The clubs vendors who have scaled down or are getting out completely simply can not afford to spend THOUSANDS on reproducing parts and then sit on them for years. Not to mentioned being nickel & dimed on the price which is many cases is a break even price anyway. The point being unless someone wins the lotto and has an interest in starting a Cosworth Vega reproduction shop the only place to get the unobtainable, will be through club projects. *I am sure that many of these will only be a one time offer.* So **YOUR** part is to participate and send the check! The faster we (CVOA) moves the last project out the sooner we can do something else.

The current projects are the swing-out weatherstrip, T-shirts (MOSTLY BLACK LEFT), EFI "o" ring set, and very limited fuel filters. Hopefully we will not have to sit on these, it is up to YOU THE MEMBERS to make things happen. I will continue to coordinate efforts and help move it along.

Future project possibilities include hood insulation, various rubber stuff (the 5-speed shifter seal, correct pedal pads, taillamp seals, etc.), maybe someday even pulse tubes. Please note we will support the most needed items according to members responses which includes their checks when a project is announced.

As usual comments, complaints, and parts needs are welcome. Please write, it shows more interest and concern on your part than a call.

MIKE RUPERT/MERCHANDISE V / P

MAGAZINE EDITOR

Actively seeking someone for this position. Call Steve Mayefske or Mike Rupert for details.

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or any Regional Director

TWIN CAM TALK

by Steve Mayefske

GREETINGS FELLOW COSWORTH OWNERS:

It's barely a week after the Round-Up and here I am writing this article. It seems like yesterday when I was anxiously waiting for the Round-Up weekend to arrive.

Round-Up week would see me greeting not one Cosworth but two Cosworths ready for the weekend. Joe Phillips and family plus my friend Tim and I would leave early Thursday morning. A cooler overcast morning would greet us for our drive through the U.P. and the same in lower Michigan with rain greeting us the closer we got to Detroit. Some of the early arrivals would include the Foy's, Dempsey's and Erosky's. Before turning in for the evening I watched television and got the latest weather report for the weekend, not good, rain forecasted for the entire weekend.

Friday morning would start out with that forecast. Despite the light rain I continued to prep my 75' Cosworth and then proceeded to greet the other arrivals throughout the day. My friend Tim and I set up and sold Club and Anniversary T-Shirts through the afternoon before we caravanned to a local car show that evening.

Saturday morning after the breakfast buffet we caravanned to the Meadow Brook Race Track to watch the races and then got on the track for a few touring laps. WHAT A BLAST!!!

The road rally would then follow with the rally ending at "Greektown" a section of Greek restaurants in Downtown Detroit. After eating at the Old and New Parthenon the Directors Meeting followed.

Mike and Sue and I will serve you for another Year. The membership is up to about 270 Members now, it's really great to see the membership increasing. Tim and Sue Morgan will be

Hosting the 96' Round-Up in Houston, Texas. Mark and Barb Rock will be Hosting the 97' Round-up in Cleveland Ohio. Possible projects were discussed. The gas filter Project had gone very well. We still need to sell off more inventory before another project is feasible. After the Directors Meeting it was time to head back to the motel and call it an evening.

Sunday morning would greet us with partly sunny skies, no rain what a relief. After another great breakfast buffet it was time to caravan to the Novi Sports Museum where the Concours Judging would take place. What a great display of 28-30 Cosworths!! It never seems to amaze me how the Cosworths seem to improve in AGE. It's a real attribute by their owners, GREAT JOB GUYS... A non-member showed up with a green 76' Cosworth. I didn't see it till the owner drove off. What a bummer, one color I never saw, I was just too busy selling the T-Shirts again, to see him arrive with it. Maybe I'll get another chance at the Texas Round-up.

After the Judging it was time for the Auto-Cross. It was a great time. Four runs through the Pylon Course. For me this is always the fun part of the Round-Up. The evening would finish off with the Awards Banquet. The food was excellent. Then came our guest speaker Dick Meyer who spoke about his experiences with racing, using of course the Cosworth Engine. He was very funny I might add. I enjoyed listening to his stories and his experiences. Next came the Awards and Door Prizes. The evening was capped off with some final Good-Byes to some of my beloved friends.

Monday morning some of us got together for the farewell breakfast. This would officially draw to a close of yet another great Round-Up. A big thanks to our gracious hosts.

(Continued on page 3)

Twin Cam Talk

...continued

On behalf of Mike and Sue Rupert and myself we thank all the attendees for the support you have shown with the merchandise that was purchased at the Round-Up and the T-Shirts that were sold. Thank you everyone it was a huge success....

Enjoy the start of autumn and enjoy your Cosworth. With the cooler weather approaching, now's the time for a drive to see the fall colors.

COSWORTHS IN PRINT

No recent articles are known. In early 1996, club member James Heine reports that the Cosworth Vega will have articles in Grassroots Motorsports magazine. He is a Senior Editor for that magazine. Watch our magazine for reprint columns from James in upcoming issues.

LOOK FOR THEM AT YOUR LOCAL NEWS STAND

NOTE: Please let us know of any book, magazine, newspaper, or anything that has a Cosworth in print - no matter how big or small.

If your car was pictured in your local paper for a parade or car show, send it in. The more press the car gets, the more interest created, the more demand for the car, the more the value of our Cosworths increases.

C.V.O.A. DIRECTORS MEETING MINUTES AUGUST 5, 1995

The annual meeting of the C.V.O.A. Board of directors was called to order by President Steve Mayefsky at 7:53 PM at the New Parthenon Restaurant in Detroit, Michigan as part of the annual Round-Up. In his opening statement Steve observed that he has some growth in the Club and it has recently seen a levelling-off of membership over the nine years he has been a member.

Mike Rupert distributed reports of Merchandise sales from July 1994 thru July 1995 and comparable report from May 1993 thru June 1994. Also distributed from Susan Rupert were Financial Statements from Fiscal 1994/1995 and 1993/1994 for comparison. Finally, Membership by Region reports were distributed for the same periods.

Mike Rupert takes the floor and reports:

-Fuel filter sales and Rear Swing-Out Window Weatherstrip programs were funded by the Club and going well. There were thirty eight fuel filters sold at cost and the rest sold above cost. There are none left and if there is to be any additional orders we will need the money in advance before any other orders are made.

Club currently has approximately \$12,000 capitalized in inventory.

-Allied Signal has enough raw material available to produce about 50 more fuel filters if we wish to place a new order

-Koni Shock requires \$13,000 to

make shock absorbers for the Cosworth Vega. Mike recommends that we (as a club) contact Bill Hutton for Spax shocks (adjustable and imported from England) or contact Carrera for their own U.S.-made high performance shocks. Estimated costs are \$300 to \$400 per set of four.

-Review of Financial Statement shows a large drop in bank assets due to high costs of printing the Magazine and capitalizing of weatherstripping. Steve Mayefsky makes a motion to accept these reports as printed. Bob Chin seconded the motion and all attending directors approved.

Old Business: None was brought forth.

New business: Bob Chin brings forth questions if the valve-adjustment tools and shims which are in the possession of D.J. Martin belong to the Club? Mike Rupert advises that he will contact D.J. to see if he has any shims left and what tools do belong to C.V.O.A. These items will go up for sale by the club if and when they returned.

-Paul Wicker has 570 new shims cut from .150" thick stock, these are available from him free of charge to any member for the asking (plus freight, of course). Be advised that these are hardened already and need to have the thickness turned down to be usable. A good machinist can do this for you.

-C.V.O.A. is in search of an editor for the Club Magazine. Please consider doing this great service for our organization.

-Sue Rupert reports that she has great success in getting renewal memberships when she sends out

expiration notices. This is a great service she does and should be shared by the Regional Directors.

-1996 Round-Up Chairman will be Tim Morgan. He has already firmed up dates of **July 12,13,14 1996** at the Hilton Hotel West, outside of Houston, Texas. Rates are \$80 per person for the Round-Up and \$55 per room at the Hotel.

-1997 Round-Up Chairman will be Makr Rock. Cleveland, here we come! Maybe we can see the Rock&Roll Hall of Fame.

-Round-Up T-Shirts are on sale through the Club. All Proceeds go to the C.V.O.A. Due to a printing error, we have double batch and reduced cost "16 VValve" shirts. Please purchase here, price will increase after Round-Up, as they will then need postage/packing to get them to you.

-It is reported that Spax shocks can be purchased for \$250. per set if purchased in quantity of 25 sets.

-Koni shocks can be purchased at \$236 per set if purchased in quantity of 50 sets. No motion was made for purchases at this time.

Election of Officers for 1995/1996: The Floor was opened for nominations of any new persons for any office in the Club. There were no nominees. A request to retain the current officers by acclamation was accepted and the current officers are retained. Thank you to them all.

Meeting was adjourned at 8:56 P.M.

Respectfully Submitted,

John F. Cowall

H-BODY ANTI-ROLL BARS

ANOTHER ARTICLE FROM THE "SERIOUS GEARHEAD REGION 16"

DUKE WILLIAMS

Anti-roll bar selection is critical to obtaining good handling. Drivers generally feel more confident in a car which exhibits minimal body roll, and good roll control helps limit tire camber wear to an acceptable level. Anti-roll bars are also a very effective way to "balance" a car's handling to achieve an acceptable compromise of the cockpit by the driver in order to maintain chassis balance as conditions change.

In my two part article "Race Track Experience with the Cosworth Vega and Other Musings" published in the May and August, 1993 issues of *CVOA Magazine*, I developed the basic philosophy of how to achieve superior handling with a Cosworth Vega, and you may wish to review those articles; however, I will summarize the high points here. The car exhibits minimal understeer, but will transition to oversteer at the limit. The fix for this is to replace the rubber bushings on the front anti-roll bar/control arm links with aftermarket urethane bushings. The production anti-roll bars nominally measure one inch at the front and 13/16s inch at the rear.

Hard front link bushings, high performance tires and shocks, plus a front end realignment (-1 to -1 1/2 degrees camber, 0 to +1 degrees caster, and 1/16 inch toe-in) will produce excellent handling with no oversteer while maintaining acceptable ride quality, which is firm but livable; however, if you push the car hard there is still notice roll.

Resistance to roll or "roll stiffness" has two components. The first component is contributed by the vehicle springs. Indeed, base suspension Vegas have no anti-roll bars either front or rear. Most sport oriented H-bodies significantly augmented the inherent roll stiffness provided by the springs with both front and rear anti-roll bars to limit roll and fine tune the chassis balance. We are fortunate that during the 10 years of H-body production GM developed a number of anti-roll bars for the various engine and chassis offerings. Research has revealed five front bars and three rear bars from GM. The aftermarket started where the factory left off and still offers larger bars than available from GM.

In order to properly tune your chassis with anti-roll bars it is important to understand how they work. Anti-roll bars contribute roll stiffness without adding to suspension stiffness on two wheel bumps such as dips, however, they do contribute stiffness to one wheel bumps such as pot holes. Anti-roll bars are torsion springs, connecting the opposite sides of the suspension, which resist roll and transfer weight to the outside wheel in response to cornering force. As the vertical load on a tire increases the tire slip angle will increase. This characteristic of tires is what allows the chassis balance.

The roll stiffness contribution of an anti-roll bar is proportional to the *fourth power of its diameter*. Thus a small change in anti-roll bar diameter will create a noticeable difference in both chassis balance and roll. Increasing the front bar size from one inch to 1 1/16 inch represents only a 6.25 percent increase in diameter which seems small, however, the increase in roll stiffness due to the anti-roll bar is $(1.0625)^4$ which is 1.274 or 27.4 percent. This message here is to make small changes, preferably no more than 1/16 inch at a time. There is a tendency among users to go out and get the biggest anti-roll bars they can find. This may be a mistake. As bar size goes up compliance and response time are reduced which will tend to make the car harsher and less forgiving. Also, shock rebound control must be increased to limit body bounce which further increases ride harshness. You eventually reach a point where for all practical purposes you have a suspensionless go-kart. Like so many things in life chassis tuning is a quest for the best compromise.

You will probably need to change both front and rear anti-roll bars in order to maintain the production balance which is very good. For example, if you only increase the front anti-roll bar size you will reduce roll, but because more weight is transferred to the outside front tire you should notice increased understeer. When I began my chassis development program in the early eighties I used the scientific method which is to make one change at a time. The first change I made was to install the 1 1/16 inch GM front bar (P/N 353920, common on V-6 powered H-bodies) in order to reduce positive camber relative to the road and the attendant outside shoulder wear on the front tires. I also expected more understeer which I would deal with later. The result I achieved was exactly as expected. In order to regain the original balance I then installed an aftermarket 7/8 inch rear anti-roll bar - 1/16 inch larger than production. This further limited roll and restored the original balance. The result is superbly neutral handling with excellent stability, roll and camber control. For a given degree of cornering load roll was cut nearly in half - from and estimated 4 to 5 degrees per "g" to about 2 1/2 to 3 degrees. The chassis also has sufficient compliance to handle bumps and the ride, though sportingly stiff, is acceptable for an occasional use toy. I highly recommend this setup if you drive aggressively and want to maximize handling potential, however, before you experiment with different anti-roll bars you should have the right tires.

As a minimum I recommend summer high performance tires with at least a "H" speed rating. If you don't usually drive in the rain and can accept their 10 to 15 thousand mile life (street driving), then DOT legal racing tires such as the

CONTINUED ON PAGE 5

Yokohama A008RS or BFG Comp T/A R1 will provide a quantum improvement in steering response and grip. If your car has non-speed rated or all-season tires you can benefit from chassis tuning, but when you finally upgrade to the proper tires you may have to re-tune the chassis because the proper tires will have such different characteristics they may change the chassis balance. Larger anti-roll bars also require additional damping due to the increased one wheel bump stiffness, so it goes without saying that you should have quality high performance shocks. The accompanying tables should be useful to you in selecting anti-roll bars. The Chassis Balance Guide gives you the effect of an anti-roll bar change at each end. What you are looking for is acceptably low roll and minimal understeer with stability which means no sudden or unpredictable oversteer, particularly as you approach the limit of adhesion or upon suddenly lifiting the throttle at the adhesion limit. The second table lists the known anti-roll bars. Not all the GM bars were serviced by GMPD, and those that were are discontinued, however; they can be found in salvage yards, usually at very reasonable prices. Often the paper tag with the part number will intact which makes indentification easy, but bring a proper instrument for measuring them. The applications in the remarks section are not all inclusive, but are a guide to identifying a doner vehicle. There were some aftermarket 1 1/4 inch front bars available back in the eighties, but I believe these are unsuitably large for street driven cars and may even be too big for dedicated race car. I have no data on factory installed bars for the early Vegas, however, if they are different from those listed they are likely smaller because the early cars were lighter.

Thanks and acknowledgement to Mike Van Auken and Chris Wheaton for research assistance on this article.

SIDE NOTE: I don't know if this is an exclusive northern problem but 4 of the 5 H-body cars I have owned had broken REAR bars. They all broke (or were broken) off at the rearmost mounting hole, left or right side. Finding any good used Vega parts in this area (Northeast) is VERY unlikely. Even though a part is discontinued by GM, that does not necessarily mean you can't find one. So when I saw the list to your right I had them checked. The only part that showed up was 371786, at three dealers. I was hoping to find a rear 346578. If any of you are really interested in the 371786, call and I'll give you the phone numbers. However, just because they came up on the locator does not mean they are always "there". Mike Rupert

CHASSIS BALANCE GUIDE

	FRONT BAR	REAR BAR
MORE UNDERSTEER	BIGGER	SMALLER
LESS UNDERSTEER	SMALLER	BIGGER

GM or After-market P/N	Nominal Diameter	Remarks
------------------------	------------------	---------

FRONT ANTI-ROLL BARS

348206	7/8"	'75 Vega GT
356399	15/16"	'75 Monza
369443	1"	'75-'76 Cos, '76 Vega GT
885(Addco)	1"	Note 1
353920	1 1/16"	V6+V8 H-bodies
371786	1 1/8"	Monza V8 Spyder
710(Addco)	1 1/8"	Note 1

REAR ANTI-ROLL BARS

339387	3/4"	Note 2
356302	3/4"	'75-'75 GT, V6+V8 "H"
346578	13/16"	'75-'76 Cos, Monza V8 Spyder
984(Addco)	7/8"	Note 1
672(Addco)	1"	Note 1

Note 1: Manufactured by Addco, Lake Park FL, 1-800-338-7015. Available from DOBI, Brea CA, (708) - 529-1977.

Note 2: Old parts book reference to '74 Vega GT, data suspect.

CONCOURS RESULTS 1995

STOCK UNDER 25,000 MILES

1st - BOB CHIN
2897 BLUE 76

2nd - TIM FOY
3163 FIRETHORN 76

3rd - DICK BAUMHAUER
3466 MAHOGANY 76

STOCK OVER 25,000 MILES

1st - DAVID DEMPSEY
2995 BLACK 76

2nd - STEVE MAYEFSKE
2947 BLUE 76

3rd - KEITH MEISWINKEL
0334 BLACK 75

MODIFIED

1st - LOU MARR
1000 BLACK 75

2nd - JAMES BLUNDEN
1953 BLACK 75

3rd - BOB FELKER
0259 BLACK 75

NOTE : TROPHY WINNERS ONLY LISTED, NO POINTS OR OTHER STANDINGS AVAILABLE

SPECIAL AWARDS

PEOPLES CHOICE - 1st DAVID DEMPSEY

PEOPLES CHOICE - 2nd LOU MARR

FARTHEST DRIVEN IN COSWORTH - BRIAN PECENCO
747 MILES

HARD LUCK AWARD - JIM STALLWITZ

OUTSTANDING DIRECTOR - DUKE WILLIAMS REGION 16-13

FRIENDSHIP AWARD - BRIAN PECENCO

PAST CVOA SERVICE - PRESIDENT - BOB CHIN

PAST CVOA SERVICE - TREASURER - PAUL WICKER

ROUND-UP HOSTS, STEPHANIE & PAUL WICKER

ROUND-UP HOSTS, KATHY & JOHN COWALL

ROBERT MALOY MEMORIAL AWARD
SUSAN & MICHAEL RUPERT

GUEST SPEAKER - DICK MEYER, CHRYSLER CORPORATION
LEAD DEVELOPMENT ENGINEER FOR THE RACE CHASSIS
ON THE DODGE "VIPER"
VETERAN COSWORTH VEGA MIDGET CAR RACER

" DE-TOUR DETROIT ROAD RALLEY "

1st : BARB ROCK AND DALE MALIN 33 CORRECT

2nd : GREGG AND ARNADENE GIBSON 24 CORRECT

3rd : JOHN COWALL JR AND BILLY COWALL 18 CORRECT

SPECIAL THANKS TO DOOR PRIZE DONERS!

NEW 2 PIECE DASH BEZELS - BILL HUTTON, HME

REPRODUCTION AIR DEFLECTOR - DAVE'S VEGA VILLAGE, CANADA

VARIOUS ITEMS - TIM MORGAN, MARRS

HOOD TOOLS / WINDSHIELD DECALS - JIM RIGG REGION 14

GERMAN BEER STEIN - BENNET TROUSDALE

STATIONARY - COWALL'S REGION 8

FENDER COVERS - KURT SPORRER, CASTROL OIL

T-SHIRTS - DALE MALIN REGION 17, STEVE MAYEFSKE PREZ

AGAIN MANY THANKS, HOPE I DIDN'T FORGET TO MENTION
ANYONE OR ANY COMPANY, IF I DID JUST WRITE AND COMPLAIN
AND WE WILL MENTION NEXT TIME, MIKE RUPERT

AUTOCROSS RESULTS

STOCK COSWORTH

1. JOHN F. COWALL	45.35
2. BRAD STONE	46.76
3. DEAN HOWLETT	46.99
4. JIM REARDON	49.91
5. STEVE MAYEFSKE	50.42
6. GREGG GIBSON	50.89
7. CLIFF EROSKY	51.68
8. JOE PHILLIPS	51.95
9. LANCE NELSON	55.51

MODIFIED COSWORTH

1. MAL KOOIMAN	41.79
2. DAN FILE	45.48
3. BENNETT TROUSDALE	45.99
4. ROY LINENBERGER	46.07
5. JOHN STULTZ	46.67
6. JOHN J. COWALL	47.81
7. MICHAEL RUPERT	48.89
8. DALE MALIN	49.06
9. ALLEN KOHN	49.68
10. JAMES BLUNDEN	49.83
11. LOU MARR	59.02

LADIES COSWORTH

1. RUTHANNE FILE	46.60
2. LORI MALIN	49.76
3. DEBORAH KOHN	50.56
4. HYL A KOOIMAN	51.38
5. JUDITH KOHN	51.76
6. KATHY COWALL	54.37
7. ARNIE GIBSON	55.48
8. JUNE EROSKY	57.95
9. LINDA LINENBERGER	58.06
10. HARRIETT MARR	62.15

NON-COSWORTH

1. DICK BAUMHAUER	43.47
2. DAN MCNALLY	45.36
3. MARK ROCK	46.29
4. BARBARA ROCK	48.26
5. CLARK KIRBY	51.03
6. DAN ROCK	51.14
7. PAUL AMORATIS	52.33

BOLD.... INDICATES TROPHY WINNERS.

ONLY "BEST" TIMES ARE LISTED

FASTEST TIME OF DAY:
MAL KOOIMAN, ZEELAND MI



James Blunden on the track
Photo: John Chidester



What? a Saturn in a Cosworth Magazine? That must be Mark or Dan because Barb drives much smoother than this. Photo: John Chidester



Cliff, or June Eroskey cruising in old # 3504 Photo: John Chidester



All above are the Banquet shots (obviously). Hope you can find yourself. Photos: Brain Pecenco

CVOA CO-OP SHOCK PROGRAM

The Cosworth Vega has the potential to be one of the best handling cars on the road, but to achieve ride and handling suited to your driving objectives and style **YOU** need the right shocks.

CVOA has put together a co-op program for 25 sets of SPAX adjustable shock absorbers. SPAX shocks can be adjusted to suit any driving environment:

- * low pressure gas, twin tube hydraulic architecture, made in England
- * Externally adjustable for easy suspension tuning
- * 14 position rebound adjustability meets every driving requirement, from easy cruising to **SERIOUS COMPETION!**
- * units are rebuildable also

SPAX
SPAX
SPAX
SPAX

**MAKE
IT
HAPPEN!**

**YOU
CAN!**

**PRE-PAID ORDERS FOR 25 SETS IS \$250 FOR EACH CAR SET...
INCLUDING SHIPPING TO YOUR DOOR.
WE MUST HAVE 25 ORDERS TO MAKE THIS FLY
CHECKS ARE DUE NOT LATER THAN NOVEMBER 1,1995
FOR ADDITIONAL INFORMATION ON PRODUCT CHARACTERISTICS
CALL:**

DAN MCNALLY or **DUKE WILLIAMS**
412-793-6652 **310-372-5527**

**SEND CHECK TODAY !
PAYABLE CVOA INC.**

**SEND TO : CVOA / MIKE RUPERT
147 HIRAM STREET
PITTSBURGH, PA 15209**

DELIVERY TIME WILL BE ABOUT 6 MONTHS FROM CLUB ORDER DATE

Cosworth Vega Assembly Instruction Manuals

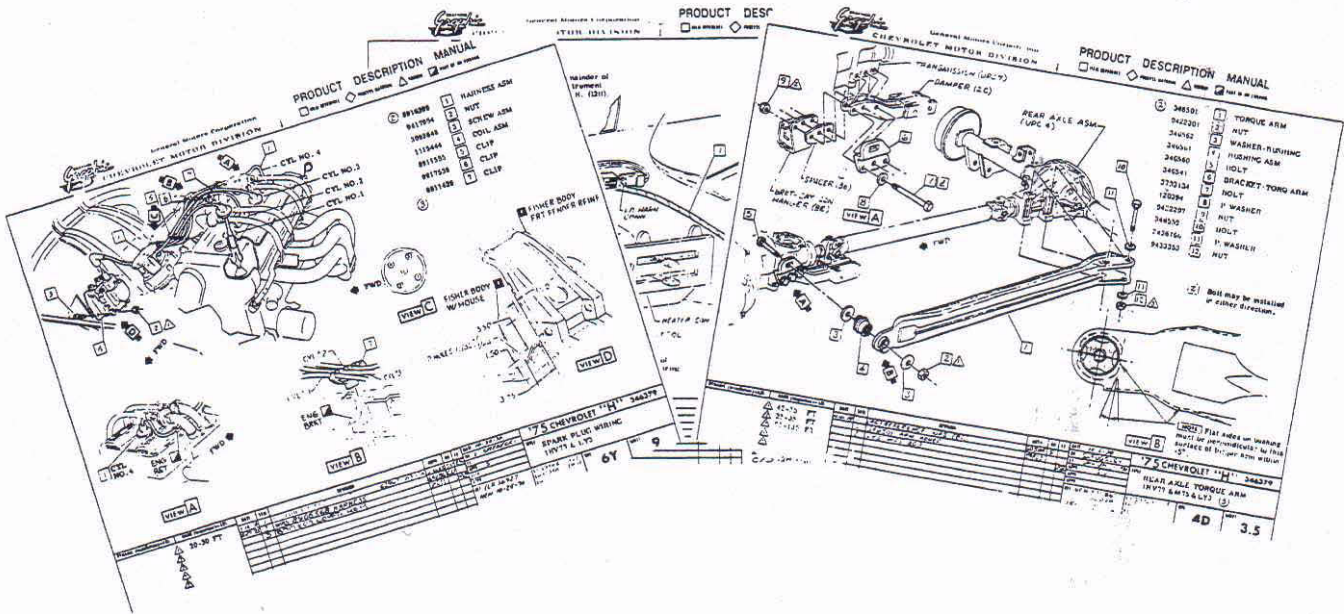
Available Only From CVOA!

Reprinted through the courtesy of General Motors. This is the manual used by the assembly workers on line to build the Cosworth Vega. Exploded views of engine, transmission, wiring, sheet metal assembly, body and trim items, decals, and everything pertaining to the RPO-Z09 option code with part numbers and torque specifications on original diagrams! Loose leaf three-ring binder style.

A much needed addition to your Cosworth repair information.
Many items never shown anywhere before!

COSWORTH ASSEMBLY MANUAL

1974 Engine Assembly Only	\$10.00
(Completes '75 or '76 manuals)	
1975 Assembly Manual	\$35.00
1976 Assembly Manual	\$35.00



CVOA MERCHANDISE • Attn: Mike Rupert
147 Hiram Street • Pittsburgh, PA 15209
(412) 821-8429

CVOA MERCHANDISE (SOLD TO MEMBERS ONLY)

Cosworth Vega Shop Manual - Photocopy of the out of print manual from HELM, Inc. **\$20.00 each.**

Fuel Injection Diagnostic Manual - Photocopy of manual written by Phil Good, one of the Bendix Engineers who developed the Cosworth Vega EFI. **\$15.00 each.**

Front Fender Stripe Set - Reproduction of the early 1975 style COSWORTH TWIN CAM stripe on a rectangular black background. Contains left and right front fenders. **SALE PRICE \$5.00 per set.** Note: top layer will be time consuming to remove, will need Ditzler DX-330 Wax & Grease Remover to remove residue after application.

Cosworth Vega Stripe Kit Set - Exact reproduction of the exterior gold stripe kit. Made by 3M using the latest available materials and the original tooling. Some individual stripes are available. Note: color is slightly different from NOS stripes. **\$115.00 per kit**, call for individual stripe availability. (No separate hood or small "COSWORTH TWIN CAM" end panel stripes.)

Swing Out Window Weatherstrip - Excellent Reproduction, left & right, only **\$115.00 LIMITED SUPPLY**

1973 CV Pilot Assembly Video - B&W copy of 1973 pilot assembly activities for the "stillborn" 1974 Cosworth Vega 16 Valve. Note: Due to the age and tape format, these copies have a good deal of roll and mistracking. It does have many good moments of brilliance including what are believed to be the only surviving images of the Cosworth silver 1974 Cosworth Vega 16 Valve vehicle. **\$18.00 each.**

Tech Bulletin Set - CVOA Technical Bulletins have been published in the magazine. They cover many important topics. Recent update 12-94. Spiral bound copies **\$20.00**

Cosworth Vega Magazine Back Issues - All back issues of the Cosworth Vega Magazine are available. Some issues are only available as photocopies. **\$70.00 per set, \$4.00 for individual issues.**

Phone Directory - Complete listing of the latest roster of CVOA members. Great to have when you are traveling in your Cosworth on long road trips. **\$2.00 each.**

Lapel Pin - 1" diameter cloisssonne style of the CVOA logo with "Twin Cam" written within the familar Chevrolet "Bowtie" symbol. **\$3.00 each. LIMITED SUPPLY**

Window Decal - Self stick Club emblem, black with gold lettering, for the application to the inside of your window to face outside. **\$2.00 each.**

Cosworth Vega Owners Association Concours Rules - Free to members

Cosworth Vega Assembly Manuals 1975 or 1976 - looseleaf copies, will need a binder to put in. **\$35.00 each. Engine Assembly \$10.00 each**

Jacket Patches

#1 - 3" dia. similar to the lapel pin in black cloth with gold lettering. **\$6.00 each.**

#2 - Large 12" x 2 1/2" reproduction of the Cosworth dash plate (without dash number block). Black with gold lettering. **\$10.00 each**

#3 - Large round 6 3/4" diameter, showing 3/4 front view of the Twin Cam engine. Yellow background with embroidered engine using six different colrs for the engine components. **\$10.00 each.**

Send your request, along with check or money order

(Made payable to CVOA, Inc.) to:

CVOA Merchandise, Mike Rupert
147 Hiram Street
Pittsburgh, PA 15209-2133
412-821-8429

CVOA VENDOR LISTING

CV Parts - New

Grimm Chevrolet, Morton, IL (309) 263-2241

HME, Clarksville, TN (615) 648-3333
M.A.R.R.S., Houston, TX (713) 589-0449
Performance Dynamics, Sacramento, CA (916) 488-3114

RMP Auto Restyling, Telford, PA (215) 723-1571

CV Parts - Used

HME, Clarksville, TN (615) 648-3333
M.A.R.R.S., Houston, TX (713) 589-0449
RMP Auto Restyling, Telford, PA (215) 723-1571

Vega Parts - New/Used

M.A.R.R.S., Houston, TX (713) 589-0449
VEGA VILLAGE, Port Moody, B.C. Canada, (604) 469-9979

CV Rebuilding/Repairs - Total or Partial

Grimm Chevrolet, Morton, IL (309) 263-2241

HME, Clarksville, TN (615) 648-3333
Performance Dynamics, Sacramento, CA (916) 488-3114

RMP Auto Restyling, Telford, PA (215) 723-1571

Carpets - Molded Floor, Rear Cargo & Material

Auto Custom Carpets, c/o Vickie Land, Anniston, AL

1-800-633-2358

Speedometer/Tachometer Repair
Micro-Tech, c/o Michael Avery, Louisville, KY

1-800-626-1588

Reproduction Labels

Jim Osborne Repro., Lawrenceville, GA (404) 962-7556

RMP Auto Restyling, Telford, PA (215) 723-1571

Computer Repair

Bob Stallwitz, Pekin, IL Please contact Jim Stallwitz, Regional Director.

Wheel Refinishing, Kits & Paint

Tower Paint, Oshkosh, WI (414) 235-6520
RMP Auto Restyling, Telford, PA (215) 723-1571

723-1571

Seat Upholstery - Material

Original Auto Interiors, St. Clair, MI (810) 727-2486

SMS Auto Fabrics, Portland, OR (503) 775-8453

Hardware - Hose Clamps, Screws, Door Hinges, Rubber Stops, Detail Parts, Paint, etc.

GM Hardware & Parts, Macedonia, OH (216) 467-0341

Caudell's, Fairmount, IN (317) 922-7372



Cosworths waiting their turn on the track. Photo: James Heine



Co-host Kathy Cowall cruisin' in a Cos. Photo: James Heine



Nice selection of cars on display at Waterford Hills Raceway. Photo: James Heine

ACTUAL FAILURES AND ACTUAL FIXES

Mike Rupert

Hello out there! Since this column was my idea I suppose I should provide the first example.

This failure left me almost stranded leaving Manitowoc, WI at the '93 Round-Up. As I was coming back to the hotel after a gas run, I noticed the car was low on power and sputtering. The car eventually stalled in the parking lot and then would not crank. Of course Brian Pecenco was there to take pictures as I was getting over that sick WHAT'S WRONG NOW feeling. The car did jump start and run, and I noticed there was very low volt reading on the meter. OK now I had something to go on, why wasn't it charging? A feel and tug of the wiring quickly revealed the problem. The wire which connects to the BAT terminal on the back of the alternator had broken off completely.

Being that all I needed was to get it home I simply stripped the end of the wire and tightened the BAT nut against it. We were heading home but it was not over. It was late and very dark when cruising thru Ohio, I noticed the charging voltage dropping. (now that I pay attention to the gauges). Making it to a rest stop, I quickly checked to see if the nut came loose. It did not. The ground wire which bolts to the back of the alternator had broken just like the BAT wire did. Again it was a simple fix temporarily but why did it happen?

Vibration, that inherent annoyance that we Cosworth Vega owners will have until we are recalled by our Maker.

It should be noted that those plastic or nylon crimp type connectors are NOT acceptable repairs. Any good electrical connector should be soldered. I did finally make the solder repair two days before the '94 Round - Up. I know there are failures & fixes out there that are much more interesting than broken alternator wires. Write and tell us about it!

Cosworth Vega Classifieds

Cars for sale

75-0002. Recreation of Chevrolet's Show Car. 2.3+L, automatic, console, Monza factory air, preproduction intake, 8-way power Recaro's with full spectrum interior, 100 watt RMS am/fm cassette, power windows, chrome 8 quart oil pan, Mecca/NASCAR oil filter, 6 core radiator, twin electric fans, 100 amp alternator, trip computer, "G" meter, custom springs, custom drilled Centra wheels, Fulda 205/50VR-15 tires, Nardi wood steering wheel with Cosworth Horn button, tilt wheel, stalk controlled cruise control and dimmer switch, polished intake, head, cam carrier. Water injection, factory wind wings, 160 mph Corvette speedometer, over \$18,000 invested, sacrifice, best reasonable offer. Contact: Tony Hansen, P.O. Box 336, Shenandoah IA, 51601. (712) 246-3143

75-0393. Black, black vinyl. All original with manuals. Excellent condition, 30k, needs minor tuning after prolonged storage. \$3,000. John Kuehnert, 1863 Rolling Hills, Norman OK, 73072. Call (405) 360-4872 (H) or (405) 325-6052 (W).

75-0441. Totally stock, 12k, perfect vinyl interior. Tinted glass, AM/FM, rear speaker, swing-outs, and refinished wheels. Exterior body, paint, and decals in excellent condition. Consistant show winner! This is a #2 car! BONUS: unused set of essential tools still in box. \$6,500 or best offer. Contact Patrick Andres, RR#2 Box 277, Seneca, PA 16346. (814) 676-5066

75-0530. Black, black vinyl. Swing-outs. Stock throughout. Driven daily, 109k, runs great. Make offer. James Stradling, Greer SC (803) 268-7884.

75-0598. Only 443 miles. No other C-V has more documentation than this. Numbers matching car, 2 build sheets, all VIN specific papers, dealer order printout. Sealed hatch tent and tools. All interior tags, all books, sales receipts, and perfect original tires. \$8,000. Steve Larson, 164 N. Clark Dr., Palatine, IL. 60067 Call: (708) 934-3672 evenings and weekends.

75-1256. Black, white vinyl. Original owner, always stored inside. Only 4,000 miles, cross country drive only. No rust, no salt, no damage! Exceptional car for collector or driver. Must see! Asking \$5,000. Carroll Lysinger (313) 537-8305 Detroit MI.

75-1597. Black, black vinyl. Swing-outs, tinted glass, 45,000 miles, EFI, solid body, refinished wheels. \$2200. Excellent interior, new Goodyears, and driven daily. Jim Blunden, (607) 334-7259. NY

75-1599. Black, black vinyl. Like new, never hit, 60k, original paint. Posi, swing-outs, AM/FM, rear speaker, aux lighting, and floor mats. Fresh, complete overhaul by RMP, sleeved block, head rebuilt, all externals rebuilt. Engine bay stripped, painted, and detailed. Powder coated cam cover and air cleaner. Underside blasted, painted, and detailed. Rear axle completely rebuilt. New fuel pumps, hoses, and exhaust. Powder coated wheels with new tires. Only needs paint. Original owner. Need room for other projects. \$4,100. Michael Price, 835 Ruth Road, Telford PA, 18969. (215) 721-0412.

76-2405. Black, black Recaro racing seats, sleeved block, DCOE 48 Webers, original injectors available, Venolia 12.5:1 pistons, Crane cam, runs consistent 123-124 mph standing mile at El Mirage Dry Lake. extra ported head, cam carrier, cams, many more spare engine parts, Michelin H rated tires, less than 100 miles on engine. \$4750. Dick Ferguson, 1322 N. Niagra Street, Burbank, CA 91505. (818) 846-0972.

76-2597. Black, black vinyl, 4-speed, swing-outs, rear defog, only 4k. Rare find. Stored by Chevy dealer for 16 years. Purchased new in 1992. Wife says we need the dough so the toy gotta go! \$7,900. Will send photo if truly interested. Call (802) 464-2397, leave message. Tiido Tennelo. Wilmington VT.

76-2756. Black, black vinyl. Car refinished with Deltron paint. 29k. Swing-outs, AM/FM, posi, sleeved block, Hutton Webers, COE 10.5 to 1 pistons, no-gap rings, HD rod bolts, Chevy lightweight flywheel, balanced, valve job by Hutton. Custom 2.25 exhaust. Have every original part including exhaust, EFI, etc., some extra suspension pieces, manuals, some Kent Moore tools. Please save from local hot rodder who thinks a Buick V6 will be neat in it. \$3,900. Keith Coombs, Olympia WA (206) 754-7792.

76-2677. Firethorn, firethorn vinyl. Turbocharger built special for Cosworth. 5 speed, 19,000 original miles. Factory am/fm stereo cassette player, owners manual and window sticker. Original owner, always stored in garage. Looks brand new. Rare find! Dr. Gladney, (817) 488-5105.

76-2900. Medium orange, black vinyl. Monza muffler with chrome tip. Purchased new April 1977, 5 speed, always garaged, 25,000 miles, Delco seek/scan radio, IECO console and air conditioning installed. \$3,995. obo. Dr. Swan Richardson, (817) 968-3365 after 5pm. TX

76-3253. Firethorn, firethorn vinyl. 69 K, Hutton Webers, original EFI in box. Used as daily driver, then stored in garage last 5 years. Needs good tuning to get back on road. \$1200 Andy Ontko, (405) 525-9079 OK City, OK

Parting out cars

76-2488. Hit in front. Black, black vinyl. 76k. 5-speed, posi with 4.10. Call Rod Brennehan, (503) 926-6138. OR

76-3357. Firethorn, firethorn vinyl. 5 wheels, rear axle, 4-speed, hood, hatch, AM/FM radio, glass, taillamps, new carpet, some interior pieces, grille, etc., etc., NO ENGINE PARTS. (607) 334-7259 evenings, EST. Jim Blunden, Norwich, NY.

Parts for Sale

Brand new Cosworth engine with "0" miles, less intake, exhaust, and front cover. Best offer over \$2,000.

Brand new engine-transmission-transfer case for GMC Cyclone/Typhoon "0" miles. Best offer over \$5,500.

New saddle vinyl seat covers, front and rear, except passenger seat bottom, and carpet for 77 Monza, make offer.

Very good used front & rear seats, black vinyl from 75 Monza. Make offer. Dick Baumhauer (810) 435-7540 ext. 113 (w) or (810) 435-4633 (H).

Gauge set (tach, speedo, clock, volts, & fuel) \$125 for all or will sell separately. Alt mounting brackets \$50, rad fan \$10, fan spacer \$5. May consider trade on stock parts. Tom Hutton, Lawrence KS (913) 749-5922.

Vega 140 engine, rebuilt sleeved block. Holley 4 barrel, Crane cam, Offy intake, header, Mallory dual point dist. Call Don Bourassa, Voluntown CT (203) 564-1198.

NOS : fuel filter \$65, crankshaft sprocket \$125, harmonic balancer \$75. New Crane performance cams \$375.
USED : front timing cover \$50, crankcase vent tube \$50, GM dash bezel \$50, Hutton 2 piece bezel \$60.
James Blunden, Norwich NY (607) 334-7259.

NOS dated spark plug wire sets:

2nd Quarter 1975 \$145, 1st Quarter 1976 \$145

NOS dated shocks for 1975 Cosworth, 2 frt + 2 rear \$90

Exhaust pipe: from header to converter, exact match, new, \$150. Doug Drahnak (301) 898-5821

GARAGE SALE

'76 Cosworth rims, \$40 each or \$150 set of 4;

Vega rims 8" & 9" wide, pr of each, sold as set, \$150 set;

'76 rear seat asm, black cloth or vinyl, \$50;

'76 black plastic interior trim panels, \$50;

NOS bare cylinder head, \$300;

NOS cowl sheet metal, \$150;

NOS left front fender, \$125;

Pair used fenders in fair condition, \$100 for pair;

'76 headlight asm w/lower grill asm, \$50;

'75 headlight asm w/grill and header panel, \$100;

Rear hatch asm w/glass, fair condition, \$80;

(2) hoods, fair condition, \$50 each;

Pair swing-out windows w/gaskets & hardware, \$125;

4 speed transmission, needs syncros, \$50;

Front or rear bumper, painted black, \$50 each;

NOS air filter elements, \$15;

New aftermarket, '76 brake cable;

Call for other bits of parted out '76 (NO engine bits)

New 12.5:1 Venolia pistons w/pins & sleeves, \$400

John Cowall, Allen Park MI, (313) 388-1026 (H) after 6pm or (810) 435-7540 ext. 117 from 8 to 5pm.

Parts Wanted

'74-'77 Vega hatchback doors, LH and RH. In good or better condition. Bob Chin, (812) 339-0838. IN

RAM Engineering Bra, IECO Console. James Blunden, Norwich NY, (607) 334-7259.

Lower air deflector, NOS or good used. Dash pad and headliner for Blue Cosworth. Call Steve Mayefske, Green Bay WI. (414) 434-3652.

Right firethorn armrest, NOS or good used. Firethorn door panels w/ chrome trim intact. Mike Rupert (412) 821-8429

Miscellaneous

ORIGINAL COSWORTH VEGA LITERATURE:

Large selection of Cosworth Vega sales brochures, factory manuals, etc. Send stamped envelope for free list. Be sure to specify "COSWORTH VEGA" as I have lists for all other cars / trucks / motorcycles / worldwide. Walter Miller 6710 Brooklawn Pkwy, Syracuse New York, 13211. (315) 432-8282 . Fax (313) 432-8256.

H07 - REGISTRY, Mike Van Auken would like to announce a beginning registry for 1975-1980 H-Special 'H07' bodied cars. These include Chevy Monza, Olds Starfire, Buick Skyhawk, and Pontiac Sunbird with the 2+2 hatchback body style. The purpose is to form a communications network by creating a directory of H07 cars and their owners. Interested owners send SASE for form. Send to: H07 Registry, c/o Mike Van Auken, PO Box 2653, Mission Viejo, CA 92690

4th QUARTER COSWORTH VEGA MAGAZINE DEADLINE

Deadlines for articles and advertisements in the 4th Quarter issue of the Cosworth Vega Magazine is **NOVEMBER 10, 1995**

Articles or advertisements submitted after this date may not appear in the 4th Quarter issue

Inserts for the magazine will be accepted as late as December 1st.

CVOA ADVERTISING POLICY

Business Advertisements

1/4 page - \$25.00

1/2 page - \$50.00

Full page - \$100

Full page inserts - \$45.00

Member/Non-member ads

CVOA members are entitled to one free ad per issue. Non-member ads are charged \$15.00 for an advertisement in two consecutive issues. Cosworth data (dash #, VIN, color combination, options) must be included.

For the time being mail all advertisements to:

CVOA Magazine
147 Hiram Street
Pittsburgh, PA 15209

CVOA is not responsible for any advertised claims, products or services from independent or commercial vendors. However, reoccurrence of complaints may result in denial of advertising space and reference to members in future issues

**REMEMBER:
TO SEND ADDRESS CHANGES
TO CVOA!
AT MINIMUM PLEASE CALL
AND LEAVE NAME AND
YOUR NEW ADDRESS
(412) 821-8429**

**P.S. WHEN WAS THE LAST
TIME YOU CHECKED YOUR
MAIL LABEL FOR EXPIRATION?**

CVOA REGIONAL DIRECTORS

REGION 1 - MA, RI, NH, ME, VT, CT
Mike Gauvin, 148 S. Bennington Road
Bennington, NH 03442
603-588-2524

REGION 2 - NJ, NY
Chris Northington, 83 Powers Lane
Rochester, NY 14624
716-889-5033

REGION 3 - PA, DE, DC, MD, VA, WV
Dan McNally, 7248 Shannon Road
Verona, PA 15147
412-793-6652

REGION 4 - NC, SC, GA, TN, MS, AL
Fred Kieffer, 3649 High Green Drive
Marietta, GA 30068-2530
404-971-4958

REGION 5 - FL, PR, VI
Presently merged with Region 4

REGION 6 - CO, WY
Presently merged with Region 14

REGION 7 - OH
Presently merged with Region 10

REGION 8 - MI
John Cowall, 9677 Fox
Allen Park, MI 48101
313-388-1026

REGION 9 - IA, KS, NE
Presently merged with Region 11

REGION 10 - IN, KY
Bob Chin, 709 Wellington Court
Bloomington, IN 47401
812-339-0838

REGION 11 - IL, MO
Jim Stallwitz, 4410 Meadow Drive
Pekin, IL 61554
309-925-7881

REGION 12 - TX, OK, LA, AR
Tim Morgan, 11202 Valley Stream
Houston, TX 77043
713-589-0449

REGION 13 - AZ, UT, NV, NM
Presently merged with Region 16

REGION 14 - OR, WA, ID, MT, AK,
N. California & Hawaii
Jim Rigg, 4546 N. Clayton Place
Boise, ID 83704-1235
208-377-5187

REGION 16 - Southern California
Duke Williams, 1720 Goodman
Redondo Beach, CA 90278
310-372-5527

REGION XVII - ND, SD, MN, WI
Dale Malin, 1020 Dale Street
Hutchinson, MN 55350
612-587-7506

**SERIOUS, PUNCTUAL, INTERESTED
DIRECTORS WANTED:**

If you would like to be a director in a region that has merged into another, please contact Steve Mayefske.

CVOA, INC. MEMBERSHIP FORM

Mail to: 147 Hiram Street, Pittsburgh, PA 15209-2133

NAME _____ TELEPHONE _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

NEW () RENEWAL ()
1 YEAR MEMBERSHIP \$30.00 ()
3 YEAR MEMBERSHIP \$75.00 ()

COSWORTH INFORMATION

PAYMENT: PERSONAL CHECK () MONEY ORDER ()

PRESENT CONDITION: 1 (Best) 2 3 4 5 (Worst)

PRESENT USE: _____

MODEL: 1975 () 1976 () DASH# _____ VIN# _____ MILEAGE _____

EXTERIOR COLOR: Black () Firethorn Met. () Antique White () Medium Orange () Medium Saddle Met. (Gold) ()
Dark Green Met. () Dark Blue Met. () Mahogany () Buckskin ()

SEAT COLOR: Black () White () Firethorn () Buckskin () SEAT TYPE: All Vinyl () Vinyl/Cloth Insert ()

CARPET COLOR: Black () White () Firethorn () Saddle () Dark Blue () Dark Lime ()

DASH PAD COLOR: Black () Saddle () Firethorn () Dark Blue () Dark Lime ()

ORIGINAL FACTORY OPTIONS: Tinted Glass Positraction Swing-out Windows Rear Speaker Rear Defogger
5 Speed Aux. Lighting SkyTrends Sunroof AM/FM Radio AM Radio Floor Mats
AM/FM Monaural Door Edge Guards Cloth Headliner Radio with Tape Player

PERMANENT MODIFICATIONS: _____

ORIGINAL DEALER/PREVIOUS OWNERS: _____

Cosworth Vega
quarterly magazine

147 Hiram Street
Pittsburgh, PA 15209

ADDRESS CORRECTION REQUESTED

FIRST CLASS MAIL