

A publication by and for the members of the
Flatwater Austin-Healey Club of Nebraska and Western Iowa

Events for March 2012

Mar 8, Thursday, 6:30 pm
Pub Night
Sean O'Casey's Pub
10730 Q Street
Omaha, NE

Mar 14, Wednesday, 6:30 pm
Officer's Meeting
Honey Creek Restaurant
Waverly, NE

Mar 17, Saturday, 9:00 am
Breakfast
D&K Gretna Cafe
104 E Glenmore St
Gretna, NE

Mar 21, Wednesday, 12 pm,
Lincoln Lunch
The Steakhouse
3441 Adams St
(35th & Cornhusker Hwy)
Lincoln, NE
www.thesteakhouselincoln.com

Mar 30, Friday, 6:30 pm
Fish
Cedar Creek Inn
Cedar Creek, NE



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FAHC CLUB OFFICERS 2012

President:

Brad Swiggart
6530 Shenandoah Dr
Lincoln, NE 68510
402-430-6380
brad_swiggart@yahoo.com

Vice-President:

Tony Koester
105 Wesgaye Street
Gretna, NE 68028
402-326-0867
tk510@cox.net

Secretary:

Mike Tiesi
17134 S St
Omaha, NE 68135
402-689-5225
michael.tiesi@alegent.org

Treasurer:

Michael Gregg
2808 Woodsdale Blvd
Lincoln, NE 68502
402-423-3236
tobarcooran@aol.com

AHCA National Delegate:

John Ulrich
6845 S 44th St
Lincoln, NE 68516
402-421-9252
bugeyejohn@gmail.com

Officer At-Large:

Terry Davis
16205 Capitol Av
Omaha, NE
402-637-0101
tadavis50@gmail.com

Officer At-Large/Driving Events Chair:

Gerry Conant
410 South 1st St
Council Bluffs, IA
51503
712-326-8968
trseven@cox.net

Membership:

Pam Brunke
850 Irving St
Lincoln, NE 68521
402-438-3330
p_brunke@yahoo.com

Newsletter Editor: Chrissy Conant

410 South 1st St
Council Bluffs, IA 51503
712-322-5821
cigi@cox.net

THIS MONTH'S COVER PICTURE

The cover picture this month is courtesy of Rimmer Brothers. Our very own Lee & Sheryl Pedersen's 1962 Triumph Herald, lovingly known as "Old Weird", is the featured desktop wallpaper in the Rimmer Brothers February newsletter. Lee, Sheryl, and the car won 2nd place at *Brits in the Ozarks* 2010. They drove to Fayetteville, AR with a caravan of FAHC friends for its first appearance in a car show. Way to go Pedersens!

From your editor...

Chrissy Conant

You should have received your 2012 events calendar in your February newsletter. We have many exciting events planned for this year, plus others will come up that are not yet on the calendar. There should be something to entice every member.

Thank you to everyone that is sending in contributions! I have received many articles that really speak to the interests of our club.

You are definitely helping me make this newsletter fun and informative.

Feel free to contact me or the other officers with any club questions or suggestions. You are also welcome to join us at the monthly officer's meetings.

Joe mentions it in his article too so this is just another reminder to send in your odometer readings for the 2012 distance driving awards.

Flatwater Austin-Healey Club

A chapter of the Austin-Healey Club of America
C/o Newsletter Editor:

Chrissy Conant
410 South 1st St
Council Bluffs, IA 51503
712-322-5821
cigi@cox.net

WEB SITE: www.flatwater.org

Webmaster: Bob Kerns
Bob-kerns@neb.rr.com

TEAM FLATWATER TRACK DAY

By Terry Davis

The first Team Flatwater track day of 2012 is tentatively set for Friday, April 6, at Mid-America Motorplex near Glenwood, Iowa. I should have final word on the date by Wednesday, February 29. The morning session starts at 9:00 a.m. The afternoon session starts at 1:00 p.m. This is an open track day that is part of MAM's Fast Friday series. If you have already driven at MAM you don't need to pre-register, just show up with your car, helmet, and proper clothes (see below). Please send me an email or call me if you're planning on coming so I have an idea about how many to expect.

If you're a first time driver you will need to register for the Full Throttle Orientation School. You can use any street car and a roll bar is not required for an open car. All you need to do to register is email me with your name, year and make of car, and your telephone number(s). You do not need to prepay. The school starts at 9:00 a.m., so you should be there between 8:30 and 8:45 to pay, sign waivers, etc. You will get classroom instruction on basic track driving skills plus 1-on-1 in-car lessons with a driving instructor. During the morning sessions you will only be on the track with other students, no "licensed" drivers. In the afternoon you should get signed off to solo and it will be open track time for the rest of the day for all drivers. Plan to stay until at least 1:00 to complete the school.

Please call me at 402-637-0101 or email me at tadavis50@gmail.com by Wednesday, March 21 to register.

Here is what you need to do the school:

SAFETY GEAR and APPAREL REQUIREMENTS

1. Snell certified SA2000 or newer helmet
2. A restraint system meeting federal standards for the year of manufacture of the vehicle in each of the front seating positions. For modern cars, a 3-point system (shoulder and lap belt) must be in place. For older British cars simple lap belts are okay.
3. Flat sole leather shoes
4. Long cotton pants
5. Long sleeve cotton shirt
6. Recommended, but not required - Fire Extinguisher, 2.5 lbs. minimum, ABC rated, securely mounted within easy reach of the driver.

VEHICLE REQUIREMENTS:

1. Pollution control equipment need not be operational.
2. Suitable and safely mounted driver and passenger seats.
3. A full-size, street legal windshield. No cracks. Must be clean.
4. Removed hub caps
5. Targa or T-top vehicles must either bolt the removable panels in place, or remove them entirely.
6. Open cars must run with the top lowered and safely stowed.
7. All cars must run with both front door windows fully lowered.
8. Brake fluid - Less than 6 months old, reservoir full. (If your fluid is dark, a change is recommended)
9. Brake Hoses and Lines - Dry and in good condition
10. Brake Pads - 1/4" thickness or greater. New pads recommended.
11. Brake Pedal - Must be firm and release freely.
12. Brake Lights - Fully functioning
13. Battery - Securely fastened, good condition, no leaks corrosion, or exposed terminals.
14. Engine and Transmission - No fluid leaks. Reliable throttle return springs, no binding, returns freely.
15. Exhaust - Securely mounted.
16. Front Suspension - No looseness permitted. Bearings and joints in excellent condition.
17. Rear Suspension - Drive train and components in excellent condition. Suspension secure.
18. Wheels - No cracks or bends. Lug nuts torqued after each session. No hubcaps.
19. Tires - Good condition. No cracks, bulges, flat spots, or cords. Minimum 2/32" tread.
20. Mirrors - At least 2 securely mounted mirrors - one should be okay for older British cars.
21. All loose items inside and outside car must be removed.

To get more information about the Full Throttle School and to look at the Student Manual, go to www.midamericamotorplex.com, click on "Road Course" in the upper left corner, scroll over the "Track School" tab, and click on "Orientation Manual" on the pull-down menu.

Cost for the Full Throttle School should be \$175.00. If you're already licensed to drive at MAM the cost should be \$120.00 for a full day of track time and \$80.00 for a half day. If we get enough people to sign up we should get a discount. In the past, the discount price for the school has been \$150.00.

Come on out and join in the fun!

THE PRESIDENT'S MESSAGE

Brad Swiggart

Change is in the air!!! While we just enjoyed one of the worst snowstorms of my life it appears spring is around the corner. Speaking of change, first of all, a big thank you goes to Dennis and Jane Stone as they have recently taken a well-deserved break from Flatwater Board of Director responsibilities. Be sure and thank them for all their continued efforts and past contributions when you see them.

Welcome to Vice President Tony Koester and Secretary Mike Tiesi. For the most part these two guys jumped in head first and jointly worked diligently to create our 2012 Calendar of Events which was published in the February 2012 newsletter.

Newsletter ... again thanking outgoing editor John Ruud for his efforts and welcoming Chrissy Conant to the editor position.

Not much else to report. I am hoping to see many of you at lunch, breakfast, pub night or a fish fry soon. There is something for everybody to enjoy and I hope you take advantage of every opportunity.

"YOU PULL IT" NEW TO LINCOLN

Tim Creger

There is a new salvage yard in Lincoln by the name of "You Pull It". It is part of the national chain by the same name and they are buying up all sorts of local cars to stock up on parts. They are located on North 70th Street, about two blocks north of Cornhusker Hwy. They are open 8:30 to 5 or 6 every day of the week and charge \$2 per visit to get in. They have concrete drives and walks, so not the big mud hole typical of many salvage yards. They have modified wheel barrows to help you lug your tools to the cars. My informant tells me they do not supply any tools so come prepared! You will find lots of American iron sorted by manufacturer. Currently they do not have many foreign cars but that might change over time as they buy out police auctions and anything that comes their way. For those looking for wheels, seats, one wire alternators, and other swapper parts, it might be worth the trip. I am close to this location so if someone from out of town would like me to make a trip to check for certain parts just let me know and I will try to help out. Tim Creger 402-466-3968

LAWS OF LIFE

Law of Mechanical Repair - After your hands become coated with grease, your nose will begin to itch and you'll have to pee.

Law of Gravity- Any tool, nut, bolt, or screw, when dropped, will roll to the least accessible corner.

Variation Law- If you change lines (or traffic lanes), the one you were in will always move faster than the one you are in now (works every time).

Law of the Result- When you try to prove to someone that a machine won't work, it will.

Law of Logical Argument - Anything is possible if you don't know what you are talking about.

Wilson's Law of Commercial Marketing Strategy- As soon as you find a product that you really like, they will stop making it.

Doctors' Law- If you don't feel well, make an appointment to go to the doctor, by the time you get there you'll feel better. But don't make an appointment, and you'll stay sick

Last year I started using a Traqmate data acquisition system in the Bugeye race car. So what is a Traqmate, what kind of data is acquired, and what good is it? I wrote about the technical aspects of data acquisition systems in January of 2011, so I won't repeat any of that here. I'll just note that the basic Traqmate system consists of a small box about the size of a pack of cigarettes (remember cigarettes?) that is Velcroed to the floor of the car, a display unit about the size of a candy bar (those I remember all too well) that is mounted on the transmission tunnel, and a small magnetic GPS antenna that sticks on the rear deck behind the driver's seat. The data unit contains a high-speed GPS receiver and accelerometers that record a variety of data that can be used to analyze a track day or racing session. There is also another small box that starts and stops a video camera.

The system is hardwired into the car, so no batteries are needed. It is also wired into the ignition system, so engine RPM data can be recorded and gear selection calculated. Before using the system, the display unit must be set up with driver, car, and track information using a computer. You simply plug the display unit into the computer using a USB cable and enter the driver's name, enter a name for the race track, and then enter data about the car. Necessary car data includes vehicle weight, number of engine cylinders, rev warning RPMs, rev limiter RPMs, tire size, rear axle ratio, and transmission gear ratios.

When you get to the track you just turn on the display unit and select the appropriate driver and track names. When you go on track and cross the Start-Finish Line for the first time you press a "Start" button on the display unit and it automatically starts recording track and vehicle data. When you cross the Start-Finish Line the second time it recognizes that you have completed a lap and constructs a map of the track and your lap. With each lap you run the unit stores data about that lap, which can later be displayed on your computer and analyzed in a variety of ways.



I can make. When you open a session file (one is created for each race or track session) you see a map of the track showing the lines you drove during that session.

One thing you're looking for is consistency. In other words, assuming you're driving the proper racing line, your laps should be essentially superimposed on top of each other showing one single line running around the track for the entire race. There will be some variations as you pass other cars or try a different line through a particular corner, but they should be fairly consistent. Something I've noticed is that on a track such as High Plains Raceway, my lines are a bit more variable than they are around Hastings, where I have more experience and know the track better. Also, later races during a weekend may show more consistency as you get in the groove of racing that particular track.

By clicking on a "Setup" button you get lap times for each lap you've run during that race and you can choose to display other data, including a brake and turning zones map, a friction circle, and a segment analysis spreadsheet. The brake and turning zones map shows the portions of the track where you were accelerating (green), braking (red), or coasting (black). The friction circle shows a plot of the various points and g-forces that you were generating during the session. Ideally your friction circle should be fairly round or oval, showing that you have been driving smoothly near the limits of adhesion, rather than looking like an inverted "T," which indicates that you're not transitioning between braking or accelerating and cornering as smoothly as you should (I plead guilty).

Data Acquired



FUMES
By
Terry Davis

Several things that I like about the Traqmate, and some of the reasons why I chose that system over other available systems, include its simplicity of operation, relatively low cost, and the fact that a video camera can be hooked into the unit and it will automatically control the camera and synchronize your racing data with the video footage. The data can then be superimposed on the video as a virtual "dashboard" showing speed, RPMs, gear selection, and a g-force meter. You can also display a virtual track map on the video that shows your position on the track at any point during the race and a lap counter and timer. It all looks really cool when done.

So what kind of data is acquired? Once the data is downloaded onto your computer you open a program (included) called TraqStudio that lets you view and analyze a ton of information. I've only started to learn how to use some of the data, so please pardon the limited analysis

The segment analysis spreadsheet can be quite useful. It shows numerous bits of information for each lap, including segment time, distance traveled, time braking, maximum and average braking g's, maximum and average acceleration g's, maximum and average right load g's, maximum and average left load g's, maximum and minimum speed, average speed, maximum and minimum elevation, maximum and minimum horsepower, average horsepower, maximum and minimum torque, and average torque. Best values are shown in green and worst in red.

So what have I learned from all this? First, I'm not quitting my day job to become a professional race car driver. Seriously, here are some interesting (to me at least) data and things that I've learned from the 2011 racing season:

Hallett – Clockwise – 1.8 miles (April):

Max Elevation speed change	Max HP	Max torque	Max right g's	Max left g's	Max braking g's	Max acceler g's
77.85 75.46 ft.	80.57	69.01	1.32	1.50	1.00	0.54

High Plains – West Loop – 2.00 miles (May):

Max Elevation speed	Max HP	Max torque	Max right g's	Max left g's	Max braking g's	Max acceler g's	Max change
98.65	83.76	75.17	1.51	1.47	1.06	0.76	68.90 ft.

Road America – 4.05 miles (July):

Max speed	Max HP	Max torque	Max right g's	Max left g's	Max braking g's	Max acceler g's	Max Elevation change
104.29	95.67	83.05	1.24	1.35	1.06	0.76	193.57 ft.

High Plains – Full Course – 2.55 miles (August):

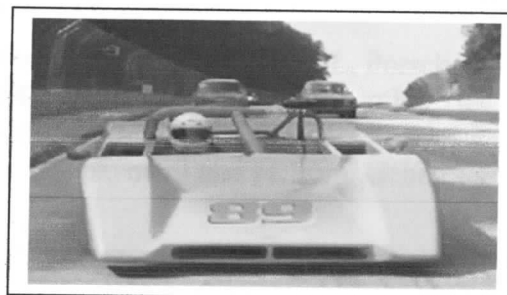
Max speed	Max HP	Max torque	Max right g's	Max left g's	Max braking g's	Max acceler g's	Max Elevation change
100.71	84.10	80.67	1.43	1.45	1.20	0.78	101.71 ft.

Hastings – 2.3 miles (September):

Max speed	Max HP	Max torque	Max right g's	Max left g's	Max braking g's	Max acceler g's	Max Elevation change
91.75	89.38	91.75	1.76	1.61	1.15	0.69	29.53 ft.

Maximum speed for the Sprite was 104.29 MPH at Road America. The slowest maximum speed was 77.85 MPH at Hallett. That makes sense because Hallett is a much shorter course than Road America (1.8 vs. 4.05 miles), with much shorter straights, so there is not as much distance to gain speed. Also, the rear axle ratios were different – 4.55 at Hallett vs. 3.90 at Road America. Lastly, the driver was “different.” Hallett was my first race of the year on a track I'd only been to once before and only run in the other direction, and I only ran two races plus one practice session there. I had more seat time by the time I got to Road America, although it was the first weekend I'd driven it.

There are significant differences in horsepower and torque depending on the track, probably due to elevation changes. Road America's highest point is 1069 feet. High Plains' highest point is 5069 feet. 95+ horsepower at the wheel is pretty good for a Sprite, particularly since it has (ahem) a “1275” cc motor (only minimally modified, of course ☺).



I'm surprised by the elevation change at Road America. Can it really be almost 200 feet? The differences between the elevation changes at High Plains reflects the fact that in May we ran the shorter West Loop, which doesn't use the steepest part of the course, while in August we ran the whole track. Hastings really is as flat as a pancake, a 29.53 foot thick pancake, that is.

There are significant differences between braking and accelerating g-forces, with braking always being greater than acceleration. You can always brake harder than you can accelerate – probably a good thing. Once you get going you do occasionally need to stop, sometimes in a hurry. However, those figures also reflect the importance of maintaining momentum. To get around the track fast, you need to get up to speed, brake as little as possible, and keep on the gas.

There are also significant differences in cornering forces depending on the race and the track. That may reflect how “tight” the course is, e.g., Hastings vs. Road America, or how much (or little) testicular fortitude the driver has!

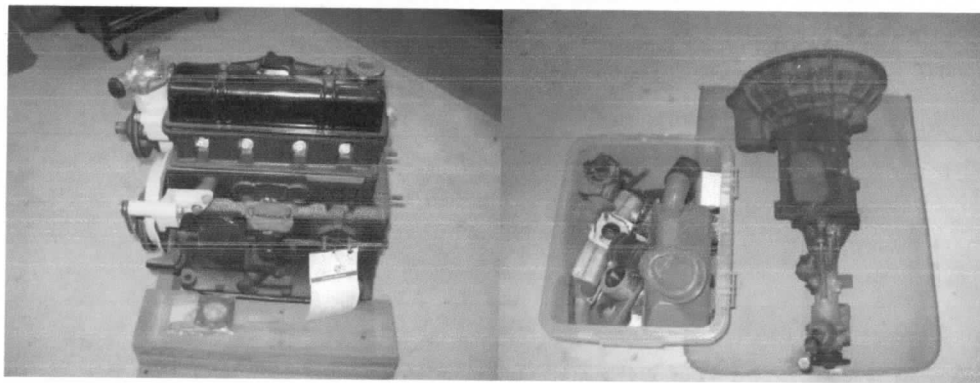
Lastly, I was surprised if not shocked by the cornering forces that the Sprite can generate. Maximum cornering load was 1.76 g at Hastings. That's right – **1.76 g!!!** Holy force vectors, Batman, that little car can corner!!!! Guess that's why they make such good race cars. Guess that also means I can take some corners a lot faster; I just have to “grow a pair.”

What are some of the minutiae that I've learned? I was able to hit at least 100 MPH on each of the 3 long straights at Road America, consistently hitting 103 MPH on the straight between Turns 3 and 5. I was able to take the Kink at 80 to 90 MPH, with the faster speeds later in the weekend. At High Plains the sweeping uphill Turn 7 can be taken in either 3rd gear at 7000 RPM or 4th gear at 5000 RPM with about the same exit speed, between 68 and 70 MPH. But staying in 3rd means you only have to downshift once when approaching the very sharp left-hand turn 8, a 2nd gear corner, so I think I'll stay in 3rd in the future. Like I said, minutiae, but that's where you can gain a tenth of a second or so during a lap.

Okay, so now you've seen some of the things that an obsessive, number-crunching, gadget freak / race car driver can do with a data acquisition system – and I've barely gotten started! If you'd like to see how all of this looks in a video, I've posted the Road America Feature Race, along with 8 other videos from the 2011 season, on YouTube. The URL is <http://youtu.be/nALQusJaaXM>. If you'd like to watch some of my other 2011 videos (surely SOMEBODY out there must have nothing better to do!), click on my username “bugeyesprite119” and that will take you to my channel where the other videos are posted. See you in the paddock.

CLASSIFIED ADS

Rebuilt 1500 Triumph motor, with tranny and other engine parts for sale. Price for all \$750.00 Call Jerry at 402-991-2723 or 402-670-4476 to get all information about engine specs.



Cars Wanted

Jaguar, XK-XKE, MGT series, MGA Triumph TR-2 3-4-250, Mercedes 190,220,230,250,280SL, Porsche 356,911,914, Austin Healey, Riley, Alfa-Romeo, Singer, Mustang 1964-1967 Model T, A Also other interesting European and American made cars. Steve's British Connection 630-553-9023 email sbcinc@aol.com Actively buying cars for over 17 years, any condition, fast payment and pick-up. Generous finder's fees.

JOE'S GARAGE

Joe Kueper

Deep in the quiet recesses of snow covered garages minions of car enthusiasts tinker away on projects with the hope of unveiling them in the spring like the warm sun opens flower blossoms. Yes, some of us blooming idiots take a more poetic view of our hobby.

As I soldier on with my projects I was happy to hook up McKay for a day of transmission over hauling. John has acquiring parts from the British version of E-bay and his Spitfire transmission with overdrive that he will be John wanted to double check the tranny before he us tear it apart to evaluate the condition. The tranny was condition so John spent the rest of the day cleaning parts for seals and thrust washer for the reassembly.

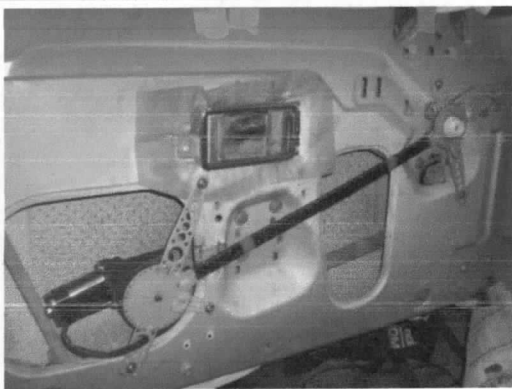
John reported that his friend Alan Johnson purchased a TR6 at a moving sale years ago and started to rebuild it. completion of the frame-off restoration. The hood Sunday and the seats were temporarily installed so that The first ride was about six feet, in the garage because the the teens and the top was not yet installed. That must have been a very exciting event after a long time of anticipation. Alan's wife, Donna, has helped John out and did a great job of refinishing the dash. Now that is an act of love. Way to go Donna!



John and Bill checking the tranny

with John Martin and Bill become an expert at latest acquisition is a putting in his Midget. installed it so Bill helped found to be in excellent and writing up an order

completely disassembled He is now is nearing (bonnet) was adjusted on the car could be driven. temperature outside was in



Power Window Mechanism

I continue to put Parts, my MGBGT, back together along with countless hours of color sanding and buffing. Check out the picture of the mechanical part of the electric motor driven window operators mounted on the door. If anyone is interested in this feature, give me a call.

We are social creatures so four of us; Phil Brauer, Brian Goldsmith, Devon Runyon, and I are taking a three day road trip to the Chicago British swap meet. We never seem to have enough time at club events to cover all the topics we want to discuss and the trip will help us catch up plus we might even find that long sought after part or piece that launches us into another project. Three days of lies, libations and laughter is good medicine for a car guy.

To date, I have had only one person give me their beginning mileage for the driving awards. With our club membership of 165 I suspect there is more than one driver who expects to drive at least 1000 mile this year. Don't be lazy. Go out into the garage, pull back the car cover, write down your odometer reading

and send it to me. Joesbcgarage@msn.com or call 402-592-3132.

See you on the road and not beside it.

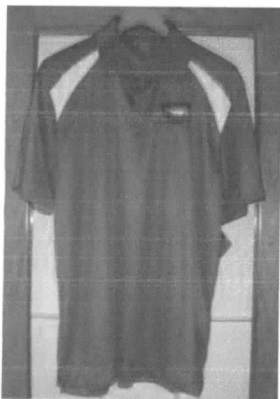
FAHC REGALIA

Pam Brunke has a nice selection of the official Flatwater Austin Healey Club hats available for members to purchase. Cost is \$15.00 each. For more information, or to request your favorite color, call Pam at (402) 438-3330, or by email at P_brunke@yahoo.com



Pam will bring your hat(s) to you at the next club event. Limited quantities remain, not all colors available.

Also available in limited quantities are blue polo shirts with the club logo in sizes M, L, XL, for \$30 and XXL for \$32.



Many of our members have requested the Flatwater logo be made available to be applied to their garments of choice. We have made arrangements with Art F/X in both their Lincoln and Omaha locations to embroider the Flatwater logo onto your articles for a fee of \$8.00.

Their locations and phone numbers are:

7400 Cross Lake Lane	4142 South 144 th St
Lincoln, NE 68516	Omaha, NE 68137
(402) 421-2611	(402) 330-4488

ARTICLES PLEASE

The newsletter is an excellent way to share information with the club. Send me details of your event, current project, or other club related activities. Send pictures if you have them. Thank you very much for your participation!

cigi@cox.net

FRONT PAGE PHOTOS

Please send photos of yourself with your LBC. I would like to feature a different member and their car for the front page of each issue. cigi@cox.net

CLASSIFIED ADS

Find a home for that car, car part, or other car related merchandise. Classified ads are available at no charge to club members for club related items. Send your description and photos to your newsletter editor. cigi@cox.net